

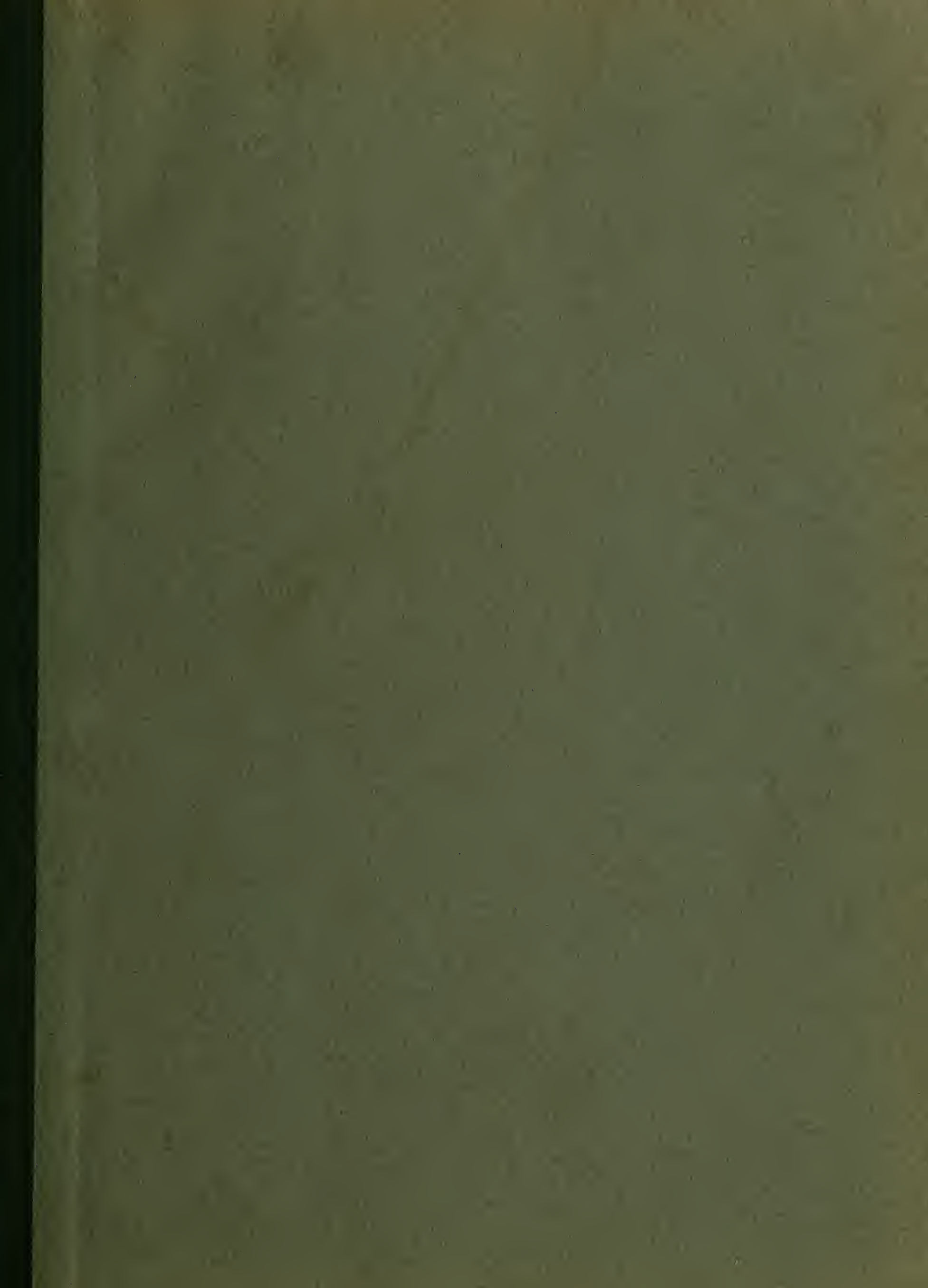


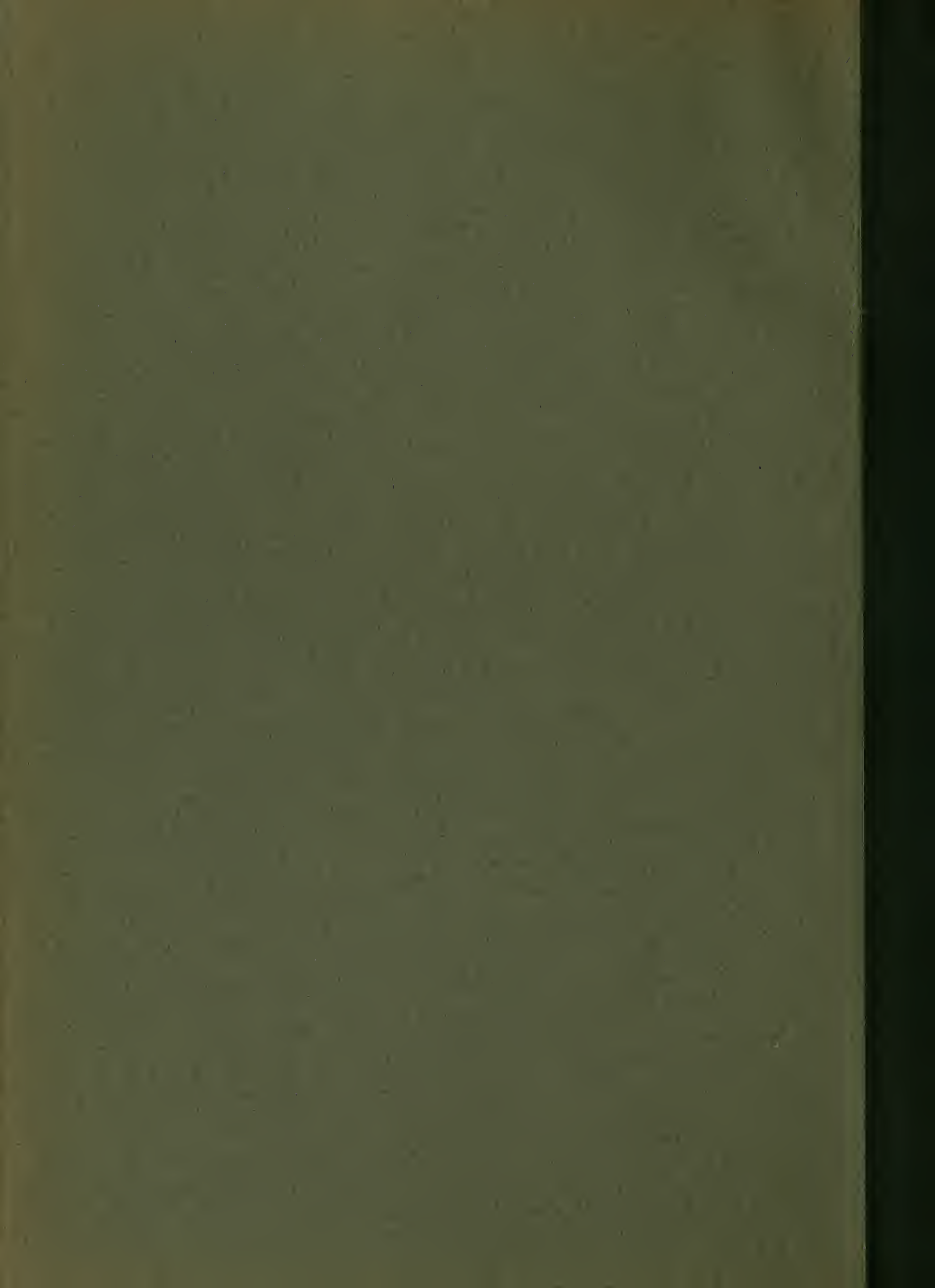
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# THE CYCLE AGE

## AND TRADE REVIEW

Vol. XXII—No. 1

CHICAGO, NOV. 3, 1898

New Series No. 50

"An article which pleases the eye and the understanding is easily sold."

### Iver Johnson Cycles

please the eye because they are handsome in design and finish and they satisfy the understanding because of the long experience of the makers and magnificent quality of the material used in their construction. It is also easy to understand that with

**All Connections Made From Drop Forgings...**

There is no stronger form of construction. Ours will be the PROPER LINE FOR 1899.



A GUARANTEE OF EXCELLENCE

**B**RANCHES  
NEW YORK: 99 Chambers St.  
BOSTON: 408 Washington St.  
WORCESTER: 364 Main St.....

**IVER JOHNSON'S ARMS AND CYCLE WORKS** FITCHBURG, ...MASS

# New Rear Fork Ends

No. 1080



## D Thimble

3/4x20 Gauge.



No. 1081



No. 1080 has angle of 70 degrees and is made of one piece of Sheet Metal; is made in D shape only for 3-4x20 gauge tube.

No. 1081 is furnished with either round or D thimbles as per illustrations; thimbles being separate pieces.

Both these Rear Fork Ends are of entirely new design, No. 1080 being calculated especially for 30-in. wheels. See our catalog No. 3 for illustrations. Will send samples of either of these upon application.

## The H. A. Matthews Mfg. Co.

MacDONALD, JONES & CO.,  
51 Broad St., New York, Export Selling Agents.

SEYMOUR, CONN.

# Star and Bridgeport Pedals



STAR No. 2.

Inside bearings nearer the nut than in the Bridgeport.

....FOR....

## 1899



BRIDGEPORT No. 2.

Barrels turned from bar steel assuring perfect alignment and uniform wear on the bearings. Finish unequaled.  
Over one hundred of the leading manufacturers and jobbers of the country used Star and Bridgeport Pedals in 1898.

SEND FOR QUOTATIONS.

## The Bridgeport Gun Implement Co.,

BRIDGEPORT, CONN.

Mention The Cycle Age



# THE CYCLE AGE

## AND TRADE REVIEW

VOL. XXII—No. 1.

CHICAGO, NOV. 3, 1898.

NEW SERIES No. 50

### LOOSE CREDIT OPENS SHOPS FROM BICYCLES TO GROCERIES

**Frequent Breakages Prove Ineffectual to Stop Amateur Assembling By Incompetent Builders.**

Buffalo, Oct. 31.—To such concerns as the alley cycle company and the universal tinker repair shop is traced much, if not all, of the trouble experienced the early part of the season by reason of broken forks, which for a time played havoc with the trade. These accidents, as will be remembered, became of so frequent occurrence, and the nature of the injuries so serious, as to arouse public feeling to the extent that legislation was demanded by the press, both editorially and by letters to the editor, for some measure that would protect users of bicycles from the skull and bone cracking that was prevalent at that time.

#### Sold on Long Time Payments.

In the '97 season these concerns made a few bicycles and became so flushed with their success that the conclusion was jumped at that they were destined to become large makers, and forthwith set about enlarging their shops and adding new (?) machinery. The result was that the fore part of the season found many bicycles of this class in use, principally by the younger class of riders. The machines were sold cheaply and on long time payments. They were badly constructed, and it was not surprising to those with a knowledge of bicycle construction that fork fractures became epidemic immediately upon the introduction of the machines. The general public had no means of knowing what makes were responsible for the accidents, so the press was called on to publish the names of such bicycles, that the public could avoid that particular make. This, of course, would not do, for, as one editor said, injustice would be done some maker who, through no great fault of his, might have one of his bicycles break, which might be the only one in thousands.

#### Shops Now in Full Blast.

The end as far as these establishments were concerned was thought to be in sight when, from time to time, as the season advanced, almost daily announcement was made of the closing up of one or more of these shops. The failures were due primarily to the refusal of tire and parts makers to supply them on anything but a cash basis, but it is with the bicycle as with other business, that someone can always be found ready and willing to sell regardless of the standing of the party or the injury liable to be worked to legitimate business; so it is but natural that after a time these shops are found in full blast, turning out a product that is

destined to cause a repetition of the trouble another year.

The change from the bicycle to the grocery business is one of the remarkable happenings of the week. Finn & Sullivan, who were the local agents for Orient cycles last summer and who recently were forced to give a chattel mortgage on their stock and fixtures to Waltham Mfg. Co., have opened a grocery store in their old quarters.

### URGE SUPREME COURT ACTION

**Interested Persons Demand That Legal Forms for Bankruptcy Law be Provided Quickly.**

Washington, D. C., Nov. 2.—A clamorous crowd of lawyers and representatives of firms interested in the new bankruptcy law are in Washington to urge the supreme court to prepare the blanks and forms to make the law operative. The new federal law on the subject has repealed every state insolvency law, and therefore there is no legal provision for bankruptcy at this time.

The supreme court members claim to have been too much occupied with other business to prepare the forms. It is already plain, say the attorneys, that if the delay continues for a month, as now seems probable, it will embarrass many millions of property interest and may cause much litigation.

### AMERICAN HUMBER CO. TO QUIT

**New York Department Store Managers Say No More American Humbers Will be Made.**

Adams & Co., the New York department store managers, intimate in their advertisement in New York papers last Sunday that the American Humber company has stated to them that prevailing conditions in the cycle trade would be likely to compel them to close their factory for 1899, except for the purpose of replacing defective or broken parts.

The only rational explanation of the course taken by the American Humber Company in permitting department stores to make a plaything of its prices is thus furnished, and the anticipations of the manufacturing trade in general concerning the motives of the company's policy are justified.

### EFFECT OF CANADIAN TARIFF INCREASE OF EXPORTS CHECKED

**Though Paying Higher Duty on United States Goods Canadians Continue to Buy Them.**

The first month of the new Canadian tariff does not appear to have had the depressing effect upon exports from the United States into Canada that was anticipated. The report of the Department of Trade and Commerce in Canada, covering the month of August, 1898, and comparing with the corresponding months of 1897 and 1896 has just reached the Treasury Bureau of Statistics. The figures which it presents are especially interesting since they cover the first month of the operations of the new tariff which gives the goods coming into Canada from Great Britain and certain British colonies 25 percent advantage in tariff rates over those coming from the United States.

#### Reciprocity in New Form.

The new Canadian tariff law, enacted in 1897, provided that when the customs tariff of any other country is made as favorable to Canada as her own tariff rates, the duties upon the products of that country should at once be lowered one-eighth, and after the expiration of one year, should be reduced another one-eighth. The 12½ percent reduction went into operation August 1, 1897, and was held to affect goods coming into Canada from Great Britain, Germany, Belgium, and several other countries, thus giving to most of the imports coming into Canada an advantage of 12½ percent in rates of duty as against those from the United States, which were required to pay the full rates named in the new law. Additional legislation in 1893 so modified the act that the reduction of 25 percent, which was to take effect on August 1, 1898, is held to relate only to goods coming into Canada from the United Kingdom, Bermuda, British West Indies, British Guiana, or "any other British colony or possession, the customs tariff of which is on the whole as favorable to Canada as the British preferential tariff is to such colony or possession."

This modification of the tariff act of 1897 thus gives to goods from Great Britain and most of her colonies an advantage, on and after August 1, 1898, of 25 percent in rates of duty over those from the United States, or in other words, requires goods from the United States to pay 1-3 higher tariff rates than those from the countries in question. The figures showing the imports into Canada during August, the first month under the new arrangement, are therefore especially interesting.

It was expected that the imports from

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Great Britain and her colonies in August, 1898, would be abnormally large because of the fact that importers, knowing that they would obtain better tariff rates in August than in June or July, would wherever practicable hold back their imports until the new rates should go into effect. August 1, while no such condition would apply to goods from the United States. It was presumed, therefore, that whatever might be the final effect upon the relative growth of British or American imports into Canada, those of the month of August would show much greater gains for Great Britain than for the United States.

#### Figures of Principal Imports.

The figures presented in the report in question, however, do not justify this expectation. While the report does not state the total amount of goods from Great Britain imported into Canada during August, it does give a table containing qualities and values of "principal articles of merchandise exported from Great Britain to British North America during the month of August, 1898, compared with August, 1897 and 1896." The total value of these "principal articles" exported from Great Britain to Canada in August, 1898, was 11.4 percent in excess of the same class of articles exported to Canada in August, 1897, when the tariff advantage was but 12½ percent, and is actually less than in August, 1896, when the tariff gave no advantage to articles from Great Britain. On the other hand, the reports of the Bureau of Statistics of our own government show that the exports from the United States into Canada in August, 1898, were 12½ percent greater than in August, 1897, and more than 25 percent in excess of those of August, 1896.

#### Explanation of the Records.

It is not to be inferred from these figures that the Canadian tariff legislation has had no depressing effect on our exports, but that the causes tending to increase our exports in certain lines were strong enough to overcome the adverse legislation in a measure, and that they would have been still larger if the discriminating tariff law had not been in force. That this is the proper explanation of the increase for August, 1898, is especially clear when this increase is compared with the much greater increase of our exports to European countries which has lately been recorded and when it is noted that the high total figure of exports to Canada is chiefly due to one line of goods, agricultural implements, of which there was sold in August this year \$223,818 worth, as against \$61,075 in 1896 and \$71,519 in 1897. This difference of about \$160,000 constitutes alone more than the increase of 12½ percent in the total over 1897 and nearly two-thirds of the increase over the total for 1896. It is therefore apparent that it would be rash to put a low estimate on the effects of the discriminating legislation per se. As against the wave of liberality in purchases of American goods which has swept over the entire civilized world, it has been sufficient to so stem the tide as to almost neutralize the effects of this favorable change of sentiment in Canada, although this neighboring territory is one of those where the effects should have been felt most strongly.

#### Monarch Company Gets Damages.

In a breach of contract suit brought by the Monarch Cycle Manufacturing company against the Roger Wheel Company, of Cincinnati, the jury in the district court gave the plaintiff a verdict for \$3,580 damages on October 28. On the cross petition of the Roger company the jury gave a verdict of \$1,808 damages.

## PATENTS AND TRADEMARK LAW

### EQUAL RIGHTS FOR ALL NATIONS

#### Protection of American Rights Abroad Depends Upon Changes in Federal Laws at Home.

The Convention for the Protection of Industrial Property of 1883 marked the beginning of international protection for property rights embodied in construction or design of merchandise. The nations which were members of the Union at the time, and those which afterwards joined it made attempts to conform to it in subsequent legislation.

The provision of the convention that citizens of each of the contracting states shall enjoy in all the other states of the Union, so far as concerns trade or commercial marks and commercial names, the advantages that the respective laws thereof at present accord to citizens, seems to require in this country the enactment of a Federal law on the subject of trade marks, which shall definitely define and regulate them.

The convention provides that every trade or commercial mark regularly deposited in the country of origin shall be admitted to deposit and so protected in all the countries of the Union; whether the convention be carried into effect in favor of United States, so long as there is no constitutional provision for a Federal trade mark law, is the principal question of importance for our citizens.

#### Trademarks Various Defined.

Under the laws of all the other states of the Union for the Protection of Industrial Property a mark is only valid as a trade mark in case it has been registered, or, in other words, it is not a trade mark, although capable of being a mark, until registered.

The convention is not being carried out, so far as relates to trade marks, either in this country or in Great Britain. The latter country recognizes such marks only as conform to the definition of its statutes. We, as a nation, relegate the matter to the states and the common law. The advantages of a Federal law are apparent, e. g., greater uniformity, greater certainty in adopting new marks, greater certainty of exclusive use. The subject may seem, when first presented, unimportant to us, still the nations of Europe consider it of such importance that a great part of the recent conference at Brussels was devoted to it.

#### Quality Not Maintained.

By article 2 of the convention "Subjects or citizens of each of the contracting states shall enjoy in all the other states of the Union, so far as concerns patents to inventions, \* \* \* the advantages that the respective laws thereof at present accord or shall afterwards accord to subjects or citizens. In consequence, they shall have the same protection as these latter, and the same legal recourse against all infringement of their rights." \* \* \* But section 4902 of the Revised Statutes of the United States provides that only citizens of the United States who make new inventions or discoveries and desire further time to mature the same may, upon payment of the fees required by law, file in the Patent Office a caveat. Is this a divergence from the treaty? The filing of a caveat does not grant any right to the exclusion of others from the use of an invention. It is at most a proceeding in the Patent Office, entitling the caveator to notice. Can it be said that the treaty goes so far as to require that all modes of procedure in the Patent Office open to citizens, shall be open to citizens of other states of the Union? Another and a better view seems to be that the spirit of the convention re-

quires that all means for the protection of the inventor against the loss of his invention should be open to every citizen of any state of the Union. The convention to be of service to our citizens must receive the broadest construction possible.

Under the ruling of the Patent Office the citizen of another state of the Union is not allowed to carry back the date of his invention to the date of his application in his own country. This is clearly against the spirit of the convention, since under its article 4 the period of priority is granted from the date of the first application. The first applicant, therefore, has the right under the convention to a patent, unless some one in this country is proved to be an inventor, prior to that application.

#### The Question of Priority.

It is clear that our citizens cannot secure protection in foreign countries unless our laws are so changed as to carry back the date of an applicant from one of the other states of the Union to the date of his first application in his own country.

At the meeting of the patent and trademark commission, which is being held in Chicago, New York and Washington, the questions outlined above will be considered, and the commission is very desirous that inventors and manufacturers in general, and bicycle manufacturers in particular, should give expression to their opinions on these subjects.

### PAN-AMERICAN SHIPPING CO.

New American Ocean Express Established to Facilitate Trade With Spanish America.

A regular express service between New York and Cuba, Porto Rico, Central and South America is now being operated by the Cuban and Pan-American Express company, 52 Broadway, New York, which has steamship and railroad connections to seaport and interior cities.

The excessive rates heretofore charged for "foreign express" service have been superseded by an equitable tariff suited to the requirements of importers and exporters of all commodities. Shipments may be consigned to care of the company for final despatch to the above countries. Invoice or memorandum of contents, valuation and gross weight of each package, is required for customs and consular regulations. The company is prepared to execute orders, negotiate credits, drafts and exchange, and make collections on commission. Catalogues and price lists of manufactures, etc., and all further information required will be promptly furnished upon application.

#### Rudge-Whitworth Balance Large.

The fourth annual report of the Rudge-Whitworth company, limited, of London, which was the first of the English bicycle manufacturing concerns to adopt the net price list, was issued a fortnight ago and shows a net profit for the year ending August 31, of more than \$100,000, constituting a 10 percent dividend on the shares. This is after deductions have been made to provide for debenture interest, directors' fees, depreciation, and ample reserves for bad and doubtful debts. In the balance sheets the stocks in the depots and works and the additions to plant and tools have all been valued at or below cost. The showing made by this concern is a bright ray in contrast to the reported gloom in Coventry and indicates that the foreign trade conditions are not so bad as they have been reported by the daily press.

Offices of Cycle Checking Lock Co., at 7 Warren street, New York City, have been seized by the sheriff on three executions for \$923. The company was incorporated in September, 1897, with authorized capital stock of \$250,000.

## TRADE CUSTOMS OF CHINESE

### CONTRACTS ARE ONLY VERBAL

**Agreements Are Scrupulously Fulfilled, However—Foreigners Boycotted for Non-Observance.**

The Chinese merchant is, with very few exceptions, scrupulously honest. He trades simply upon his word, and the word of another, and when once a business transaction has been agreed and entered into, it will be executed and fulfilled, so far as he is concerned, with the strictest regard to all the stipulated conditions. It is, indeed, seldom that a Chinese trader exacts a signature from another, or gives his own, to a bargain or contract. In the case of the largest orders, he usually contents himself with simply making an entry upon a memorandum sheet. Should a foreigner, however, fail to carry out a bargain he has entered into, he is immediately put into "quarantine" by the Chinese tradesmen, which suspension from commercial privileges may last an indefinite time. The offending merchant in this plight would find that he would not be able to buy a roll of silk or sell a piece of cotton. It has been found impossible for foreign tradesmen to retaliate in the same manner in the case of defaulting Chinamen; but there is really no widespread occasion for it, as such instances are few and far between. At the time fixed for the delivery of goods to the Mongolian trader, the merchandise is carefully examined and definitely accepted, if it is in strict accordance with the terms agreed upon, or rejected if the contrary is the case.

#### Important Role of Inspectors.

The larger European houses exporting from China usually have especially qualified inspectors to look after their interests, who, before shipment, rigorously examine articles of such importance as tea and silk; these officers being invariably men of great experience and perfect reliability. In other cases, the advice and assistance of a "comprador" is sought. This intermediary always speaks English understandingly, and, before the establishment of European banks at several important commercial centers throughout the empire, he was a person of considerable influence and importance. Nearly every large business house still retains the services of a comprador, who is really a make-shift banker, receiving and paying out money for those who employ him. For the important duties that he is called upon to perform he often receives a compensation as high as 4,000 taels annually. He deposits as security to his clients a large sum of money in one of the banks, and as an additional safeguard, a friend or relative of means usually acts as personal security for him in event of default. But owing to the establishment of the European banks, the commercial importance of the comprador has greatly diminished in late years, and it is only the comprador of a bank who retains his ancient powers to the full. In that capacity, he has the management of everything relative to foreign business, and often he alone can secure native customers for his employers. In a word, a good comprador is still almost indispensable to every foreign house wishing to trade with the Chinese.

#### Utility of Transactions by Letter.

In China, as in other foreign fields where national trade peculiarities exist, the merchant from Europe or America who proposes to establish a profitable business must go there himself and make himself personally acquainted with the local conditions, to meet which is essential to success. Usually, however, he

does not do this, but sends an agent with meager qualifications and limited powers to represent him, and when this is the case, satisfactory results are rarely, if ever, obtained. The foreign enterprises in China which have been the most successful have been founded there by the merchants themselves, who have carefully studied on the spot the special requirements of the markets they have desired to supply. To attempt to establish a profitable business anywhere in Asia by correspondence is futile. The hesitation, lack of confidence, and delay which necessarily accompany such correspondence affecting important transactions, result in a serious loss in time and money, and are fatal to the building up of a satisfactory trade.

### TOUCH POPULAR FIGURE

**Announcement of Monarch Prices Confirms Anticipations of '99 List of Standard Bicycles.**

Prices for the Monarch line of bicycles for the season of 1899 have just been announced. As one of the leading firms in the trade, the early action of the Monarch Cycle Mfg. Co. may be expected to have an effect in determining the policy of the smaller makers. It has been generally anticipated for some time that the popular standard price for first class machines would settle on the half hundred mark, and this has been in a measure realized by the listing of the Monarch roadsters at \$50. The Cooper Special racing machine is quoted at \$60, while Defiance roadsters will be retailed for \$35. The regular equipment of the whole line will include Dunlop detachable tires, with option of Goodrich single-tube pneumatics.

It is intimated that the company has other interesting information to impart relative to its policy for the coming year, and this may be expected to be divulged in a week or two.

#### Tire Plant Sold and Reopened.

Springfield, Mass., Oct. 31. The tire factory of the Spaulding & Pepper Company, of Chicopee Falls, was sold at auction Wednesday to Reimers & Myer, of New York, for \$17,000. On Thursday the plant was transferred by the purchasers to Noyes W. Fisk, of Springfield, the next highest bidder at the sale. The plant, which has been closed for several months, will be reopened at once for the manufacture of bicycle and motor carriage tires. The concern will be incorporated and operated as a stock company. The output at first will be small and only high grade tires will be produced. The Spaulding & Pepper Company, which passes out of existence, was incorporated in 1896 with a capital stock of \$80,000. Its owners were also interested in the Spaulding Machine Screw Company, of Buffalo, which became financially involved about the time the Spaulding & Pepper factory was closed. The plant is said to represent an investment of \$43,000. It was mortgaged for \$20,000. The price at which it was bid off is considerably less than the amount at which the machinery alone was appraised.

#### Rubber Fight in Prospect.

Hartford, Conn., Oct. 29.—The trade has followed with interest the reports of the organization of a company to fight the big rubber syndicate. The resignation of the secretary and treasurer of the Good-year plant at Naugatuck has been accompanied by all sorts of rumors. A battle between the rubber trust and a competitor might affect the price of crude rubber.

W. G. Nott Bicycle Co., Ltd., of Brantford, Can., has been incorporated with capital stock of \$20,000 to manufacture bicycles, tricycles, electric carriages, and children's steel wheeled vehicles.

## WANT STOUTER DRESS GUARDS

### AUSTRALIAN IDEAS CHANGING

**American Wood Rims Are Now Accepted But Fault Is Found With Drop Frame Equipment.**

In his annual report on the trade and commerce of New South Wales, Australia, soon to be presented to Congress, our consul at Newcastle says the only article of American manufacture in the importation and sale of which sufficient change has taken place to merit special mention is the bicycle. A year ago, very few American machines were sold in his consular district. There was then a strong prejudice against them, caused principally by the introduction by certain unscrupulous dealers of a consignment of low-grade Canadian wheels, which were sold at high-grade prices. These machines soon went to pieces and caused a reaction in favor of the heavier English makes, the belief being that the American machines were too light for the rough, heavy roads abounding in New South Wales. It was also thought that the wood rim, almost universally used on American wheels, would not stand the hot, dry summer. It is interesting to record that this prejudice is gradually being overcome, and several Newcastle dealers are now importing high-grade American machines quite extensively, and speak favorably of the willingness on the part of American manufacturers to make any alterations suggested in the structure or finish of their machines, in order to meet the requirements of the local market.

#### Women Still Prefer English Machines.

Lady riders in Newcastle seem still to prefer the heavy, unattractive English makes to the lighter and more graceful American models, but a change in this branch of the trade is looked for shortly. The consul adds in conclusion that manufacturers would do well to try to devise more effective and durable dress and chain guards than such as are now employed on American drop frame machines, that being one of the chief objections to them in New South Wales.

#### American Machines Gain Supremacy.

Cycling has become popular in and around Smyrna, in Asia Minor, in the last few years. Most of the machines sold and used there five or six years ago were of English make, but the Austrian consul there reports that American machines have been recently introduced on a large scale. He estimates that fully 50 percent of the machines now imported are American, and less than 25 percent English, while the balance are supplied by German and Belgian cycle manufacturers.

#### Eastern Tricycle Factory Burned.

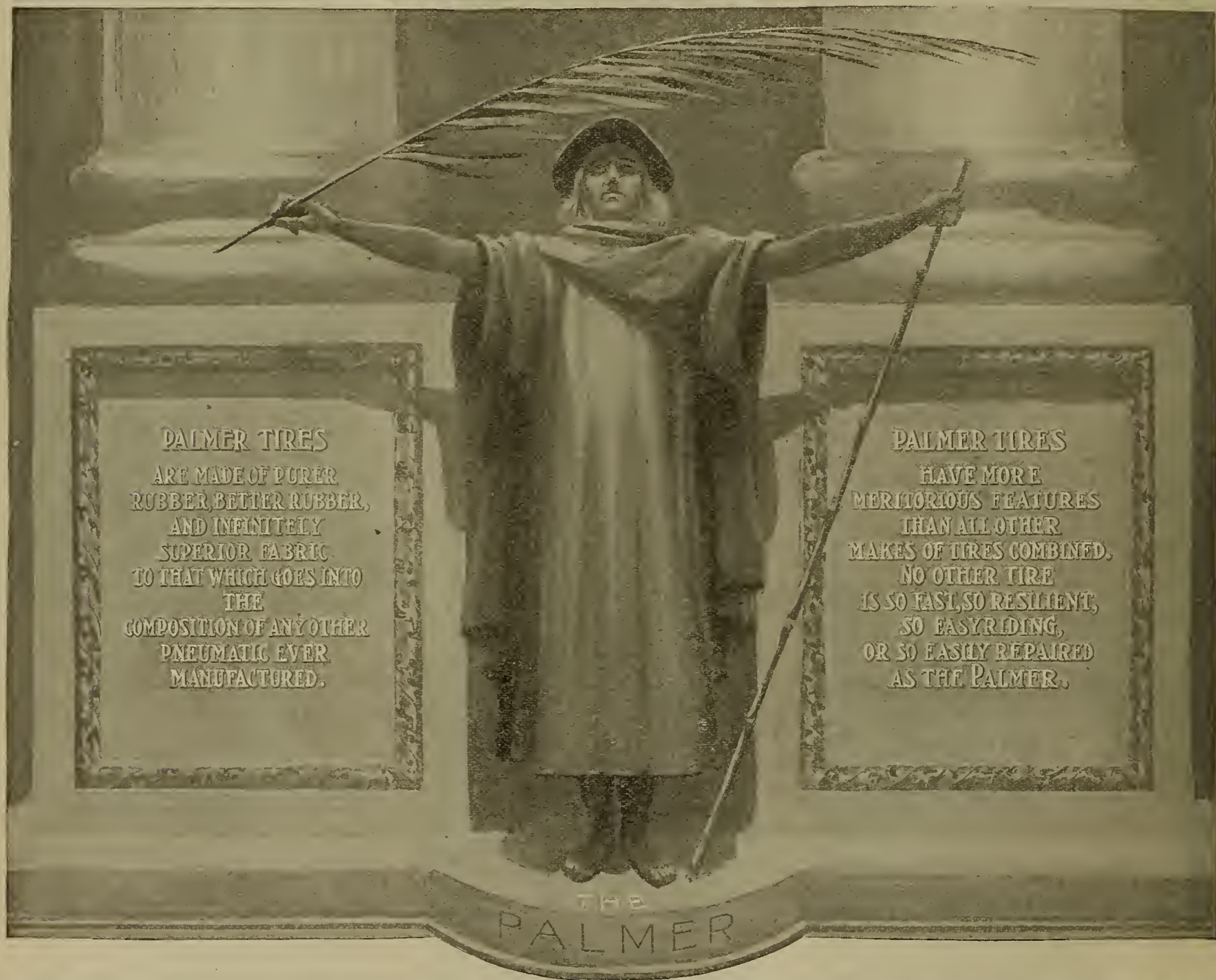
The factory of the New England Tricycle Co., at Taylor, Conn., was entirely destroyed by fire October 28. The building, which was owned by J. Willis Downs, president of the company, was damaged to the extent of about \$5,000, and the stock and machinery a like amount. The loss of the building is covered by insurance, but the stock was only partly insured.

An Austrian firm is extensively advertising chainless bicycles in Belgium for \$90. This competition forced the makers of the Acatene machine—the only one which seems to have met with success in Belgium—to reduce their price from \$130 to \$95.

Ruos & Ruos have begun the erection of a bicycle factory in Doylestown, Pa.

# PALMER TIRES

## MARK THE HIGH GRADE WHEEL



**THE PALMER PNEUMATIC TIRE CO.**  
**CHICAGO.**

NEW YORK OFFICES: 66-68 READE ST.

# THE CYCLE AGE

## AND TRADE REVIEW

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### EXPORT TRADE CHANGING.

When our export trade in bicycles began to spread slowly in the fall of 1895 and reached three millions of dollars in value in 1896 and seven millions in 1897, the sentiment among our manufacturers was at first one of doubt and frivolity. It was considered a good joke by the majority of them, and too good to last. But they were as a rule willing enough to skim the cream of this trade so long as it should hold out. Subsequently it became of course apparent that there were good mechanical and economical reasons for the favoritism shown for American bicycles by the European public. They were lighter than any built in England, France or Germany, better at the same price and cheaper at the same quality. Still it was generally supposed that English manufacturers would quickly rally from their stupor and would fight our invaders with their own weapons. For a number of reasons, which probably have their deepest foundation in our public schools, absence of social class lines and weakness of our labor unions, this did not occur. Our exports continued to grow in volume and spread in geographical extent.

Our worst competitors have come from our own ranks. The cash sales acted as a wonderful inducement for reducing prices and soon many manufacturers who would not at home be identified with any but high-priced forms of manufacture sold quantities of bicycles in Europe at prices to compete with anybody. Many of these bicycles were a great deal better than they should have been, comparing favorably with bicycles sold for more money by the same makers in the home market. The cash made the difference, and the doubt which still existed in regard to the continuance of the trade. Naturally methods were loosened considerably in transactions which were looked upon as cleaning-out sales. During this period the European purchasers had not yet learned to understand the situation. The prices were for them a revelation, explained only on the supposition that the industry must be overproducing violently at home and was in sore straits for cash. They bought anything and everything on this supposition without much examination into quality, and the opportunity thus afforded to American makers of inferior machines was embraced with much ardor. Enormous quantities of cheap and shoddy machines were shipped to European ports on consignment and disposed of, and this has been continued up to date, although under increasing difficulties.

A dozen American makers have meanwhile established a reputation for their product in transatlantic trade on its merits. They have cut loose from the export jobbers and are entering into direct relations with retail dealers. Their European trade is probably as well secured as their home trade and their business relations with Africa, India and South America are being built up on similar lines. As time passes and foreign buyers learn to discriminate, their positions in the world markets grow more and more independent of the favor or disfavor incurred by other American exporters. The rapidly increasing trade in fittings and sundries constitutes another branch of export which does not seem to be seriously threatened as yet. It may be surmised that the reaction against American bicycles generally which is at present diminishing sales by these two classes of manufacturers somewhat, will soon settle down to a rational and careful distinction between good and bad, from which these

makers will emerge with colors brightened and ability for transacting European business enhanced.

Quite otherwise for the manufacturers of bicycles who have contributed to the flood of inferior products of which complaint is now so generally being made; these and all other manufacturers who, while not guilty of especially inferior work have been late in making their wares known, are falling under the ban of all expert jobbers as included in the general condemnation pronounced against unknown American bicycles. The reckless methods followed under the misapprehension that the export trade could not last have brought about the result which was feared and have divided all American exporters into two classes: well-known and not-well-known. The stigma already resting upon the latter class may probably be removed by intelligent missionary work so far as those makers are concerned who are qualified for competing for export trade but it would be idle to expect that the export jobbers who have heretofore been ready to pay against sight draft before shipping documents were received by them will be willing to shoulder the increased burden of antagonizing the well-founded aversion to unidentified American machines which has lately been gaining ground in Germany and elsewhere. This convenient form of trade is apparently booked for a material decrease but the result may after all be beneficial if it should induce a larger number of our manufacturers to do their export business through hired representatives and retail agencies in the same manner as in the home market. Suitable representatives would perhaps not always be easily found in the American trade as at present constituted but may be drawn from the ranks of foreign commerce and industry where men with the necessary linguistic proficiency are by no means rare.

### ORIGINAL CATALOGUES FOR 1899.

Great and telling originality in business methods can hardly be expected from more than a small minority in any line of trade, but is perhaps not even desirable in all cases. The masses look upon originality with suspicion. It must be administered to them with suavity and caution and in homeopathic doses so as not to produce too violent thinking. Probably there is nothing which goes so much against the natural inclinations of the masses as to be forced to consider anything from an entirely new standpoint; and yet they appreciate innovation to a certain extent—as a condiment, but not as a medicine. To draw the line where originality begins to nauseate and ceases to stimulate has always been the Alpha and the Omega of the art practiced by commercial people, and this art has to-day more to do with changes in bicycle construction than has any deep consideration of relative mechanical merits.

If there is any field, however, in which original methods have been supposed to be not only permissible but indispensable, it is that of advertising. Probably the supposition is not quite correct. An overdose of originality in advertising matter repels the possible purchaser as much as radical innovation in design of merchandise, if certain successful advertisers may be believed. They obtain their best results by neat juggling with ideas which were previously familiar to their public, and by massing effects in words and pictures which have before made an impression in some other way or on a smaller scale. Under all circumstances they do not exact much new thinking, whatever they do in the way of spectacular effect or appeals to the senses. If they have anything to say which absolutely requires something more than a combining of accustomed phrases, they are reduced to the necessity of repeating their efforts over and over again, each time adding a little more of the objectionable, thought-stirring message which it is the ultimate object to make the public appreciate in its entirety. From this necessity there is apparently no escape unless some article is offered which really meets a true "long felt want." In that case the want has already produced the necessary thinking and absolved the advertiser from producing it. More often, however, the seller of a new article or of an improvement of an old article must create a demand by his own efforts before he can make sales and it has been a matter for astonishment in the cycle trade how many things of merit have fallen flat on the market simply because the makers attempted to force them down the throat of the

intelligent public instead of taking time to introduce them properly.

With these and many other considerations in mind, pertaining to the extremely difficult subject of economical and effective advertising, it can hardly be considered amazing that bicycle manufacturers in their preparations for 1899 trade seem to be content with the usual style of bicycle catalogues. But when many of them not only preserve the hackneyed features of the bicycle literature of the past but also cheapen it to a degree which will be quickly noticed by the general public, the whole matter grows at once into a question of trade importance, to which must be devoted some thought. If the majority of manufacturers should follow the same policy the public would be almost certain to accept that version, according to which the cycle industry is represented as entering upon a period of decadence; but if the policy be limited to a few, those who adopt a line of action which shows more life and elasticity of resources will undoubtedly carry the public with them and will get more than their share of an undiminished total volume of business. Whether economy should be the watchword in advertising matter or not, signs of decay should at all events be avoided. If gorgeous, illuminated pamphlets be no longer desirable, something which denotes change but not retrogression should be substituted. Those who must reduce their appropriation for advertising matter must, in order to avoid odious comparison with others and with previous efforts, change the style of their printed matter entirely.

This calls for a certain amount of originality, and, as above referred to, originality is not only rare, but also dangerous if it taxes the ability of either producer or reader beyond that point where mental strain commences. The conditions are, however, fortunate for the cycle trade in this respect. Nearly every subject on that side of cycling in which the public is interested, has been threshed out. Even the chainless bicycle is a familiar topic. Sensational innovations and improvements are so styled by courtesy rather than by judgment. The cycle phraseology sounds like an old story though few connect definite ideas with the current words. From all these well-worn ingredients to concoct a palatable dish for the public would seem impossible unless at least some change is made in the trimmings, the style of serving.

The "primer" style of booklet has already made many converts, but it is chiefly an auxiliary to other advertising matter. It requires an unusually deft pen combined with the deepest insight in the subject handled and the condition of trade; qualities seldom united in one person. It is better adapted for the sundries and accessories manufacturer than for the bicycle maker. The manner of presenting an argument which is used in business "primers" may, however, be employed in bicycle catalogues with good effect. Special points in construction may be handled in a separate chapter in this style with illustrations to correspond, but the richest mines from which inspiration may be drawn for new departures in catalogue making are probably to be found in the minds of the persons who superintend the buying of material and accessories, and choose design and work-methods. A heavy draft on sincerity in accounting for the reasons why certain materials have been used, certain accessories selected and certain designs preferred, would make interesting reading for dealers as well as for the public. It would practically lay bare how deeply the manufacturer understands his own business and how willing he is to have the extent of his knowledge known, but this is precisely the reason why such style of treatment may be used only by those who are leaders. Mere imitators who might attempt to adopt the same method would find themselves debarred by their own ignorance from producing a presentable pamphlet by it. They would be compelled to fall back upon trite "specifications" and engravings of mechanical details in which the new crop of purchasers whom each new year brings forth are not interested, and which older riders are tired of discussing unless there is every evidence of sincerity in the argument.

A catalogue for agents which shall serve no other purpose than that of furnishing certain important data of construction and design by which the manufacturer is bound, supplemented by an illustrated pamphlet for agents and the public intended to explain all those points which the manufacturer considers essential to make his position as a bidder for trade understood—means a form of advertising matter which cannot be used by

everybody and which for some time would be in no danger of succumbing to the spell of sameness which has made bicycle catalogues useless as trade bringers for the past two years.

\* \* \* \* \*

While the bicycle dealers who do a legitimate and conservative business with responsible manufacturers have reported an unusually satisfactory business for the past season, there have yet been heard a number of pessimistic voices inquiring in a doleful strain when and how the extinction of the bicycle dealer may be expected. It is the same school of prophets that point to motorcycles as a means of "salvation" for the bicycle trade and advocate cycle shows as necessary for reviving the "waning public interest" which has had the remarkable result of placing the industry and the trade in a better financial position, generally, than it has occupied for years. It may be divined that all these birds of evil omen subscribe to that branch of social economy which declares that waste makes wealth and have been drawing income in the past from the wastefulness of the bicycle trade. This source of income having been drained they forthwith contend that the trade is in agony. Without entering at all into the merits and demerits of the plaint, which the trade can probably afford to ignore, it seems as if it might do some good to draw attention to at least one branch of bicycle work which is indisputably flourishing and bids fair to flourish for many years. This branch is represented by the repairman. Every year sees an increased number of bicycles in use; from 500,000 to 700,000 are added annually to those already in the hands of the public; they all require repairing after the first year of service and many of them much earlier. Thus even the meanest condition of the trade at large produces an ever-increasing field for the repairman offering him the while the most excellent chance for becoming thoroughly familiar with all lines of cycle manufacture. Even now many repairmen combine with their repair business a successful cycle retail store and nearly all of their number who are endowed with any talent for business at all, will find it easy enough to obtain an agency for a good model and make greater profit by so doing than by undertaking manufacturing on a small scale. There seems to be probabilities in this development which many exclusive cycle dealers have already perceived. Instead of meekly submitting to the extinction with which he is said to be threatened, he arranges a suitable partnership with a repairman and makes provisions for sidelines. By slow degrees a larger conception of cycle retail trade than the one which has been prevailing may be expected to spread among the trade at large from observations of ventures that prove successful, and then a new crop of cycle dealers will naturally grow out of the altered conditions. With a class of men as well qualified to perpetuate the retail cycle trade as will be the repairman who goes into the business when young, it is hardly probable that either department stores or other mixed stores will long be able to attract customers for bicycles when the new class of cycle dealers shall have reached maturity.

\* \* \* \* \*

When show promoters maintain that there is a necessity for cycle shows because the public must have a new opportunity to compare good with bad construction and find out that the cycle business is not dead, it seems odd that the same promoters consider it expedient to divert the public's attention from the cycles by means of motor carriages, which, by the way, they will find it difficult to get together. In regard to construction and finish the question also naturally arises whether the public are better at discerning or the manufacturers at concealing possible shortcomings. If the public can see more deeply into construction than the manufacturer wants them to see, then the public does not seem in much need of a show. And if the contrary is true—that the manufacturer is best at his own game—then all manufacturers and dealers whose wares are really good would be losers by a show.



# We are Prepared

to talk '99 business  
with a few large  
jobbers . . . . .

MARCH-DAVIS CYCLE MFG. CO.

47 WARREN ST., NEW YORK.

Mention The Cycle Age

44TH AND NORTH AVES., CHICAGO, ILL.

# Spalding

*Bicycles  
for 1899  
are fitted  
with the  
Only Automatic  
Coaster and  
Brake*

There are many pedals, but is there any  
.....pedal in it with the

# Record?

Hundreds of thousands of riders testify  
most emphatically\*\*\*

# NO!

The first cost is higher—when satis-  
factory results are assured it gener-  
ally is.\*\*\*\*\*

Record Pedal Mfg. Co.

221 Columbus Avenue,  
BOSTON, MASS.

Mention The Cycle Age

## ELASTIC POWER IN FACTORIES

### The Storage Battery Promises a Saving Where the Power Requirement Varies Greatly

There is at the present time a tendency among factory owners to adopt some form of electric power for the operating of their machinery. The late advances that have been made in electric generation and in the means for utilizing electric power have begun to impress the public with the desirability of that form of power. There are now many power plants of all kinds which are operated from electric currents applied in different ways, but the most interesting use of electric power in factories and the one which most directly affects bicycle factories is the independent system of running engines and dynamos and generating electric currents which drive motors in the shops. Such a system seems at first to be a roundabout way of furnishing power in that mechanical energy is first produced through steam, then converted into electric energy, and afterward reconverted into mechanical energy to drive the milling machines, lathes and presses. It is seemingly a waste to change a form of power into some other form and then convert it back again into the original form. However, as it is economy that has prompted such a system of conversion, and as it is economy which is the most important item in a power plant, the system is more meritorious than it seems to the man who gives the subject but a passing thought.

#### An Equalizer of Energy.

It is a well known fact that in all factories, whether they be bicycle shops or not, there is a wide variance in the amount of power used and necessary at different times. All of the machines in the shop may be running at one time and may be running at the full extent of their capacity, or only a few machines may be running, and those running only on light loads. The power required thus varies as the work varies, but the power supply must at all times be able to furnish the amount of energy required when all of the machines are running heavily. Supposing that a certain factory has such machines that when all are being operated, four hundred horse-power is needed, and that for half of the time on an average only about two hundred horse-power is needed. Then about two hundred horse-power is wasted fifty per cent of the time, for the engine must be a four hundred horse-power engine and run at a waste half of the time. This condition is what has made an opening for electric power in factories.

The latest electrical development, with view to furnishing power economically, is the storage battery, and there is no reason why its advantages may not be enjoyed in bicycle factories as well as in other power plants. It can be used in connection with plants driven from a purchased current or with those in which the current is home generated. In the first mentioned system the current would come from some electric supply station and would drive electric motors placed in the different rooms of the factory, there being in some instances individual motors for certain machines and sometimes motors driving the line shafts of rooms. The current, instead of driving the motors direct, passes through a storage battery. This battery is large or small, in accordance with the extent of the plant. Suppose, for sake of illustration, that the average load on the power is two hundred horse-power, and that it occasionally

runs up to four hundred, and sometimes drops to almost nothing. At all events, the power is used only during the working hours, say ten, there being no load on the power for the remaining fourteen hours of the day. Were the current used direct, it would have to be sufficient to furnish four hundred horse-power at all times, and as electric current is bought by the year, would be wasted for more than half of the time. By using the storage battery, even though the factory were run twenty-four hours daily, the current required would have to be sufficient to furnish only the average power of two hundred horse-power. When the machines were running lightly and only part were being operated, the superfluous current would discharge into the storage battery, charging it. When more machines were put into operation and the power required run up beyond the average of two hundred horse-power, the storage battery would begin to discharge, thus supplementing the current and allowing the constant two-hundred horse-power supply to drive during certain periods machinery requiring four hundred horse-power. The fact of the machinery running less than half of the time makes the reduction in the amount of original power needed still less. During the night the entire current will discharge into the battery, charging the latter to a point which will allow it to carry almost all of the entire load during the working hours. The current needed and paid for would thus be several times less than that needed to run the motors and machinery direct.

#### Reduction of Steam Power.

In a power system, where steam is employed to drive an electric generating outfit, the storage battery is useful in the same manner. Instead of driving direct from a four hundred horse-power steam engine, a certain size dynamo is operated by, say, a two hundred horse-power engine, and the electric current thus generated used to drive the motors in the shop through the medium of the storage battery. The original power unit necessary is made much less than with the direct system and the load on the current kept much more constant.

Whether the electric current be generated in the factory or be purchased from a supply station, the storage battery offers the additional advantage of being not only a money saving auxiliary, but of being able to take, for a short time, the place of all other forms of power. This advantage is apparent in case of accident or other cause which renders the engine, dynamo or supply current useless.

#### Applied to Various Work.

A late demonstration of the utility of the storage battery and the economy derived from its use is an application to a New York office building. A twenty-five horse-power steam engine supplied with steam from a street service pipe drives a twenty kilowatt dynamo. The exhaust steam from the engine passes through an exhaust pipe properly connected to the heating system of the building. The dynamo is run in connection with a storage battery comprising 118 cells, each containing four positive and five negative plates, 10 $\frac{1}{4}$  inches square. This dynamo-storage battery system operates two Sprague high-speed elevators, on which, of course, the load is exceedingly varying,

and 500 sixteen candle-power incandescent lamps, as well as several pump and ventilating motors. The cost of the steam used in operating the plant is under \$1,200 per year, and when it is taken into consideration that this amount heats, lights and operates the elevators of a thirteen-story office building, and that it is fully \$500 less than the expense of operating any other system of equal extent, the commercial and mechanical value and economy of the storage battery is apparent. The storage battery in connection with an electric power system will yield the same results in a bicycle factory as in a street railway or office building plant. In the latter two, as well as in other power plants where it has been tried and is in operation, it has without exception made great savings in the expense of furnishing power. The example is sufficient to warrant its adoption in bicycle factories, the owners of which desire to save money.

#### Initial Expense to be Reduced.

The one point urged against the secondary battery is its expense at the time of installment. By those who desire to increase the capacity of their power plant and who consider the advisability of installing a storage battery, it is urged that the cost of the battery is such that it will be cheaper to put in another engine or otherwise enlarge the original power supply. Storage batteries are cheaper in Europe than they are in this country, and, considering the fact that their development here is a work of the last three or four years, and that the disastrous effect of litigation in the courts has been ended, the prospects for less expensive batteries in the United States is almost assured. In the meantime, however, the cost is such that the great economy of its use enables the storage battery to more than pay for its installment cost. The convenience in a bicycle factory of an electric power which is not only economical, but which allows each room, or, for that matter, each large machine, to be operated independently, is apparent. The waste of power from extensive systems of line shafts and belting is obviated, and each piece of machinery is driven when needed, and when not needed the power necessary to operate it is not wasted.

#### Trade Marks for Bicycles.

A decision was recently handed down by Patent Commissioner Duell, by which registration was refused for a word denoting a color as a trademark for bicycles. The grounds first given by the Examiner for refusing to register the mark were that the word is the salient feature of applicant's name and is an ordinary surname. To this the Commissioner adds: "It is well settled that color alone does not constitute a trademark. If a manufacturer were allowed to monopolize by trademark, the color of the package in which his goods might be wrapped or the color of the paint or enamel applied to them, then legitimate competition would be seriously interfered with. A manufacturer of bicycles may paint or enamel his bicycles any color which he may select; but such selection will not take that color from out the public domain, and any other manufacturer will have an equal right to use the same color. This right being a common one, no manufacturer can exclusively hold the right to any color as against others, and if one paints or enamels his bicycles white, yellow, blue, green, or olive, he has a right to designate them by the color employed."

#### Complaints of Export Methods.

Consul-General Cole writes from Dresden: While American manufacturers complain of the difficulties in introducing their goods into Germany, I am inclined to think some of our people at least do



not pay sufficient attention to promptness in executing orders they receive, or care in making shipments to insure their reception at destination within a reasonable time. Two complaints that have reached me well illustrate the trouble: An order for machinery given early in June last to an eastern manufacturing company has not been received, although sight draft with invoice attached was paid in August; I have seen invoice from an Ohio tool company, dated June 3, 1898, the sight draft for which was paid August 8 last, but up to October 7, there are no tidings of the goods. These delays are very provoking to the purchaser or consignee, particularly after he has long ago paid for the property, and, unless corrected, will have serious effect on American trade in Germany.

### SOLID FLOORS FOR FACTORIES

**French Embed Boards in Asphalt Herringbone Pattern—Concrete as a Foundation.**

A unique method of laying floors where great solidity is required has obtained wide application in France, and is growing in favor in some of the other Continental countries. It consists in putting down a floor, not as usual, on sleepers, but in embedding the boards in asphalt. Pieces of oak, usually about two and one-half to four inches broad, one inch thick and twelve to fifty inches long, are pressed down into a layer of solid asphalt, not quite an inch thick, in the well known herring-bone pattern. To secure a complete adhesion of the wood to the asphalt, and obtain the smallest possible joint, the edges of the pieces of wood are planed down, beveling toward the bottom, so that their cross-sections become wedge-like. It is stated that these floors are used quite frequently for the ground stories of barracks and hospitals, and that they have been laid in the numerous forts around Metz, Germany. A number of advantages are cited in connection therewith. A plan in some respects resembling this has been employed in the construction of the floors of some factories and foundries in the United States. It is similar, however, only in some of the more general features, the details being altogether different. Sleepers are employed, but instead of stretching between supports, they are solidly bedded in concrete. Upon them, planking is placed, each plank as laid being bedded in hot tar.

One of the most annoying features of many otherwise well-built factories is their poorly constructed floors. A tight, smooth, strong and durable floor is what is wanted, but in floors as commonly constructed, some of these qualities, at least, are lacking. A floor upon which heavy machinery can be placed without regard to the locations of the beams and girders is a rarity. Floors which rest upon the ground, as ordinarily built, are constantly wearing out, and are not always to be depended upon. The construction employed in the plan above outlined combines all of the desirable qualities mentioned, while avoiding the objectionable features. The surface of the ground, after the top earth has been removed, is thoroughly smoothed and rolled. Four inches of concrete is then applied, and while this is soft, locust stringers are bedded in it. These stringers are placed about thirty inches between centers. After the concrete has become perfectly hard and solid, two-inch planks of Georgia pine are laid, each plank in turn being bedded in hot tar, which is spread upon the concrete as fast as the planks are laid and spiked. The result is a floor upon which the heaviest machines can stand in any convenient position without the necessity of any special foundations. Moreover, it is water-proof, damp-proof, and no miasma

can arise from the ground through it. A floor of this kind is both cheap and solid, but an additional fact which will appeal to every factory owner and builder is that such a floor will last until worn out from the top, as there can be no decay from the under side. It is reported that floors constructed upon this general plan have been in use in some of the older European factories upwards of twenty-five years.

### PARTS MAKERS' AGREEMENT

**Fixes Prices by Unanimous Consent and Prohibits Individual Reductions—No Penalties Provided.**

The form of agreement prepared for adoption by the proposed Associated Manufacturers of Cycle Parts now in process of organization sets forth in full the plans of the bicycle parts makers. The parties to the agreement agree for a period of one year from the date of signature not to sell any bicycle parts for less than the schedule agreed upon and made a part of the form, and consent to submit similar goods to the association to be inspected and classified. They also agree that no goods shall be sent out on memoranda, nor shall any bills be dated ahead, and that no gratuity or commission shall be allowed to any customer, commission agent or purchasing agent; nor shall any other terms of sale be granted to a purchaser than those agreed upon by the association.

To secure a plan of uniform cooperation in marketing various productions of bicycle parts, it is proposed to effect a permanent organization by electing a president and secretary and adopting the rule: "All prices offered must receive the unanimous vote of those present (at the meeting to arrange the schedule) to be adopted."

With a view of meeting the competition of manufacturers who are not members of the organization, and preventing the cutting of prices at points where it is at times wholly unnecessary, it is agreed that no member of the association shall deviate from the prices and terms agreed upon, without first obtaining permission from the secretary: that his request shall give the name of the competitor making the lower price, the name of party to whom the competitor made the price, and all information as to why a change in association price is desired, and if, in the judgment of the secretary, it appears desirable to grant such permission, he shall immediately telegraph his consent to the member making the request, and shall at the same time notify every member by wire, giving each permission to name the same price to the same party, and to this party only.

### LAW POINTS ON PARTNERSHIP.

**Recent Legal Decisions of Interest to Nearly all Firms in the Cycle Trade.**

Incoming partners are not liable for the prior debts of the firm unless they expressly assume them.

Where the business for which a copartnership is formed is illegal, the contract of partnership is equally so.

A surviving partner is not entitled to have his personal exemptions paid out of the assets of an insolvent copartnership.

A partner who, after dissolution of the firm, converts firm property to his own use is liable for same with interest thereon.

Where a partner retiring from the business allows his unliquidated interest to be continued in the business of a new firm, the interest so left becomes liable not

only for partnership debts then outstanding, but also for those subsequently created by the new firm.

One is not liable for holding himself out as a member of a firm, unless the debt was incurred through reliance upon his credit.

All members of a partnership are bound by the false representations of one of the partners, made in the sale of partnership property.

A partner has no right to appropriate partnership property to the payment of his own debts without the consent of the other partners.

The fact that one partner is indebted to the other on copartnership transactions gives the other no lien upon his debtor's individual property.

A partnership may be formed by the voluntary consent of the parties, without written articles, by tacit approbation, by parol contract, or even mere acts.

One partner cannot take any business to himself, for his own exclusive benefit, that is within the scope of the partnership business, unless specially provided for.

Each partner is liable individually for all wrongs committed in the course of the partnership business, and may be sued along with part or all the other members of the firm.

The mere naked promise of one that another shall share in the profits of his enterprise, where the other furnishes or does nothing towards the enterprise is void, for want of consideration.

Where the books of a firm show that one of the partners is indebted to the firm, the purchase of his interest in the partnership by the other partners extinguishes the debt, and his liability to it ceases.

A partner retiring from a firm after the purchase of goods by it is not thereby released from liability, although the seller afterwards extends the time of payment to the one continuing the firm's business.

Where a firm dissolves by a change of its personnel, the assets of the old firm will not become the property of the new firm without specific and distinct agreement transferring title to the new partnership.

Though a partnership, as such, possesses no capacity to take a conveyance of the legal title to real estate, it may acquire in its firm name a lien on real estate to secure an indebtedness, or take same in names of the partners for the benefit of the firm.

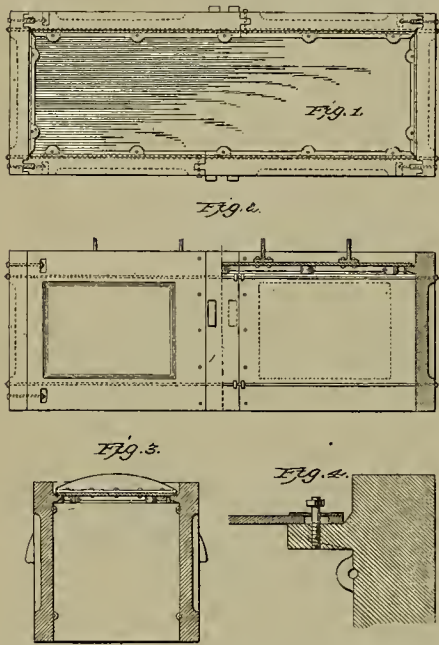
### Boys and Girls in Factories.

The Inspector of Workshops and Factories in Toledo is enforcing the law relative to the employment of boys and girls under 15 and 16 years of age, respectively. A number of such youthful employes in Toledo bicycle factories have been obliged to leave the shop and take up study in school. In many instances the enforcement of the law works a hardship, as the bread winning power is shut off where the youth are the only support of families. Again, the law will work great good for it will take the cheaper laborers out of the factories and thereby contribute to better workmanship with all machine tools which are not wholly automatic.

## RECENT PATENTS

### Annealing Box That Provides for Expansion—Interesting Eccentric Driving Mechanism

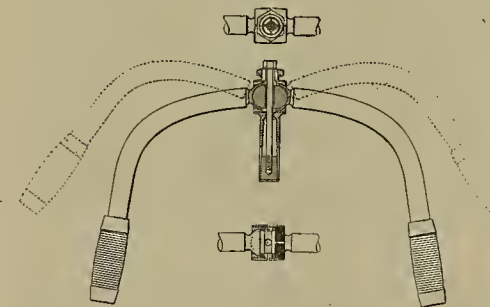
**Annealing Box.**—It has been the inventor's object to provide an annealing box which will be durable and successfully withstand the intense heat to which these boxes are subjected, the construction being such as to provide for expansion and contraction of the top plate and prevent the top plate from sagging or buckling. In the accompanying drawings, Fig. 1 is a plan view of the annealing box with the top removed. Fig. 2 is a side elevation with one end and a part of the top in section. Fig. 3 is a cross-section through the box and top, and Fig. 4 is a detail



view showing a part of one side of the box with the top plate and its supporting ledge. The box may be made of cast or wrought iron or steel, as may be found desirable. The side sections may be in two parts, and all the sections are made with interlocking tongues and recesses and secured together by bolts connecting the parts at each joint. The sides, shown in Fig. 1, are also in section, with tongues in one section fitting in recesses in the other sections, and bolts secure the sections of the sides together at these joints. In order to brace the whole structure longitudinally, rods pass between the end plates from end to end through ears, which prevent the rods from buckling under the heat and keep them straight, the ears being located at intervals on the inner wall of the side sections. In order to support the top plate, a ledge is formed around the inner wall of the sections, this ledge projecting inwardly, and at intervals the ledge is slightly extended, and these extended portions are provided with openings adapted to receive threaded bolts. The top plate is of slightly less width and length than the opening constituting the entrance to the box, so as to allow for the contraction and expansion of the plate without buckling, and after the top has been placed upon the ledge the threaded bolts are passed down through elongated openings in the top plate, these openings allowing for the expansion and contraction; and covering the openings are small plates, which form supports for the heads, fitting on the ends of the bolts. Instead of nuts being used for this purpose, any form of fastening will do, provided it keeps the top plate to its seat. In order to prevent buckling, the top plate is stiffened by ribs, which extend crosswise, as shown in Figs. 2 and

3, being bolted by flanges to the plate. It will be noticed that the ledges are arranged below the upper edge of the sides of the box, so that sand may be filled in this space above the top plate, and this sand will cover the joint about the edges of the top plate, which, it will be seen, does not reach to the sides of the box, and in this way allows for expansion. The corners of the box are inclined, and the edge of the top plate will rest against this incline, and the sand will rise and fall as the parts expand and contract. In the contracting of the box the incline will allow the sand to slide upon it easily, and in expanding the sand will drop down, following the top plate, keeping the cracks air-tight, but not interfering with the free expansion and contraction of both the top plate and the sides of the box. The inventor is Robert A. Wilson, of Canton, O., assignor of two-thirds to H. A. Crouch and W. T. Hall, of the same place.

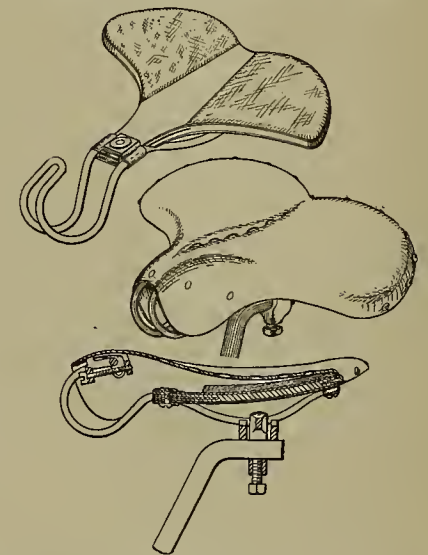
**Martyn's Handlebar.**—The bar is formed of two separate portions, each terminating at the inner end in cups which fit upon hemispherical surfaces of a core, to which they are confined by nuts with concave inner holding surfaces. The handlebar post, formed with a transverse cylindrical opening, in which are contained the core, the cups, and the rings. The latter are located within the ends of the opening in the post and are rendered relatively movable by splitting the post axially in the plane of the bicycle. By contracting the split portions of the post together, the rings are caused to approach each other, and thereby the cups are gripped solidly upon the core at any desired adjustment of the handles. The mode of adjusting the rings on the post is to form the rings with a screw-threaded exterior surface, which engages with an internal screw-thread in the transverse cylindrical opening through the post. The parts are assembled by first introducing the core into the aperture, then placing the cups in contact with it, and then slipping the rings over the handlebars and screwing them into the opening until they make a rather loose contact with the outer surfaces of



the cups, thereby confining the cups upon the core, but at the same time allowing them to be shifted thereon as may be desired. In order to provide for a more perfect gripping of the cups, each ring has a split, and the head of the post is also split at right angles to the split in the rings, extending from the upper extremity of the head only down into the opening. To produce the simultaneous contraction of the portions of the head formed by the splits, the head is made with an upper conical projection, composed of the extremities of the split portions, and a screw-thread is cut upon the conical projection to receive a conical

nut. When this nut is turned down, all four portions are contracted together, and the effect is to simultaneously contract each of the rings circumferentially upon itself and both of them laterally toward each other. The resulting gripping action produced upon the cups is extremely powerful and serves to clamp the cups very solidly upon the core. The inventor contemplates to have this construction utilized in conjunction with a draw bolt expander device for securing the handlebar post in the steering head of the bicycle, as shown in the illustration, but this is not essential. The inventor is Fred M. Martyn, of Woburn, Mass., assignor of one-half to James J. Freeman and Henry F. Davis, of the same place.

**Wheeler's Saddle.**—The claims allowed for this patent are six in number. Claim 1 reads as follows: "In a bicycle saddle, the combination of the broad wooden frame, the spring mounted on said frame and attached at its front and rear ends thereto, said spring having the yielding forwardly-extending portion and the curved portion near the rear end



thereof, and the leather supported on said frame and spring." Claim 6 is more specific, as follows: "In a bicycle saddle, the combination of a solid wooden frame shaped into concavo-convex form having the curved back and laterally-extending side portions and the reduced forwardly-extending neck, the back of said frame rising above the reduced forward portion thereof and having an inward curve at the center of the rear, the leather shaped to conform to the contour of said frame having at its back a central inward curve which coincides with the curve of said frame and having the central longitudinal depression leading from said rear inward curve and extending forward to a point adjacent to the pommel, the pads interposed between the leather and the frame separated to form an open space between them, the central depressed portion of the leather depending between said pads, the spring attached to said frame at the front and rear, its forward end projecting beyond said frame and attached to the pommel of the saddle leather." The inventor is Benjamin F. Wheeler, assignor to The Wheeler Saddle Co., of Detroit. The patent is numbered 613,050; dated October 25, 1898. The application was filed October 12, 1895.

**Salsbury's Driving Gear.**—In the crank bracket is fitted a tube upon which are formed cone bearings. The tube projects at both ends of the crank bracket and carries near each end an eccentric. These eccentrics are at ninety degrees to each other. Each of the eccentrics carries a strap which runs on balls interposed between the strap and the eccentric and held in place by a casing. At its ends and exterior to the eccentrics, the tube is provided with casings containing balls upon which bears the crank shaft carry-



TRADE MARK



26



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On their wheels AT NO EXTRA COST, either wholesale or retail.

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“They are after you, Mr. Bicycle Manufacturer.”

WHO?

Our Travelers!

They are looking for all manufacturers who are looking for the best in our line. We don't make cheap tubing for use in cycle construction and don't believe any bicycle manufacturer who makes a good wheel and stands behind it will consider seriously the use of inferior tubing for one minute.

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is made from the highest grade Swedish Charcoal Steel that can be obtained. “SHELBY” has the capacity and equipment to meet all demands. “SHELBY” has the reputation of making tubing of the highest standard. Catalogues and further information on application to our offices.

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General Sales Offices: CLEVELAND, OHIO, U. S. A.

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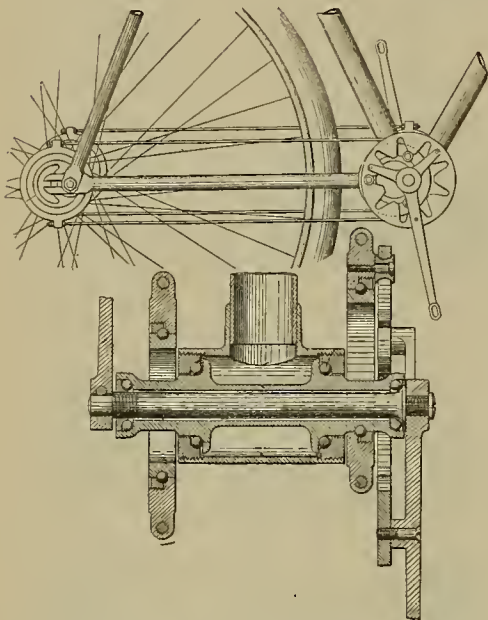
144 Chambers St., NEW YORK, N. Y.

135 Lake St., CHICAGO, ILL.

29 Constitution Hill, BIRMINGHAM, ENG.

Mention The Cycle Age

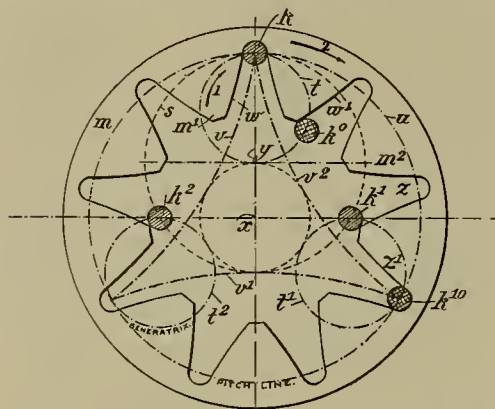
ing two casings, of which one is capable of adjustment. On one of the eccentric straps, preferably the right one, are fitted a number—three are shown in the illustration—of revolving bowls or studs, placed at an equal distance from each other on the same circumference concentric with the strap. Onto the crank on the same side is secured in any suitable manner a disk having a number of inner hypocycloidal teeth, the faces of which are so determined and drawn as to act



upon the bowls in succession and consecutively. Finally, each of the eccentric straps is connected by two rods to the corresponding straps of similar eccentrics, mounted upon the two ends of the axle of the rear wheel and placed at ninety degrees to each other.

The motion obtained by this mechanism is explained by the inventor with reference to the diagrammatic drawing shown, as follows: It is well known that when an eccentric is revolving every point of its strap describes a circle, the radius of which is precisely equal to the radius of eccentricity of the eccentric. This being so, let it be assumed that  $s$  be the imaginary circle drawn upon the eccentric strap  $f$  and passing through the centers of the bowls  $k$   $k'$   $k''$ . Every point of the said circumference, and especially the center of each of the bowls  $k$   $k'$   $k''$ , will describe while revolving around the eccentric a circle  $t$   $t'$   $t''$ , the radius of which will be equal to the radius of eccentricity  $x$   $y$  of the eccentric. Vice versa, it is obvious that if the center of each of these bowls be caused to describe the said circle, the strap will receive the requisite motion for causing the eccentric to revolve. On the other hand, consider the center of any one of the bowls—say  $k$ —when the said center assumes a position most distant from the axis of rotation  $x$  of the eccentric and draw from the point  $x$  taken as a center a circle  $u$ , passing through the point  $k$  and therefore internally tangential at that point to the circles  $s$  and  $t$ . It will be clear that if the two imaginary circles  $u$  and  $t$  be assumed to revolve within each other in the direction of the arrows 1 and 2, respectively, the trajectory of the relative movement of the point  $k$  of the circle  $t$  with reference to the circle  $u$  will be the hypocycloid  $v$ , and that if the respective diameters of the circles  $t$  and  $u$  are suitably selected, so that the one shall be contained in the other an exact number of times, the point  $k$  of the circle  $t$  will return exactly to the starting point of the circle  $u$  after describing, in accomplishing its motion with reference to the said circle, a series of hypocycloidal trajectories which may be represented by  $v$   $v'$   $v''$  and the number of which will be precisely equal to the numeral which will express the ratio between the diam-

eters of  $u$  and  $t$ . Vice versa, it will be readily understood that if the circle  $u$  be assumed to revolve in the direction of the arrow 2 by causing the point  $k$  of the circle  $t$  to follow the hypocycloidal directrix  $v$ , the circle  $t$  will revolve in the direction of the arrow 1. It therefore follows that if within the disk  $m$  are cut teeth having a hypocycloidal profile drawn through the directrix  $v$  of Fig. 4, the number of the teeth being so calculated for a given number of bowls  $k$   $k'$   $k''$  and for a given ratio of pitch-lines  $t$  and  $u$ , the hypocycloid described by each bowl  $k$  with reference to the pitch-line  $u$  shall comprise an arc of the said circle  $u$  equal to the fraction of the said circle corresponding to the number of bowls  $k$   $k'$   $k''$  and to the ratio of the diameters of the pitch-lines  $t$  and  $u$ , and if the disk  $m$  be caused to revolve in the direction of the arrow 2, starting from the position shown, then the hypocycloidal face  $w$  of the tooth  $m'$ , will first act upon the bowl  $k$  and cause its center to become displaced according to the circle  $t$ , which movement will be imparted to every point of the strap  $f$ , and consequently to the bowls  $k'$  and  $k''$ , until the face  $w$  reaches the position  $w'$  and ceases to act upon the bowl  $k$ , which will then assume the position  $k^0$ . At that time the face  $z$  of the tooth  $m^2$  will have reached the position of  $z'$  and will begin to act upon the bowl  $k'$ , which will then have assumed the position  $k^1$ , and motion is continued to be imparted by means of the bowl  $k''$ , then again by means of the bowl  $k$ , and so on, the re-



quired teeth of the disk  $m$  thus successively engaging the bowls  $k$   $k'$   $k''$ , so as to impart to the eccentric  $f$  a continuous circular movement, the angular speed of which with reference to that of the disk  $m$  will be precisely in the same ratio as the diameters of the pitch-lines  $u$  and  $t$ . The inventor is T. G. Salsbury, of Paris, France. The American patent is number 612,995, dated October 25, and carries eight comprehensive claims. One of the chief objections to this transmission method as explained by the inventor is the small choice of gears to which the rider would be restricted with any given size of rear wheel. The system is supposed to be applicable to motor vehicles as well as to bicycles, or better.

### NOVEL SPROCKET REPAIR

**Rim of Old Wheel Is Cut Off an Inch from the Hub and New Rim Riveted to the Arms.**

A quite frequent repair on old machines is the replacement of the front sprocket, the work being made necessary by the wearing out of the original sprocket. Sometimes the work is very difficult on account of the sprocket fastening. Many old sprockets are brazed to the axle or otherwise secured so that the task of taking off the old and putting on a new one is laborious enough to take all the profit off the job. A repairer has this season replaced many such sprockets in a manner that not only affords ready accomplishment of the work, but enables the shopman to better please the patron than would be possible

by the mere duplicating of the old sprocket wheel. The method also makes it possible to put on a larger sprocket than can be commonly secured of the old pattern, and avoids all machining of stock sprockets in order to make them fit the axle.

The old sprocket is not taken from the axle, but the arms are sawed off about an inch above the hub. A sprocket of the popular type is purchased and holes drilled in the ends of the old sprocket arm stubs. The sprocket is then placed on the inner side of the old hub and rivets put through the holes. Careful and solid riveting will securely fasten the new sprocket to the hub. The rivets should be as large as the holes through which they pass in order to prevent the sprocket working loose in use. The dished side of the sprocket being turned outward will bring it in approximately the same chain line as the former wheel. The job in each instance where it has been executed has given satisfaction as it gives the owner of the machine a new sprocket which is of a late popular style and lends the bicycle something of an up-to-date appearance. A slight advance in charge may be made for supplying the new sprocket over that which could be expected for putting on one of the old style, and as the job is easier to do than the average job of sprocket replacement after the old plan, it becomes a more profitable repair for the shopman.

### WHAT IT COSTS TO FAIL

**New Bankruptcy Law Makes Cost of Proceedings Lighter—Clerk, Referee and Trustee Fees.**

Regarding cost of procedure in bankruptcy cases under the new law, W. C. Sprague writes in the Hardware Trade that it was the great expense entailed by the old laws that brought about their repeal. Under the new law, fees are moderate.

The petitioner must deposit with the clerk the sum of \$25, except in the case of a petition "of a proposed voluntary bankrupt, which is accompanied by an affidavit stating that the petitioner is without, and cannot obtain, the money with which to pay such fees." In such a case no deposit is required. Of the \$25, \$10 is for clerk's fee, \$10 for referee's fee, and \$5 for trustee's fee. The trustee, in addition, receives such commission as may be allowed by the court, not to exceed 3 per centum on the first \$5,000 to be paid as dividends and commissions, 2 per centum on the second \$5,000 and 1 per centum on the balance. The referee will receive in addition to the \$10 deposited with the clerk, a commission of "1 per centum on sums to be paid as dividends and commissions or one-half of 1 per centum on the amount to be paid to creditors upon the confirmation of a composition." Thus, in a case where the net assets for distribution amount to \$12,000, the clerk's fee would be, as in all cases, \$10, the referee's, unless an offer of composition was made and confirmed, \$130, the trustee's not to exceed \$175—a total expense for these officers in such a case of \$415.

The petitioner is allowed also one reasonable attorney's fee, to be paid out of the estate before distribution to creditors, the amount to be fixed by the court.

### Profit Due to Automatic Machinery.

After a series of misfortunes which have heretofore prevented the Alfred Appleby Twin Roller Chain Co., limited, of Birmingham, Eng., from showing a favorable balance sheet, this concern at its annual meeting, held last month, reported a profit of nearly \$7,000, as the result of the introduction of automatic machinery, by which an increase of 25 per cent in output and 25 per cent decrease in the number of employes has been attained.

# Fauber 1899 Hanger.

NEW IDEAS—NEW PRICES.

**MANUFACTURERS** who used Fauber Hangers were very successful and well satisfied.

**DEALERS** found them good sellers and bicycles fitted with them not dead stock.

**RIDERS** appreciate the simple and practical construction of the Fauber Hanger and the advantage of a standard article for which you can get any necessary repairs.

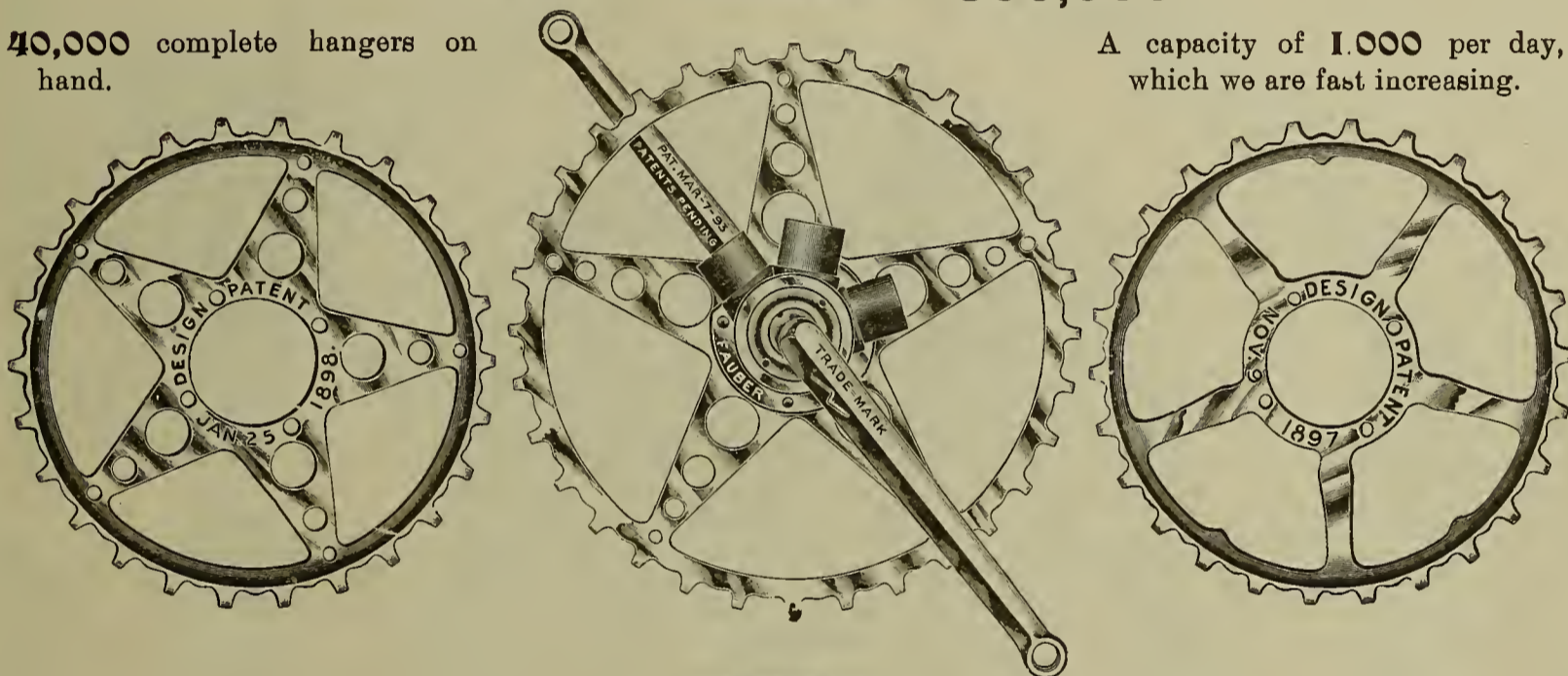
We are **Pioneers** in the manufacture of **One-Piece Crank-Axles** and own more than twenty allowed and pending patents. The **Success** of the Fauber Hanger is unparalleled in the bicycle trade.

## OUR RECORD.

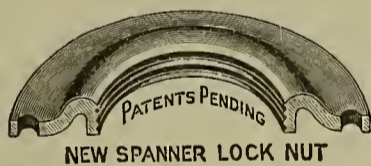
1895	Output over	200
1896	"	9,000
1897	"	30 000
1898	"	100 000
1899	Output estimated	300,000

40,000 complete hangers on hand.

A capacity of 1,000 per day, which we are fast increasing.



Our improved Spanner Lock Nut makes Note this is our

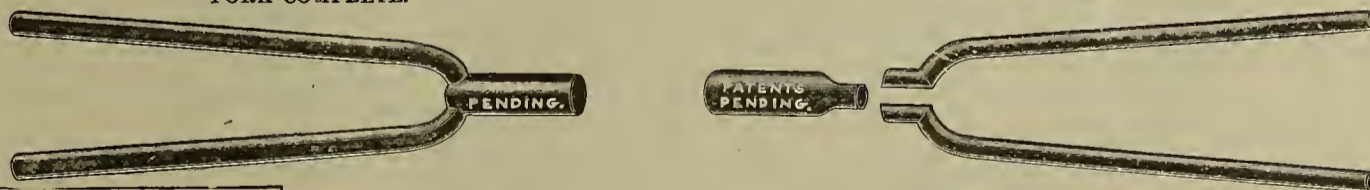


the end of the hanger flush and dust-proof. special construction.

## IMPROVED FAUBER REAR FORKS AND BACK STAYS.

FORK COMPLETE.

PIECES SEPARATE.



**THE COMING CONSTRUCTION**—These forks are made of three pieces ; the neck tube is slotted ; the ends overlap in the joint, making it flush and reinforcing the bend. We furnish the forks ready to assemble. They line up, are easily brazed, finished, strong and light. The shape and style of this fork are perfect. To supply a part of our trade for '99 we have contracted for 500,000 feet of Shelby Tube.

# W. H. FAUBER,

Manufacturer,

Jackson and Clinton Streets, Chicago.

Mention The Cycle Age

## THE WHITNEY STEAM WAGON

### Engine Reduced to Small Weight But Wagon Details Stoutly Made—Operation Simplified

George E. Whitney, New street, East Boston, has been engaged on the steam motorcycle since 1883, although his first complete steam wagon was not placed on the road until the month of October, 1896.

Mr. Whitney was born in 1863 and comes of a family which has furnished many names well known to the mechanical world, Amos Whitney, of the machine tool building firm of Pratt & Whitney, Hartford, being his uncle, and the Whitney of cotton gin fame being in his ancestral connection.

George E. Whitney has had a long experience with small yacht engines and boilers, which involve most of the problems connected with a motor suitable for driving steam wagons. Nearly twenty years ago Whitney did some work on the first Roper steam wagon, which was a very light vehicle, weighing only 410 pounds and capable of fast work. This Roper wagon had, of course, wooden wheels and steel tires, the wire-spoke suspension wheel and the pneumatic tire being unknown in the day of Roper's first work.

#### Boiler With Gun Barrel Tubes.

Roper used a boiler 20 inches high, of only 10 inches diameter, with 63 tubes of large diameter, No. 10 sporting gun-barrel gauge, and these large tubes were only 10 inches long. Such tubes as Roper thought fit to use were not to be bought in the market in his day, and Roper made them, buying sporting gun barrels and cutting them to his length, and turning them down to about 1-32 of an inch thickness in the body, with thicker ends, which were V-threaded 60 p. i., and screwed into his boiler tube sheets, the tube sheet holes being small in one head and large in the other head, both heads being tapped at the same time with a long 2-size tap, and the flues being made with 2-sized ends, so that the smaller threaded ends of the tubes could slip through the larger tapped holes in one tube sheet and drop down to the other sheet, and then the threaded tube ends could be turned home. Roper made the threads on his tube ends taper, and did

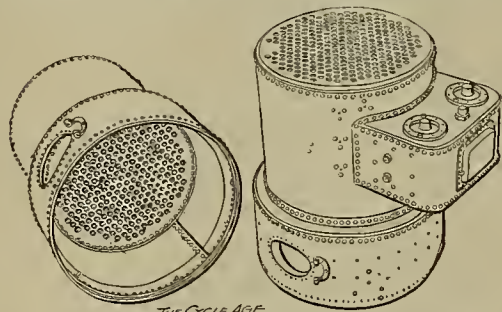


Fig. 1.—Boiler shells, one complete and one lacking flues and steam chamber.

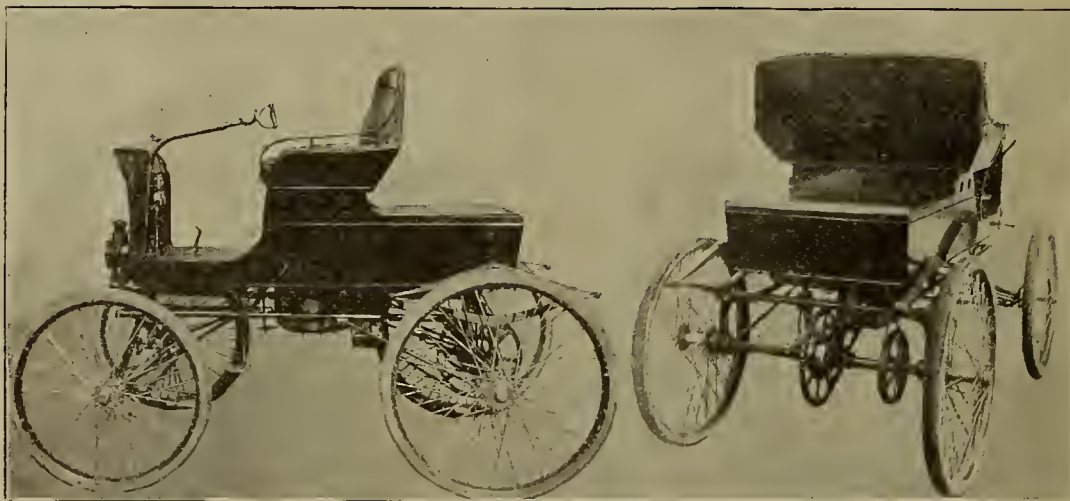
not expand his tubes after screwing them in, but depended on the taper threads to make them tight in the tube sheets. Roper's tubes were of too large diameter for their length, and Roper used coal for fuel, and had to stop his carriage and dismount to mend his fire, and when the fire was once made he had either to run his wagon or blow off his steam at the safety valve, as he had no way to check his fire, and, indeed, there is no way now known by which coal or coke can be burned under a road wagon boiler, so as to fill the exacting conditions under which a motorcycle steam boiler should work readily.

Whitney, in his experiments with yacht boilers, found that the single vertical

tubular boiler, with flues 26 diameters in length, produced more steam per pound of boiler than any other form of steam generator with which he experimented, and he has adopted as standard the boiler shown in Fig. 1.

#### Dimensions and Securing of Flues.

This illustration shows two Whitney boiler shells, one complete, except that the flues are not in place, while the other, lying on its side, lacks both flues and the steam chamber in which the steam cylinders are placed. The dimensions of the Whitney boiler are, total height, 20 inches, with a body diameter of 16 inches. This gives a horizontal "expansion ring" between the water-leg fire box diameter



The Whitney Steam Wagon, Side and Rear Views.

of 16 inches, and the body or barrel diameter of 14 inches. This introduction of the expansion ring in the outer shell of the boiler is advantageous inasmuch as it gives room in the fire box for a burner of the same diameter as the lower tube sheet, but its greatest use is in affording an easily bent surface, which will permit the boiler shell to expand and contract without changing the distance between the top and bottom tube sheets.

Whitney uses copper tubes, 1/2-inch diameter, and about 300 in number. These flues are first enlarged at one end by expanding, and are then V-threaded at each end 50 p. i., double threads. This gives a flue thread the same size as if the pitch were 100 p. i., making a thread so fine as to be almost invisible, unless attention is directed to it. The difference in the flue end diameters is about 1-32 of an inch only, which is abundant to allow the small end of the flue to slip through the larger holes in the flue sheet, as in Roper's construction.

Whitney makes his flue threads straight or parallel, not taper, and after the tubes are screwed into the tube sheets their ends are made tight by use of a 3-roll expander. The boiler tube sheets are tapped with a long 2-size tap, 50 p. i., double thread, straight and parallel. The boiler shell and fire box are of steel, about 1-10-inch in thickness, and the completed boiler, which weighs about 85 pounds only, is tested to 500 pounds hydraulic pressure. The steam pressure used is not high, only about 125 pounds, commonly.

Whitney's idea is, at this time, that he desires simply to know what will run best on the road. His patents and inventions are in the hands of a strong

company, and although he is now engaged on his seventh or eighth wagon, he has adopted no standard general construction. Some of the Whitney details, are, however, regarded as established, among these being the carriage frame and front axle support, the steering handle, which is very peculiar, the boiler and valve motion, the carriage springs and the wheels and wheel tires. No two of the steam wagons built by Whitney so far are alike; all have been built to order, at prices from \$1,500 to \$2,200 each, and in weights varying between 650 and 1,300 pounds.

#### Weights Gradually Increased.

It is noteworthy that Whitney began with his lightest vehicle, and has seen cause to increase his total weight to double that of his first wagon; all of these wagons have had the same motive power, so far as completed. The cylinders are 2 1/4-inch bore 4-inch stroke, and the two are cast in one piece, as shown in Fig. 2.

The two cylinders, 2 1/4-inch bore by 4-inch stroke, have no marked peculiarity. They are connected by

the walls of the steam-chest, and the valve faces, which are of locomotive proportions, stand at about 45 degrees of inclination to the steam-chest cover seat. Although Whitney's carriages all reverse and run equally well in either direction, he does not use a link valve motion, nor eccentrics.

#### Steering Assisted by Valve Action.

The valve action is taken from a double cranked shaft, the cranks having a radius equal to half the constant valve travel, and standing at 90 deg. to each other. This valve crank shaft is driven by a sprocket and chain gear even turns with the engine shaft. The engine shaft sprocket is fixed on the crank shaft, and on the valve crank shaft is mounted a sleeve, splined inside to slide endwise on

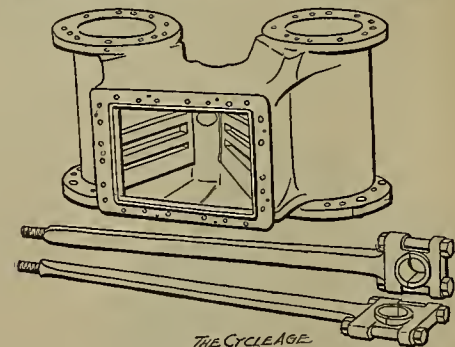


Fig. 2.—Cylinders and Connecting Rods.

a crank shaft feather, and having two spiral grooves on its outer surface, which engage two studs in the inside of the sprocket hub; the sleeve slides with a clutch-fork movement both on its spline or feather in the valve shaft, and through the sprocket hub, and thus, by virtue of

# Announcement Extraordinary

## MONARCH AND DEFIANCE LIST

### PRICES FOR 1899

Models 67 and 68, MONARCH ROADSTERS,	- -	\$50.00
Models 63 and 64, DEFIANCE ROADSTERS,	- -	35.00
Model 48 MONARCH COOPER SPECIAL,	- -	60.00

Tire Equipment Monarch Line: Dunlop \* \* \* Option: Goodrich Single Tube



Our prices for 1899 are not the only attractive features we have to offer. Progress is our motto. We have not reached that point in our existence where it is impossible to advance. We have an interesting story for good agents.

## RIDE A MONARCH AND KEEP IN FRONT!

New York. London.  
Hamburg.

# Monarch Cycle Mfg. Co.

Lake, Halsted and Fulton  
Sts., Chicago.

its exterior spiral grooves engaging the sprocket hub studs, causes the sprocket to make an angular advance or retreat upon the valve crank shaft of such extent as to cause the engines to run backward or forward at will. The advantages of this valve motion, which exactly corresponds in action to the well known shifting eccentric, are the avoidance of the large sliding circumferences inseparable from the eccentric, and obtaining the certainty of a full acting valve in both directions. There is no "hooking up" possible, as with the link, and hence the engine is always full powered, and so able to handle the carriage promptly. Too much importance cannot be given to promptness of driving action for motorcycle use. In narrow crowded streets, which are the rule in Boston, it is absolutely essential that a carriage should be able to stop, back, turn and go ahead promptly and certainly, and it is impossible to realize the instant change of direction of which the Whitney carriage is capable, until after one has ridden in it. With a link valve motion and the usual notched quadrant there would be no possibility of such cockroach-like celerity of motion in any direction as exists in the Whitney steam wagon; if the link reversing lever were held by friction on the quadrant, there would still be the possibility of less than a full valve action in either direction. Mr. Whitney did not say that this certainty of valve action decided him to employ the rather unusual form of valve motion which he uses, as this point was not mentioned. But it was very evident from the behavior of the carriage that the points specified are fully obtained, and are also extremely advantageous.

#### Where Backing is Required.

As to the need of a reversing or backing action in a motor wagon, there can be no question. No wagon is safe in a crowded street which has not brake power fully up to, or even beyond, its tire resistance; the lives of the passengers may depend on a stop so quick as to call for tire destruction to check the advance, and safety of life and limb go before the safety of working parts of the carriage. Hence, first, the brake effect must be all that the vehicle will endure.

Next, the automobile, to make headway in crowded streets, must have the power to back promptly, and for any desired distance. Suppose, as often happens in Boston streets, a wagon is driven down a narrow lane between other vehicles and comes to a block in the traffic. Then if the wagon can back out promptly the way it came, without turning, because in such a situation there is seldom room to turn, it need not wait until the block is broken, but can continue its way on another street, while the drivers of the horse drawn vehicles, unable to extricate themselves, stay in the bunch—and sing hymns and discuss church matters!

Stanley, whose steam wagon was recently described in these pages, says a motor wagon does not need to back, and the Columbia parcels carrier, now just offered to the public, has no backing action. The reason is very plain; the roads about Newton, where Stanley does his experimental driving, and about Hartford, where the Pope wagons make their trial runs, carry a very light traffic, with plenty of room for all vehicles appearing. Hence the Stanley wagon and the Columbia parcels carrier are at present without a reverse action, while Whitney, whose trial drives are made in the crooked, narrow and crowded streets of Boston, is fully aware of the need of quick movements forward or backward, and has provided his steam wagon with a valve motion which enables him to go where he wishes as quickly as the strength of his mechanism permits, and even quicker, if one is to judge from certain ragged

canvas-exposing tires, hanging on a peg in Whitney's shop.

So certain of his movements is Whitney that his driving appears to be of the most reckless description, as he takes the road in front of anything, carriage or trolley car, as soon as he is fairly ahead of it, and does not check speed until he seems to be in certain collision with obstacles in front of him. Whitney asserts, however, that in all of his many thousands of miles of hard driving he has never touched anything whatever with his wagons, and after the first half hour of his driving,—Whitney and the writer up,—all feeling of trepidation on the part of the passenger vanished, and was replaced by Whitney's own absolute confidence.

Much of Whitney's certainty in driving is undoubtedly due to his steering lever. This is a horizontally swinging lever of very peculiar construction, both at its lower end and in the upper swinging arm. The peculiarities of the lower end of the steering bar arise from the movements of the front axle with relation thereto, and while highly ingenious and effective, need not be particularly described at this time. The upper member of the steering lever has, however, distinctive functional elements of great novelty and also, apparently, of the highest utility.

#### Steering Handle of Many Functions.

Whitney's theory is that in an emergency the natural impulse is to keep hold of whatever the hand is grasping; hence

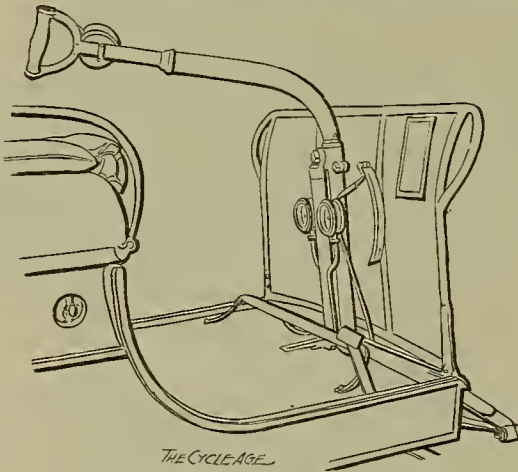


Fig. 3.—Controlling Lever.

a motorcycle should combine in one handle all that is needful to control its entire round of movements. Acting on this conviction, Whitney provides the inner extremity of his steering lever with a spade-handle grip, as shown in Fig. 3, standing normally about vertical, which is grasped by the driver's left hand, and is pushed right or left to steer the wagon, and is slightly rotated to open or close the throttle valve, and is pushed a little way outward, telescoping in the lever body, to place the valve motion in forward gear, while a backward pull of this same spade handle grip reverses the engines, and starts the wagon backward. The driver's right foot is on the brake treadle, the brake being a leather faced band acting on a drum of ample diameter. At first sight this many-functioned steering lever seemed likely to confuse the green driver, but a very short observation of its use on the road made it clear that nothing could be more easily learned, or more easily or quickly manipulated. It certainly takes less time to move a piece already in the hand than is required to let go of one piece and seize another piece, and in motorcycle driving fractions of a second are often of very great importance. After watching Whitney's manipulation of this steering, stopping, starting and backing handle for a few miles, the writer reached a most favorable conclusion as to its merits. Whitney asserts that this combination handle gives him a certainty of con-

trol impossible with any other arrangement whatever, and this wide claim seems really borne out by practice. The spade handle grip is far more secure than any other form of handle, and many accidents with automotors fitted with plain horizontal steering lever grips, would probably have been avoided with the spade handle grip, simply because the top and bottom guards prevent the displacement of the hand and consequent loss of control due to a rough road.

#### Complete Operation With One Hand.

The Whitney steering lever is shown in Fig. 3. A large bell is mounted on the lever near the grip, where it can be easily operated by the thumb. This bell was very seldom used, Whitney preferring to avoid others rather than to warn others to avoid him. As all cycle riders are well aware the unexpected clang of a loud bell close at hand often confuses the oblivious pedestrian, and sometimes leads to the very result the bell is designed to prevent. But the Whitney steam wagon is under far better control than any bicycle, and can be moved half an inch forward or backward from rest with perfect certainty, and can be checked in speed within three or four feet when running at a ten-mile clip, sufficiently to place it under the instant control of the brake.

The inner side of the dash board carries a small mirror which reflects the water gauge located on the boiler under the seat, and two gauges, one showing the boiler pressure and one the air pressure in the gasoline tank, which is about 3 pounds only, and there is also a graduated quadrant which is traversed by a float-actuated index finger, and thus indicates the amount of water in the water tank. The brake is operated by the treadle seen in front in Fig. 3. This leaves the driver with his left foot and right hand free, and gives him the ability to control the movements of the wagon solely with the single lever grasped by his left hand. HUGH DOLNAR.

#### INDIVIDUAL WORKING MOTORS

Sale of Power in Small Portable Quantities Would Permit Workmen to Live in the Country.

The bicycle was the first means of individual mechanical locomotion to come into wide and general use; and its rapid, unexampled success proves that whatever mechanism can be made of service in the everyday activities and recreations of life may tap at will the stream of the world's revenues, and divert Niagaras of gold into the industries of its own upbuilding. The bicycle has marked a broad advancement in mechanical evolution, and, although its place in the economics of the future is assured, it seems not unreasonable to suppose that in time science will contrive to place in our possession and under our control something which will do for us in the way of individual power what the bicycle is doing in the way of individual locomotion. The subject instantly broadens out in the range of its possibilities until it affects, either directly or in its ramifications, nearly every phase of life and industry.

Steam and electricity create special problems as they are harnessed to the world's work, until the conviction grows in the minds of deep thinking men that they are not all-sufficient powers. Steam is a centralizer. It concentrates industry and by gathering laborers into a small compass increases the cost of living and broadens the effect of losses on sales and of distress in hard times. Some agent of decentralization seems to be loudly called for to partially combat the centralizing tendencies of steam and electricity. Smaller motors, operated by other forces, may yet prove to be the right agent. Of course it is not within the power of any material agent to effect great changes



# Jobbing Bicycles

—...FOR 1899 Trade

NO OLD STOCK. EVERY MODEL NEW.  
TALKING POINTS THAT HELP YOU SELL.

For the requirements of 1899 trade we shall build three distinct lines of complete bicycles, embodying all features of value known in up to date construction. ❀ ❀ ❀ ❀ ❀

## We Are Ready Now

to show you our samples and to figure on your supply, either in complete or stripped bicycles. SNELI, Hubs, Handlebars, Forgings, Pedals, etc., are standard. Our long experience and immense facilities enable us to give you the best of service and guarantee you quality at the right prices. Your inquiries will receive our prompt attention. ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀

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SNELL CYCLE FITTINGS COMPANY,  
TOLEDO, OHIO.

except as it co-operates with our inclinations. The expensiveness of steam machinery co-operated with our inclinations to congregate in cities. The greater part of our growth is still, however, in the country and in the small towns. When we halt in the experiment of multiplying our great cities, our inclinations may co-operate with a motor energy which is plebeian and ultra democratic.

Let us suppose that a workman can make many of the innumerable small articles which have iron and steel as component materials. This workman has his bits of machinery and tools in his shop. They do not cost much more than the carpenter's chest of tools. He has the skill; he also has the tools; he wants the power. But a neighbor tells him that he can buy in quart or in gallon cans stored-up energy, be it of what nature it may, and that by a contrivance, which may cost little or nothing, he can attach his machinery to this democratic device and be, if he wishes, a semi-independent workman with the advantages in the gift of simple machinery. He can make many iron and steel articles in the middle of a prairie and sell them to his neighbors for cheap rent and cheap food. The divisibility of motor energy may make it the poor man's friend. You cannot buy ten cents' worth of steam power; but there is no reason why motor energy may not be sold in ten-cent packages if there is sufficient demand for it in that form. It is not impossible that the development and popularization of the "poor man's motor" may lie within the special province of the "greater cycle trade" of the twentieth century.

#### The Projected Philadelphia Show.

Philadelphia, Oct. 31.—The local Cycle Board of Trade is endeavoring to secure for Philadelphia the honor of being the first city on the American continent to promote an exhibition, the principal feature of which will be a comprehensive display of all the electric and steam-propelled motor carriages now in existence, of both foreign and domestic manufacture. President W. M. Brewster is now in correspondence with all known manufacturers of automobiles, with a view to insuring the co-operation of the majority of them. The local board is a unit in advocating such an exhibition, and its members are already enthusiastically at work endeavoring to insure its success from a cycling standpoint. Although the exact date and place were not decided upon at last week's meeting, it was the unanimous opinion that the first week in February was most suitable. The selection of a place will depend upon the tenor of the replies received by President Brewster from the automobile manufacturers. It is expected that at the November meeting of the board the full details will be announced and the preliminary work assigned to the various committees.

#### Two Whitneys Make Motorcars.

In a recent issue of this paper the name of George E. Whitney of East Boston was printed as George F. Whitney and as the latter is the name of a machine maker in Boston who is engaged in the production of an explosion engine motorcycle, the error was confusing. George E. Whitney has long been engaged in perfecting a steam wagon and has built and sold several steam driven carriages for use on common roads. His work is described in another article.

The White Hickory Wheel company of Flint, Mich., has leased Jackson Wheel Co.'s plant at Jackson, Mich., for three years and the two companies will be consolidated.

## CARRIAGE OR CYCLE DESIGN

### BUYERS' CONSERVATIVE TASTES

#### Problems of Motor Carriage Industry Preclude Anything That Looks Like Machinery.

C. E. Woods is the designer of the motor carriages bearing his name, and general manager of the Fischer Equipment company, of 110 East Twentieth street, Chicago, which manufactures them. He believes in incorporating the principles of carriage building as much as possible in the construction of motor vehicles, to the exclusion of bicycle ideas. Interviewed recently on this important subject he stated the reasons for his views substantially as follows: "The art of carriage building is very old and has been diversified to meet the many requirements of personal taste exhibited by those who are users of carriages. There is hardly a public stable today of any importance in which you cannot find ten to twelve different styles of vehicles, and the private stables of the wealthier class of carriage users run from three to six different styles of vehicles, each of which has its specific and different purpose.

"After three years of investigation among this class of carriage users I have always found the inquiry from them to be, without exception, or a perversion of the styles, luxury, finish and appearance of the vehicles to which they have already become accustomed. They demand absolutely the same diversity of design and adaptability.

#### Conspicuousness Is Embarrassing.

"This simply means that the elimination of the horse for a propelling power and the introduction of other means will not be acceptable to those who are users of fine carriages unless the change can be made without bringing with it a conspicuousness in carriage design that would be noticeable in any way to their embarrassment. In other words, the purchaser of a motor vehicle buys it for exactly the same purpose for which he has always previously bought a carriage—as a suitable means of conveyance adapted to his personal needs. The fact that it is self-propelled does not appeal to him so much as the fact that it is something in keeping with his tastes and demands, and I find that the introduction of any novelty in vehicle design is not only prohibitive of a market but is the cause for severe criticism from the users of the higher class of vehicles. There are some special features in which the motor vehicle will bear extreme originality in design, but not as a universal and general vehicle proposition."

#### Pneumatic Tires Not Necessary.

Mr. Wood's observations do not corroborate the statement heard in some quarters, namely, that bicycle construction in motor vehicles is the popular idea. "It is not popular and not practical for many reasons," he said. "Vehicles drawn by horses have required long years of experience in their general construction to make them thoroughly durable in their every particular, and when it comes to making a vehicle that is pushed instead of pulled, which runs at nearly twice the speed of the ordinary horse-drawn vehicle, and which weighs from two to three times as much, and is to operate on exactly the same roadways, we have a proposition which requires most careful consideration in its constructional features. Bicycle tubing with brazed joints and any form of cast connections has been found wholly inadequate to the requirements, even when mounted on pneumatic tires. It would perhaps be possible to design a very small and light

vehicle on the bicycle plan which might be fairly serviceable at an average rate of speed, but as a general carriage proposition it is entirely impracticable.

"What has been my experience with pneumatic tires?" repeated Mr. Woods. "It has been very unsatisfactory. The idea that they ride easier is correct in a limited sense. But pneumatic tires were designed for lightness in a bicycle and to give resiliency. For motorcycles these considerations assume a different aspect. The saving in weight disappears when the pneumatic is made as stout as required for motorcycles, and the desired resiliency is obtained through careful and proper adjustment of springs between the body of the vehicle and its running gear. Additional to this I have found that the pneumatic tire, even when inflated to its highest point, absorbs more power on the street than certain forms of hard rubber tire, so that as a general proposition I have abandoned the use of pneumatic tires in all vehicles which I have designed."

"What is the superiority, if any exists, of wood for motor vehicle construction over the all-metal theory?" asked the writer.

#### Metal and Upholstering Conflict.

"My opinion on this point," replied the man of experience, "is that it is a physical impossibility to make a motor carriage with metal as the principal material of construction without sacrificing shape, style, contour and finish. The application of anything like fine upholstery would be almost prohibitive. The special novel forms of machines in which metal is exclusively used could not be classed in the category of carriages."

Mr. Woods has built machines weighing from 750 to 3,300 pounds, and has formed the opinion that the proper distribution of weight, proper power application, and the limitation of losses in gears and means of transmission still present problems which make it impossible to determine at present to what minimum the weight of motor carriages may eventually be reduced.

#### Two Distinct Fields for Makers.

"Steam wagons, gasoline wagons, and all of that class of vehicles, have their particular field," continued Mr. Woods, "and I firmly believe will be brought rapidly to the front, but their adaptation is for commercial purposes entirely rather than personal conveyance. In other words heavy trucking and the delivery of merchandise will be their field, for the utter absence of carriage refinement in the application of such power makes it prohibitive of success in what may be termed fine carriages, either for public or private transportation."

#### M. & M. W. Co. Lose By Theft.

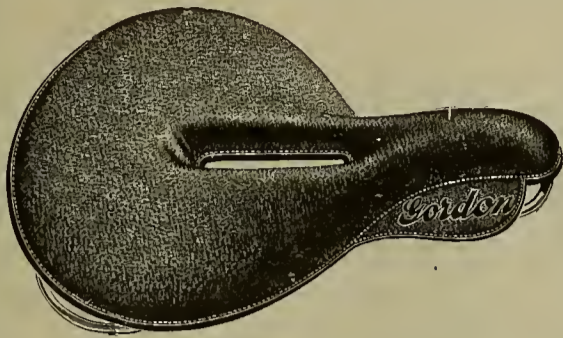
Manufacturers & Merchants Warehouse Company, of Chicago, has suffered losses to the extent of nearly \$2,500 through the peculations of a 16-year-old employe, who has for a long time been carrying away bicycle material and sundries, but has at last been arrested, and made a confession involving three others.

#### Bevelgere Co. Under Administration.

Receiver has been appointed for Bevelgere Cycle Co., of New York city, by Justice Pryor of the Supreme court, on application of Meyer Klein, who recovered a judgment against the company for \$140, on which \$25 was paid.

Burton, Griffiths & Co., Ltd., of London, England, are at present represented in this country by their Mr. Griffiths, who is visiting the manufacturers of Cleveland and Toledo this week.

# THE BECKLEY-RALSTON CO.



Quality the true test of cheapness. Gordon Quality is found only in the

## Stylish Gordon Saddle

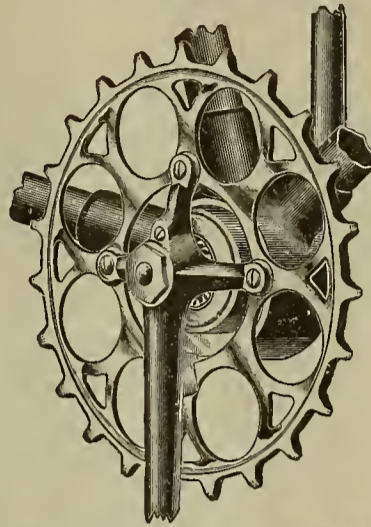
'99 MODELS ready for those willing to inspect the most popular saddle ever made—the original of its type, the best of its kind.

ELECTROS ready for jobbers desirous of cataloging high-grade and quick selling saddles.

PRICES ready for quantity buyers.

Cheaper standard or competitive models are also ready for those interested in comparing quality with price before concluding arrangements.

# THE BECKLEY-RALSTON CO.



Sole Agents for the Celebrated . . . . .

## D. & J. HANGERS

For Singles, Tandems, Triplets and Quads.

Records, friends, customers, satisfaction and a profitable business insurance policy go with D. & J. hangers without extra charge.

Don't let the first cost scare you, as the D. & J. is the cheapest in the end.

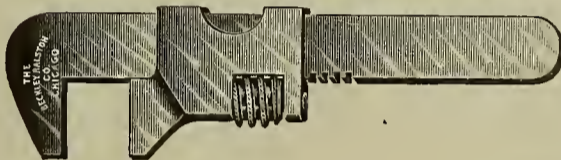
High-Grade Hangers for High-Grade Machines.

## A ROLLER CHAIN

Tool steel rollers, rivets bushed with tool steel, one-inch pitch always. It cannot stretch.



NO. 3 HIGH CARBON FORGED WRENCH



Get quotations on your '99 fittings. High-grade equipment. Frame fittings for singles and larger machines. Factory prices to quantity buyers.

Manufacturers of  
GORDON & GORDON  
PATTERN SADDLES.

# THE BECKLEY-RALSTON CO.

178 LAKE ST., - - - CHICAGO, ILL.

The Largest Distributing Depot  
in the United States for High-  
Grade Bicycle Goods.

THE BEST LINES OBTAINABLE. MADE BY PEOPLE WHO KNOW HOW.

Mention The Cycle Age

THE  
YALE

## We Have the Same Agents...

Year after year. There must be a reason for this. It is not difficult to guess. Our BICYCLES always please.

THE KIRK MFG. CO.  
TOLEDO, OHIO.

### Distributing Agents:

- Conroy Mfg. Co., 28 John St., New York.
- H. B. Shattuck & Son, Boston, Mass.
- Jas. Bailey Co., Portland, Me.
- Carlin & Fulton, Baltimore, Md.
- Mistrot Bros. & Co., Houston, Tex.
- Boutell Bros., Minneapolis, Minn.
- Powell & Clement Co., Cincinnati, Ohio.
- P. E. Allison, Louisville, Ky.

Mention The Cycle Age



A record of over  
40,000 MILES on a

# DIAMOND CHAIN

demonstrates that EXPERIENCE and GOOD MATERIAL count. Our '99 line will be the MOST COMPLETE offered to the trade. Ready soon.

Don't forget that we have the ONLY SATISFACTORY BOLT LOCK.



Closed.



Open.

## INDIANAPOLIS CHAIN & STAMPING CO.

INDIANAPOLIS, IND.

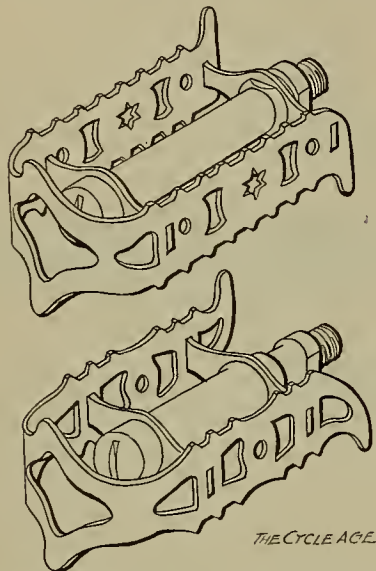
R. B. McWULLEN & CO.,  
General U. S. Sales Agents,  
309 Broadway, New York,  
88-90 Lake St. Chicago, Ill.,

NEW YORK DEPOT:  
J. S. Leng's Son & Co.,  
4 Fletcher St.  
Mention The Cycle Age

# INFORMATION FOR BUYERS

## RAPID GROWTH IN PEDAL TRADE.

Of the increasing business in bicycle parts, the pedals of the Bridgeport Gun Implement Co., of Bridgeport, Conn., with offices at 313 Broadway, New York, have become a prominent factor. Last year the business of this company is reported to have doubled that of the preceding season, and Star and Bridgeport pedals were handled by more than 100 of the leading manufacturers and jobbers of the country. In construction the '99 Star will not differ from the '98 model, as

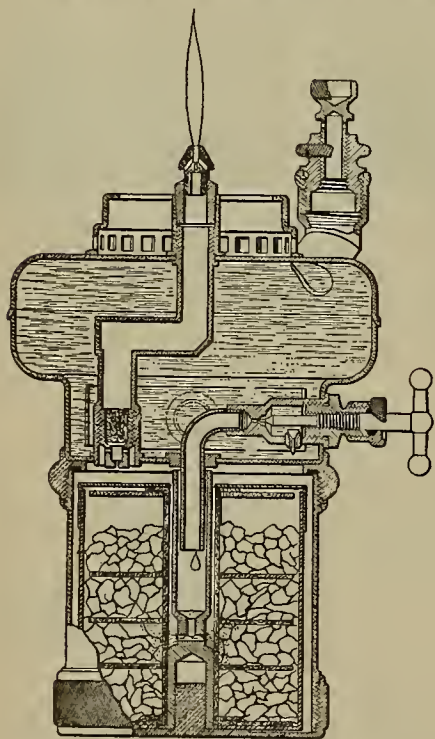


THE CYCLE AGE

it is believed that the previous style and grade of construction cannot be improved. The finish, however, will be even superior to that of last year. The barrels of both the Star and Bridgeport pedals are turned from bar steel, thus eliminating pressed cups and assuring perfect alignment and uniform wear on the bearings. The finish and the construction of parts and bearings are the same in the Star and Bridgeport pedals, but the form of construction in the Star reduces the leverage on the bearings to a minimum, owing to the increased length of the barrel, as shown in the first illustration herewith.

## BUNDY CYCLE AND CARRIAGE LAMP.

In the acetylene lamp of which sectional view of lower part is given, Frank E. Bundy Mfg. Co. of Elmira, N. Y., claims to have solved the problem of automatically generating the gas as it is consumed and in stop-

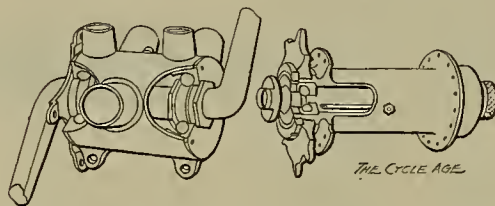


ping the generation at the proper time. It also claims to be sole owner of the patented rights to the use of an absorbent in the treatment of carbide with water. Details of construction are rendered plain in the drawing. The carbide cylinder unscrews and is recharged by removing the old charge and inserting a so-called "carbilot" of fresh carbide put up in a cylindrical case made air-

tight by means of lead seals at either end which must be broken open before the charge is placed over the water column in the generator. An over-pressure of gas in the generator operates through the feed cock to close the small admission valve and automatically stop the flow of water until the pressure goes down. A soft felt plug or washer is inserted in the lower end of the gas duct leading to the burner for the purpose of filtering the gas and taking out the impurities before they reach the burner. This must be removed occasionally when it becomes hard and full of impurities. The chief feature of this lamp seems to be in the formation of the "carblots," in which the granulated carbide is evidently divided into sections by circular disks of absorbent material which equalize the distribution of water to the carbide throughout the whole charge. Another feature is the novel construction of the bracket, which is of the rigid type designed for the head of the machine or for a buggy. The reflector is easily removable for cleaning by the loosening of a screw in the back. All parts are interchangeable and can be renewed at any time.

## DAVID BRADLEY CO.'S MODELS.

The truss framed America model will as usual be the leader of the concern for which E. M. Graham is superintendent and which is now known as the David Bradley Mfg. Co., 63 N. Desplaines street, Chicago, but this company will for 1899 also turn out a cheaper machine, called the Oriole and is as willing to pin its reputation to the latter as to the better known America model. In the America the one piece crank and shaft construction with which the superintendent's name has long been identified is used as well as the hubs with the easily removable sleeved axles which have for some time been distinguishing marks for the product of this manufacturing house. Both the hanger and the hubs are made with the same workmanship as of old and offer the rider superior facilities for taking apart and cleaning without any labor to speak of and with the smallest possible chance of losing balls or in other ways getting into trouble. The outlines of hanger mechan-



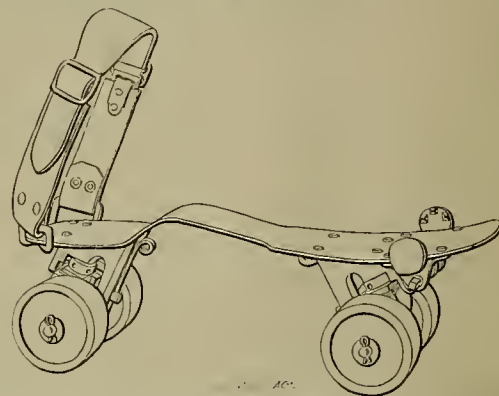
THE CYCLE AGE

ism and rear hub are shown in the accompanying illustrations. About the same style of hubs are used in the Oriole as in the America. The system employed for fastening seat post, handlebar post and handle bar is also the same in the two models and presents some novel points of practical value. The seat post fastening is of that kind in which the lower portion of the post, severed by a bias cut from the upper portion is drawn upward against the inclined edge of the cut by means of a drawbolt operated by a wrench applied to an octagon annular bolt head which bears against the upper end of the post. The fastening of the handlebar post is similar in principle. To secure the handlebar at any desired tilt the upper portion of the post is pierced below the split ferrule that grasps the bar, and a bolt is placed in the hole inclosed in a two-part sleeve, each of the sleeves having a segment cut out to form a wedging surface. These two concave surfaces, when drawn together by the tightening of a nut on the rear end of the bolt grip the bar securely within the ferrule. Corrugations are provided for additional safety though in reality superfluous. In both models tapered stays and forks are used. The stays are D shape from the brace down and taper from  $\frac{7}{8}$ -inch at the top to  $\frac{3}{8}$ -inch. The forks, of D pattern, taper from  $\frac{7}{8}$ -inch to  $\frac{3}{4}$ -inch. Twenty-two and twenty-four inch frames will be the stock sizes; in the former the steering head is  $5\frac{3}{4}$  inches long; in the larger frame  $7\frac{3}{4}$  inches. Hollow drop forged crowns are used in both models. The company will also market a tandem with the well-known central draft for front chain, as originated by Mr. Graham, incorporated in the design. An individuality which, while not obtrusive, plainly distinguishes the product marks all of the three models mentioned.

## IMPROVED HENLEY ROLLER SKATE.

The revival of roller skating as a popular amusement again brings before the trade and public M. C. Henley, the well known

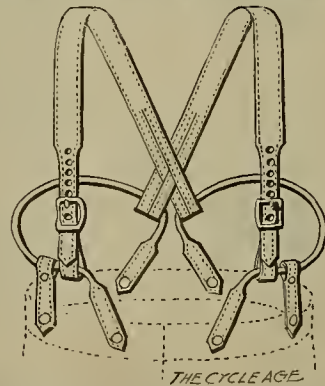
roller skate manufacturer, of Richmond, Ind., where Henley Bicycle & Roller Skate Works have the largest factory in the world for the production of these goods. The accompanying illustration shows one of Mr. Henley's improved rink skates, which are now being manufactured in large quantities and supplied to large rinks throughout the country. By the use of rubber springs the requisite lateral motion of the trucks is obtained, thus securing to the skater the easy and graceful motion which has rendered these skates so popular. The trucks can be instantly removed by drawing back the coupling pin, which is held in position by a strong side spring, and the rubber spring may then be adjusted or replaced in a mo-



ment. The tension of the rubber springs can be graduated to suit any skater. All Henley skates can be furnished with Henley's new ball bearing skate wheels at an advanced price, if desired. The skate shown, like all others of this line, is symmetrical and elegant in its proportions, style and workmanship, and is claimed by the makers to be a thoroughly strong, practical and durable rink skate.

## BUNKER SADDLE CO.'S SIDE LINES.

The '99 catalogue of Bunker Saddle Co. is being issued from the new location of the company, at 71 Milwaukee avenue, Chicago. In addition to the several models of the well-known Rubber Neck honey-comb cushion saddles and the Bunker felt-padded and pneumatic saddles, this booklet shows several styles of tool bags, a canvas tourist's case, leather bicycle belts and leather suspenders, all made by the Bunker Saddle Co. These goods are of the best selected leather, assorted colors and well made. The claim is made for the suspenders that they will not break, wear out nor pull off buttons. The peculiar construction by which this desirable result is accomplished is shown herewith. All wheelmen who find the wearing of a belt objectionable or who sometimes ride in long trousers will be pleased to find a suspender that will not pull across the shoulders when bending over the handle bars, and which will readily adjust itself to the movements of the body without tearing off buttons or breaking away itself. Such



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special goods as these are among those that cycle dealers might appropriately carry in stock to increase their profits through the riding season and which customers would not expect to have thrown in gratis with machines bought.

## LOZIER BRANCH OPENED IN CHICAGO.

Temporary headquarters for a western branch office have been opened in the Manhattan building, 315 Dearborn street, Chicago, by H. A. Lozier & Co., of Cleveland, O. Permanent location has been secured at 307 Wabash avenue and will be ready for occupancy about December 1. The main offices will be on the third floor of this build-

THERE WILL APPEAR BELOW FROM TIME TO TIME TESTIMONIALS FROM THOSE WHO HAVE TESTED AND BECOME CONVINCED OF THE SUPERIORITY OF

# CLINCHER CYCLE TUBING

FRONT FORKS, REAR FORKS AND STAYS.



The Liberty Cycle Company.

Makers of

Liberty Bicycles.

Factory and General Offices.

Bridgeport, Conn.,

Oct. 21, 1898.

The Wilmot & Hobbs Mfg. Co.,

Bridgeport, Conn.,

Gentlemen:-

In reply to your inquiry of recent date would say, at the opening of the season of 1898 we had considerable call for machines built of your Patent "Clincher" .50% Carbon "Swedoh" Spring Steel Tubing, Front Forks and Rear Stays, but as we had ordered Seamless for our entire output we did not care to order "Clincher" Tubing, in as much as we had never made any tests of your tubing. However, orders kept coming in for machines calling for "Clincher" tubing, and we finally decided to send for some pieces to test same. The result greatly surprised us.

We put this "Clincher" Tubing through all manner of tests and found it, when made into frames, without reinforcements, 43% stronger than the Seamless frames made from same diameter and gauge of tubing and which had the reinforcements, and 93% stronger than the same Seamless frames when the "Clincher" tubing frames were reinforced.

Being satisfied that this "Clincher" tubing was far superior to the Seamless we ordered enough for several machines and put them on the road, giving them the hardest usage possible, and as they stood up all right we decided to order enough of your tubing for 500 machines, and before the close of the season we had orders for and sold 800 machines made of your "Clincher" Tubing, and are pleased to say we have not yet had a single complaint, although many of them have been ridden thousands of miles. We find this "Clincher" Tubing more accurate in size than the Seamless and the surface is so much smoother that we have had less work in finishing it for enamelling.

We are satisfied with your tubing and consider it the best for bicycles and have given you our order for 1899. You are at liberty to use us as reference at any time.

Yours truly,

The Liberty Cycle Co.

*J. Schrader, Supt.*

No cycle manufacturing company is represented \* \* through its stock holders or directors, or in any way in the company making the "CLINCHER" product. \* \*



What cycle manufacturer has not wondered why deliveries have been delayed on his specifications for TUBING, FORKS or STAYS and finally, perhaps, only to receive inferior products?

Does the cycle manufacturer who is connected, directly or indirectly, with the manufacture of seamless tubing products, receive any advantage over his less fortunate competitor in the cycle manufacturing business? Do not all need more than one string to their bow?

**A WORD TO THE WISE IS SUFFICIENT.**

Hundreds of high-grade cycle manufacturers in America and Europe have already thoroughly tested "CLINCHER" Cycle Tubing and are convinced of its superior strength as compared with any other product heretofore commercially produced, and are prepared to give their trade their choice of cycles whose frames are constructed from "CLINCHER" products or seam-

less tubing, notwithstanding the fact that the discount offered on the "CLINCHER" Tubing list is 70 per cent, while that on seamless tubing, the lists being the same, has been commonly advertised as 75 per cent.

Do not be misled by the claim of certain few leading makers of seamless tubing that practically all other tubing products are of inferior grade and cheaper.

**The Wilmot & Hobbs Manufacturing Co.**

BUSINESS ESTABLISHED 1877.

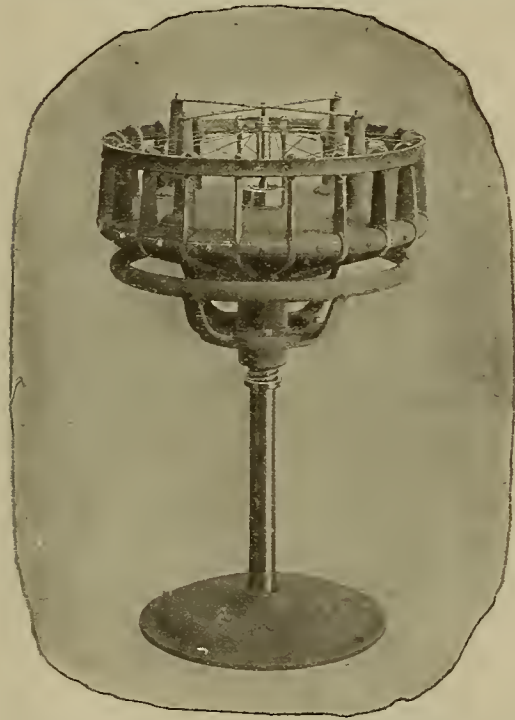
Mention The Cycle Age

BRIDGEPORT, CONN.

ing and will be open the year around, while during the selling season a display and sales room will be opened on the ground floor. This branch house will be the distributing point for Cleveland bicycles for the middle west and by carrying a stock of machines in Chicago it will not only be possible for the company to economize in the matter of expressage by shipping machines in carload lots to Chicago, but to also make quicker deliveries west of Ohio. The new branch is in charge of James Levy, for several years local retail sales manager for Sterling Cycle Works, and the offices to be opened at 307 Wabash avenue will be fitted up in part with the fixtures and some of the furniture of the elegant offices of the Sterling Cycle Works, recently removed to Kenosha, Wis. Manager Levy contemplates establishing Cleveland agencies in the several outlying sections of the city and in many of its suburbs.

#### FOX REVOLVING ASSEMBLING STAND.

Manufacturers of bicycles who have long sought machines for more quickly and accurately assembling wheels have pointed out the saving of time that can be effected by making the assembling stands with revolving tops so that the workmen will not have to walk around them as the work of setting up the nipples progresses, and have suggested that the arms which hold the rim in place should have sufficient pressure to force the wood into a true circle. Recognizing the importance of these features, the Fox Machine Co. of Grand Rapids, Mich., has brought out the ball-bearing stand here illustrated, in which are retained all of the good features of its old machine, while a number of improvements are incorporated

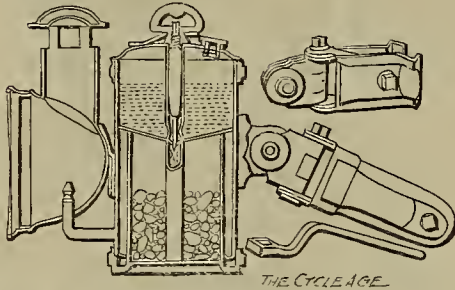


in its construction. In this new machine the company is enabled to put in twenty arms so that it can be used successfully for 40-spoke wheels. The top disk, which carries the expanding arms, has a groove turned in its periphery with radial slots milled in its face to receive the arms. The pin or pivot in the arm fitting into the groove in the outside of the disk, insures a perfectly concentric bearing, and as every one of the arms is milled to a template, they are bound to come true when expanded. The arms are expanded by means of a hand wheel, shown below the disk, which is attached to a coarse pitch nut, the upper face of which carries balls that reduce the friction between the nut and the expanding wheel to a minimum and enable the operator to get a heavy pressure on the rim and hold it true even if it was warped before it was put into the machine. The sleeve which carries the head of the machine is mounted loosely on the spindle so that the hole can be revolved to bring the different spokes in front of the operator. The top of the spindle is bored with a Moss taper hole to carry the spindle that is inserted in the ball-bearing of the hub. Four arms are bolted to the disk and carry dowel pins at their tops to hold the spider which centers the top of the spindle, thus relieving the spindle from the strain of the spokes as they are drawn up from different directions. Enough free space has been left around the arms so that the operator can readily get at the spokes and nipples to set them up. With each of these machines is furnished a lightning screw-driver which enables the operator to tighten the nipples very rapidly. While the company does not claim this to be a wheel truing machine, it says from experience that if the rim is true when it is put on the machine and all spokes are drawn up with the

same tension, the wheel will be true when it comes out and will not need to go on the truing frame.

#### CALCLITE GAS LAMP

An acetylene gas lamp of very simple construction is made by Calclite Gas Lamp Mfg. Co. of Washington. It consists of a cylindrical casing containing an upper water chamber and a lower generating chamber. In the water chamber is a needle valve which carries the regulator for governing the feed of water, and in the lower chamber fits the carbide holder or carrier hav-



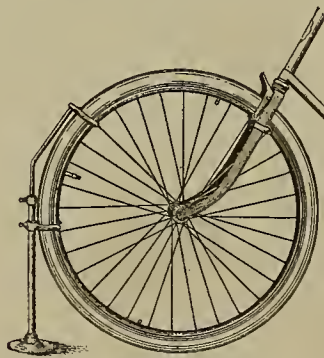
ing the central porous distributing column, which is directly under the feed opening in the division wall. By this construction the manufacturers feel confident of having accomplished a regular feed and distribution of the water, a steady light of any desired brilliancy within the limitation of the lamp; and avoidance of all danger of explosion, as no pressure can ever be exerted in the generating chamber.

#### CHISHOLM & DAVIDSON CONFIDENTIAL LIST.

A small confidential price list for manufacturers only has just been issued by Chisholm & Davidson Co., factory agents, with general offices at 220 Broadway, New York. In this small booklet is catalogued everything necessary in the construction and equipment of bicycles, but all prices are given in letters of a code and a separate key is furnished only to persons in the trade who are entitled to trade prices. Notice is given that these factory prices are subject to revision from time to time, and customers are advised to make inquiries. Among the novelties carried by this concern may be mentioned crowns, head-pieces, hanger shells and connections for 30-inch-wheel models; detachable dress guards laced with braid or silk and having patent quadrants attached which are neat and simple and do away with loss of time in lacing; also the Frederick adjustable handle bar in which the grips are always at the same angle regardless of their height with relation to the head of the machine. A "brand new" hand truer for the use of wheelmen is also offered in gross lots and the claim is made that nothing like it has ever been offered to the trade. The full line of goods for bowling alleys carried by this firm suggests a sideline for dealer that should prove profitable in a season when almost all cycling clubs are turning their attention to indoor amusements.

#### PAUL HIEKISCH'S BICYCLE STANDS.

A variety of cycle stands for store and home use are made in Decatur, Ill., by Paul Hiekisch. One of these is a stout steel folding frame which receives the axle ends of the rear wheel, leaving the latter free to revolve, so that customers may try ma-



chines in the store or the rim and spokes may be readily wiped free from dust. It is also convenient for traveling salesmen. An extension attachment is furnished for this stand so that by the use of two, with extensions attached, the machine may be supported by both axles about three feet above the floor for better display. A tray covered with felt is designed to fit in this frame just beneath the wheels of the bicycle, where it is in convenient position to receive fittings, tools, etc. By means of a roller attachment, the original stand without the extension, can be converted into an inexpensive home trainer. In the accompanying illustration is shown a new stand designed to be screwed

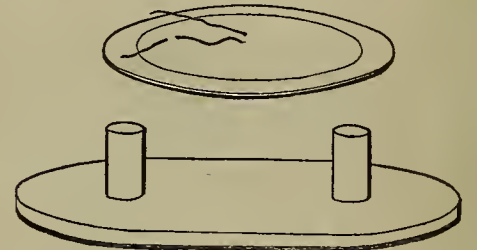
to the floor, where the tire of either front or rear wheel is pushed into the yokes and the machine is held upright. The lower yoke is adjustable on the upright tube and the upper yoke is stationary on the bent rod, which telescopes into the tube, thus making the stand adjustable to any size of wheel. This stand is simple, effective, strong and occupies a minimum of space.

#### OTIS THIRTY INCH WHEEL MODEL.

One of the first concerns to put out 30-inch-wheel models was Otis Bicycle Co., 114 Dearborn street, Chicago. A large number of these machines, having  $4\frac{1}{4}$  inches drop of hanger and 3-inch heads have been in the possession of riders for more than two months, and Otis Goddard, president and manager of the company, states that he has experienced no trouble through broken forks or heads and that the interest in these models seems to be growing. This model will be pushed vigorously as a leader by the company, which will make very few changes in its other models for the coming season. The heads of the 30-inch wheel machines are electrically welded stampings from 16 gauge tubing, with long internal fish-mouth reinforcements at the connections. A section of tubing is brazed into this head to give it additional strength and the steering stem of the front forks is of heavy gauge tubing to withstand the stresses imposed by the use of the large wheels. An arch crown is used in the rear forks to accommodate a narrow tread and make possible the use of the Ewald one-piece eccentric hanger, but the stays are continued double to the seat-post cluster, being cranked just above the tire to run parallel.

#### HODGMAN LINE OF TIRE SUNDRIES.

The price list of Hodgman bicycle tire sundries for '99 is being distributed. The prices quoted are subject to a discount to the trade only, and these discounts are made known only upon application. Owing to the great fluctuations in the cost of crude rubber, the company reserves the right to change the prices without notice. The line is comprised of plugs, cements, tire tape, repair outfits, valve stems, elastic luggage carriers and trouser guards, waterproof rid-



ing capes weighing about 36 ounces and folding into a bag 10x6 inches, and vulcanizing patches. These last are shown in the accompanying drawing. They are for the repair of single-tube tires and have strings attached for holding them after they are inserted in the tire until they are vulcanized into place. They are made in 1,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$  and 2-inch sizes. Among the Hodgman special flat-headed plugs is shown the large double-stem emergency plug with cloth back for repairing large cuts and rents which is also represented herewith.

#### PREPARING TO PUSH REMINGTON CYCLES.

Announcement is made by Remington Arms Co., of Ilion, N. Y., that the manufacture of Remington Standard bicycles will be continued on an enlarged scale and that a standard of quality consistent with the reputation of the firm as makers of fine firearms and sewing machines will be strictly maintained by careful supervision in the factory. The Remington bicycles will retail at the popular prices for '99 and the company is preparing for a larger sale of these machines than it has ever had before. The traveling force has already been increased so that it is now sufficiently large to enable the Remington people to submit their new samples to every prominent dealer from Maine to California and from Canada to the Gulf.

#### TRANSFER NAMEPLATES IN SMALL LOTS.

For dealers who handle some model of bicycle under their own name or wish to advertise their agency on all bicycles which go out of their establishment, and also for bicycle builders who turn out only from fifty to three or four hundred bicycles per year, the Meyercord Decalomania Transfer company, Chamber of Commerce, Chicago, makes a special offer in their 1899 catalogue in the form of blank transfer nameplates which are susceptible of a great many variations in color effects and contain a mortised space where any legend may be inserted which the dealer or builder may desire. The company keeps these designs made up in stock in large quantity and is

prepared to supply them in small lots with the required variations almost immediately upon receiving orders, says the catalogue.

**WARREN COMPANY'S LEATHER GRIPS.**

A rapidly growing demand for their leather grips is reported by J. J. Warren Co., of Worcester, Mass., manufacturers of a complete line of fine leather and canvas goods, including bicycle tool bags, touring bags to fit in the frame, etc. The grip has a hardwood foundation bored to admit the handle bar, and grooved to receive the seam of the leather. The solid leather covering is made



of two pieces, formed under pressure in a die so that they fit each other and the core perfectly; they are glued, and strongly stitched together, and the seam is carefully trimmed and rubbed down smooth into the groove in the wood. The nickel plated brass ferrules are glued, forced on and then pinned, and will stay. Thus made, of material of superior quality, these leather grips are of attractive appearance, agreeable to the hands, and exceedingly durable. They are furnished in variety of colors.

**MAKE THE RICHMOND FLYERS.**

Reynolds & Gross, bicycle manufacturers and repairers, have removed from 175 Michigan street and taken over the former repair business of B. F. Benson who is going out on the road for Ames & Frost in November. Reynolds & Gross will continue the manufacture of the Perry cycles in their new location and will make in their own name the Richmond Flyer bicycles, which they made on contract last year, having purchased all the dies for connections, etc. Manufacturing to contract will also be continued.

**ASBESTOS TOPPED LAMP WICKS.**

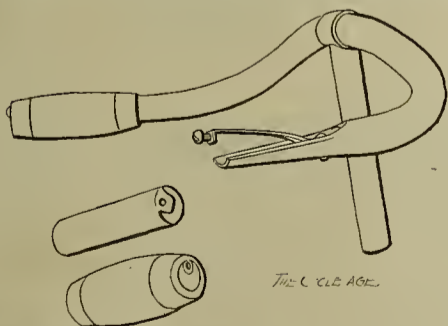
The Jackson Wick Co., of Cleveland, O., is making lamp wicks of cotton with asbestos tops. The flame consumes the oil, but leaves the top of the wick clean and even. This makes trimming wholly unnecessary and the flame always burns evenly, so that smoking is obviated and the disagreeable duty of cleaning the lamp frequently is made needless. The company contemplates making these wicks for oil cycle lamps and if they are well received will push their sale the coming season. This seems to offer a means to manufacturers of kerosene cycle lamps to remove at a nominal expense one of the objections that have been raised against these goods.

**INSTALLING A BILLET PIERCING PLANT.**

A billet piercing mill costing about \$50,000 is being put in at the Shelby Steel Tube Co.'s works in Shelby, O. With this machine the company will be able to buy solid billets of steel instead of hollow ones. By doing this the high tariff on hollow Swedish billets is avoided and thousands of dollars will be saved every year.

**KLEINSTEUBER'S SPRING GRIP.**

The spring grip construction shown below is the invention of Munroe A. Kleinsteuber, 151 Cherry street, Milwaukee, who, lacking



the time and facilities for its production on a commercial scale, wishes to dispose of his patent. The drawing represents a handlebar in which the end of the metal tube has a swaged reduction, to provide clearance for yield on the part of a grip in spring connection therewith; but the handle-bar may be of solid material, such as wood, shaped at each end to provide the clearance. While a preferred form of spring connection is shown, the invention contemplates any spring connection that may be found most convenient or desirable; and it may be pre-

ferable to employ the stiffest spring with the handle-bar having the greatest drop, and the tension may be varied as styles of handle-bars, but it is the intention that the spring resistance shall always be sufficient to prevent undue yielding of a grip in the grasp of a mounted rider. As a matter of detail, a sleeve constituting a grip-lining is shown. This sleeve is used for the reason that grips as ordinarily made are not sufficiently stiff for the purpose.

**EASTERN BRANCH FOR VIKINGS.**

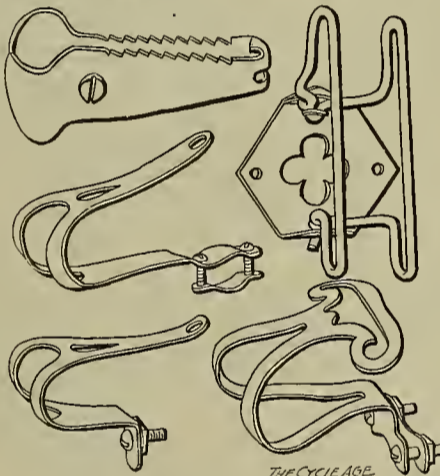
R. D. Allger, Jr., for four years engaged in the retail cycle trade in New York City, gave up his retail agency for Pierce cycles and wholesale agency for Viking bicycles, at 58 Pine street, in that city, on November 1, to become manager of the eastern branch of Viking Mfg. Co., of Toledo, which will be opened in New York about December 1. It is the intention to make the latter a wholesaling depot covering the territory including eastern Pennsylvania, New Jersey, New York and the New England states.

**TOLEDO TUBE CO. EXPANDS.**

Toledo Tube Company has enlarged its capacity by moving into the two buildings formerly occupied by the Great Western Pin company. The company has two floors in each building, which are 60x160 and 40 by 140 feet. A nickelplating plant has been added and in addition to the manufacture of tubing handle bars, seat posts and other parts will be made. In the neighborhood of 100 men are employed getting out export orders for Copenhagen, Berlin, Denmark and London.

**COE MFG. CO.'S PRICE LIST OUT.**

The 1899 illustrated price list of Coe Mfg. Co., 50 Warren street, New York, is just out and is being sent to the trade. The catalogue embraces several lines of cycle accessories bearing the company's odd trade-



mark, which signifies perfection of finish on popular priced goods. Among the articles shown are the three styles of toe clips, called Nonpareil, Unity and Racer; the Hercules coaster, and the Boulevard cycle stand, shown in the accompanying drawings. The Unity clip has the lower portion extended rearwardly and provided with two bolts and a curved auxiliary plate to clamp around the barrel of the pedal instead of to the side plate. The racer has a broadened upper part to hold the foot against side slipping, and one clip attaches to the side plate by means of two bolts, which prevent turning in the pedal. The cycle stand consists of a stamped plate to be screwed to the wall and a wire spring bent into the shape shown to receive the tire of a bicycle and hold the machine upright.

**KOKOMO TIRES IN LARGER QUANTITIES.**

Kokomo Rubber Co. announces that it is now prepared to fill orders more promptly than ever, having completed an addition to its plant which doubles its facilities for turning out goods. The Defender Special tire has gained such popularity during the time it has been on the market that the company will continue to make it the leader of the Kokomo line for 1899.

Vittorio Ferrari, importer of American cycle novelties and specialties in Milan, Italy, writes to correct the statement in Cycle Age of September 29 that Joseph H. Boetti had been appointed American purchasing agent for Pietro Fabbre. It is now stated that J. H. Boetti is in America only to purchase exclusively for Vittorio Ferrari, while Fabbre & Gagliardi have made all their purchases direct from manufacturers or merchants.

Traveling salesmen for the Viking company of Toledo have been assigned as follows: Ollie Bernhart, Ohio; W. F. Gouty,

New England; Herbert Draper, Iowa, Minnesota and Wisconsin; A. B. Kaufman and Will Sullivan, the South; R. D. Allger, Jr., New England and New York City; W. P. Laing, Illinois and Missouri; Howard French, Maryland, Delaware, New Jersey and Eastern Pennsylvania; W. H. Shell, Nebraska and Kansas; George Yokom, Michigan; Harry Myers, Central States; James Wright, Montana, Oregon and Washington.

Fitchburg, Mass., Oct. 31.—The strike at the factory of the Iver Johnson Arms & Cycle Company has been settled and the men reported for work today. The employees of the company went out several weeks ago on the announcement of a cut in wages. The men in returning to work accept a reduction, but not so large a one as was originally announced. The end of the strike is welcomed by all classes, as the Iver Johnson pay roll is an important factor in the prosperity of Fitchburg.

Demorest Mfg. Co., of Williamsport, Pa., is among the cycle manufacturing concerns which have made a gratifying success of their foreign business. The company is at present giving most of its energy to filling foreign orders, and Manager McDonald traces most of this business largely to advertisements in Cycle Age, to which the foreign buyers refer.

President W. E. Miller and Secretary W. S. Miller, of Shelby Tube Co., were in Toledo last week, looking over the Toledo plant of the company. Some improvements will be made, among them being the addition of a dry retort oven for annealing tube with exposure to the air and piercing and rolling machinery.

Snell Cycle Fittings Co. will manufacture the Falcon for Tillotson Eros. The machines will be assembled by the Tillotsons in a portion of the old Yost plant. The owners of the Yost plant have not yet found tenants for it.

Cups, cones and dust caps for the D. & J. hanger, made by Park City Mfg. Co. of Chicago, are made by the Grant Ball company, of Cleveland.

**TRADE NOTES.**

A stock company of prominent business men has just been formed in Richmond, Ind., to operate a roller skating rink. A large building erected for the purpose has been leased for a term of years, and will be fitted up in first-class manner. The skating capacity of the building is large, allowing from 750 to 1,000 skaters on the floor at one time.

The Outing branch in Louisville, Ky., has been bought out by Karl Thome, who will conduct the business independently. A. L. Ray, the former manager, will go to Bay City, Mich., to become superintendent of agencies for National Bicycle Mfg. Co.

Louis E. Dettman, of Marinette, Wis., has begun the manufacture of a number of bicycle sundries, including rubber, wood rim and plugging cements, enamel polish, tire fluid and grapho-lubricant for chains.

Harry L. Palmer has gone on the road again for Ames & Frost Co., of Chicago, to sell Imperial bicycles in New York and the New England states, which territory he covered last year with success.

Philadelphia Bicycle Co., Fifteenth and Alter streets, Philadelphia, sustained damage to the amount of \$2,000 in a recent fire which destroyed the building in which it was located.

The branch house of H. E. Cowles in Burlington, Vt., has been bought by the former manager, Elmer Dyke, who will hereafter conduct the business for himself.

Albert Dudley, of Menominee, Mich., is preparing to begin the manufacture of a new tube cutting machine which he recently invented and has patented.

Hedley Salmon, who has held the agency for Rambler bicycles in Denver for several years, and is one of the best known dealers of that city, died October 24.

J. S. and H. C. Starr, of Decatur, Ill., who make vehicles and harness and sell bicycles and sewing machines, have removed to Fort Worth, Tex.

John H. Schaal, of Chambersburg, Pa., has begun making bicycles on a limited scale for local sale.

A new building is being erected in New Knoxville, O., to be occupied by Mech Cycle Works.

# THE PASTIME AND SPORT

## Bald a Changed Eddie.

New York, Oct. 31.—A pensive, absent-minded, heavy-eyed young man, with traces of former beauty and a once athletic frame bowed beneath the weight of "lines," and "cues," and "entrances," has been wandering around the corridors of the Marlboro and along the Rialto for the past three weeks, at times mumbling to himself incoherently and occasionally turning pale and quaking as with ague. One would hardly recognize in him "Eddie Cannon" Bald, champion bicycle racer of America. It is indeed our own Eddie—but not the bright-eyed, cheery,

rel" on the stage trod with so much histrionic glory by the Great John L., Pompadour Jim, Freckled Fitz, Steve Brodie, and Chuck Connors.

## Foreign Riders Sign With Kennedy.

The management of the Madison Square Garden meet received a cable dispatch last Monday from J. C. Kennedy, in Europe, announcing that the following foreign riders have signed with him to enter the six-day race: Teddy Hale, of Ireland, winner of the race in 1896; Stephane, of France, who competed last season; Frederic, the Swiss rider, who took

## Taylor's Plans Balked.

Philadelphia, Oct. 31.—Accompanied by a complete battery of pacing artillery, Major Taylor arrived here about the middle of last week. It appears, however, that his employers, after selecting the Willow Grove track for the creation of new figures, failed to make arrangements with its owners, the Union Traction Company, and when the colored wonder went to the track he found it closed. Manager Weaver explained that the track had been closed for the season and that the company had no idea of reopening it and going to the expense of employing watch-

LEAGUE OFFICIALS SUED FOR LIBEL



ACTOR BALD MAKES HIS DEBUT



ENGLAND VICTORIOUS OVER FRANCE



TAYLOR'S RECORD BREAKING PLANS BALKED



A.R.C.U. STATES ITS CASE TO I.C.A.



FOURNIER'S ACQUAINTANCE WITH A NEW YORK POLICEMAN

chatting, devil-may-care Eddie of the circuit. The responsibilities of the selection of a leading lady worthy of the love, heroic self-sacrifice, and record-breaking speed of the handsomest of champions, weighed heavily upon him for some time. Then came the memorizing of hundreds of "lines" that haunted him by day and night and made of him a mumbling mummer. The terrors of rehearsal under the unappreciative direction of a stern stage manager followed. With all this passed through, the thoughts of that awful first night palsied his athletic limbs with stage fright. And so it is that our Eddie has not been happy and was hardly recognizable for some time to his friends and admirers. But it is all over now. Tomorrow night, at Binghamton, he will make his debut as the hero in "A Leaf of Lau-

second to Miller in the 72-hour race in Paris; Joyeux, of France, and Pat O'Halloran, an Irishman of considerable reputation as a long-distance rider. Maurice Cordang, who holds the world's record of 618 miles in twenty-four hours, is also expected to enter. Opposition to the race by the L. A. W. consulate and the Associated Cycling Clubs of New York seems to have died out, as no further move has been made by the committee delegated to draw up articles for a new ordinance to be submitted to the board of aldermen.

James Drury, with indifferent pacing by one tandem and a triplet, on October 29, at Montreal, succeeded in lowering the Canadian amateur flying start record from 1:53 to 1:52 1-5, and the standing start record from 2:03 to 2:01.

men and running its electric light plant (lights being necessary in the training quarters). Major and his pacemakers were therefore compelled to come back to town. It is understood that Woodside Park will now be selected, but it is whispered that the managers of that track contemplate getting even with Major for the "throw-down" he gave them on the occasion of the last National circuit meet in this city, and will also close their gates to him, in which event he will be compelled to go elsewhere to break records. The marks he is after are all for short distances, including the quarter, third, half and mile

## Taylor Practicing Behind Motocycles.

Edouard Taylore, the French rider, has taken up his quarters at Berkeley Oval,



Our Business Is Built Up By  
**Satisfied Dealers**

\*\*\* HUGHES, WOLF & MILLER \*\*\*

DEALERS IN

Clothing, Shoes, Jewelry and Bicycles.

TERRE HAUTE, Ind., Oct. 3, 1898.

NATIONAL CYCLE MFG. Co., Bay City, Mich.

Gentlemen—As our '98 season is now over, we take pleasure in stating a few facts. We have sold 274 National wheels this season. Of these one frame showed a slight defect in brazing at the seat-post connection and another had a clamp lug on the bottom bracket broken both were repaired free of charge. We have broken only one fork side, one crank and can hold in one hand all the cups and cones which we have replaced. Haven't had a broken fork crown, a broken crank axle or a broken front or rear wheel axle.

This is a record that we can all be more than proud of. Detective wheels cause many a gray hair to come in the retailer's head, as if a rider has any trouble he comes into the store and turns himself loose like a cyclone.

We feel more than pleased with Nationals this year and hope that our business relations will be as pleasant in '99 as they have been in the past four years. With best wishes, we remain, yours truly,  
HUGHES, WOLF & MILLER.

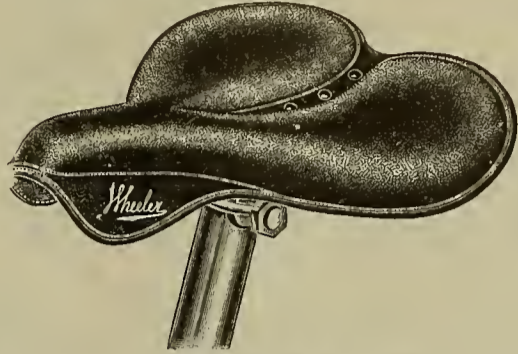


**SUMMARY.....**

- Nationals sold, 274.
- Frames broken, none.
- Fork Crowns broken, none.
- Front Forks broken, none.
- Fork Sides broken, one.
- Crank Axles broken, none.
- Wheel Axles broken, none.
- Cups and Cones broken, very few.

Mention The Cycle Age

**That Curve  
in the Back**



has always been a distinguishing feature of WHEELER saddles. Manufacturers who purpose turning out a high-grade wheel for '99, will not stoop to the using of imitation and shoddy saddles when they can buy the genuine and original WHEELER saddles at the figure we offer them. Extra grade in every respect.

Send for Samples of the Most Popular Saddles on the Market.

**THE WHEELER SADDLE CO.**

1427-1457 Woodward Ave., Detroit, Mich.

Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT.  
New York Agents: HARTLEY & GRAHAM.

Mention The Cycle Age

**They  
All  
Ride  
The**



**"Orient"**

MR. AGENT:

**North—East—South—West!**

Our travelers are out with our '99 models, and we can make deliveries at once. Our salesmen will show samples from Canada to the Gulf of Mexico, and from the Atlantic to the Rockies, and if they have not called on you, drop us a line.

The earth will fairly revolve on \_\_\_\_\_

**"ORIENT CYCLES"**

in '99 and the agent who sells them "LIVE IN CLOVER." \* \* \* \* \*

**WALTHAM MFG. CO.**

Mention The Cycle Age

WALTHAM, MASS.

where he is training for the coming Madison Square Garden races behind men-driven pacing machines and Henri Fournier's motor tricycle, which has created a considerable sensation in New York on the asphalted streets and boulevards since its arrival. Taylore told the Cycle Age representative that the motor tricycle made an ideal pacing machine, having all the speed necessary and a fine "draft." A motor triplet is expected over here before the Garden races. There is talk of races between men motor-paced and man-paced.

### LEAGUE OFFICERS SUED

**A. C. R. A. Brings Action Against Potter and Mott for Alleged Libel in Warning to Foreigners.**

New York, Oct. 31.—Albert Mott, Isaac B. Potter and Henry Sturmev have just had a suit for \$25,000 for damages for libel brought against them by the American Cycle Racing Association for the warning issued in a racing board bulletin to foreign riders against participation in the coming unsanctioned six-day race, with the added advice to get payment in advance for any remuneration that may be offered them. Sturmev's complicity in the alleged libel is rather foggy, as it does not clearly appear that he printed the warning Mott announces he sent to him for promulgation by the International Cyclists' Association. In any event, he can probably shift the responsibility onto the L. A. W. officials.

The A. C. R. A. has given out the following statement as to the suit:

The institution of this suit is the culmination of a series of attempted interferences on the part of Chairman Mott with our operations in cycle racing. So long as the attacks on us were confined to minor matters and did not seriously hamper our meets we paid little attention, but when in his recent communication to Henry Sturmev, the Secretary of the I. C. A., the League chairman tried to injure our standing and credit with the European associations and racing men, we decided that it was about time to interpose an objection of a decided nature. The explanation of the attitude of Chairman Mott and President Potter toward our association lies in the fact that we are charged with having been responsible for the recent breakaway of the leading riders from the L. A. W. The untruthfulness of this charge is plainly apparent to those who are conversant with the real facts connected with the declaration of independence on the part of the racing men. We shall continue to promote meets, and as soon as a new organization is formed we will apply to it for sanctions whenever we have occasion and also observe its rules and regulations. The suit against the League officials personally will be forced to an issue, and our lawyers believe that the strongest kind of a case is in their possession.

### ENGLAND DEFEATS FRANCE

**Linton and Armstrong Win Fifty-Kilometer Team Race From Bouhours and Champion.**

Paris, Oct. 21.—The fifty-kilometer international race between Armstrong and Linton, representing England, and Bouhours and Champion, who defended French interests, took place at the Parc des Princes track last Sunday and resulted in an easy victory for the British champions. The men were paced by electric tandems. Champion, on the outside, was the first to break the line and secure a lead of some fifty meters, but his pacing machine was slow in getting off and he quickly fell to the rear and lost 200 meters, Armstrong and Linton taking the lead, with Bouhours third.

At the fifth kilometer an accident happened to Armstrong's tandem, and three laps later Linton's men had to stop. Taking advantage of these mishaps, the Frenchmen sprinted and, amid deafening cheers, passed their opponents. Linton for three rounds was without pacemakers, and at the tenth kilometer was lapped by Champion, who had covered the distance in 11:50 2-5. At the twelfth kilometer Champion, who was beginning to show

signs of distress, was caught and passed by Armstrong, Linton (one lap behind) and Bouhours. Armstrong's time for the twenty kilometers was 23:35.

Champion was lapped by Armstrong at the twenty-ninth kilometer, and, with Bouhours weakening and Linton having made up the lost ground, the Englishmen had the race from this point virtually at their mercy. The thirty kilometers were covered by Armstrong in 35:11 4-5, and the forty in 46:54 3-5, he being at this period of the race two laps ahead of Linton and Bouhours, and two and a half laps in front of Champion. At the forty-first kilometer Linton left Bouhours, and, putting on a fine burst of speed, caught and passed Armstrong. The latter, however, had the best of the final laps, and eventually won in 58:42 4-5, Linton being second, Bouhours third, and Champion fourth.

### UNION APPEAL TO I. C. A.

**Bald Presents Racing Men's Side of Secession to Secretary Sturmev and Asks Delay.**

President Edward C. Bald, of the American Racing Cyclists' Union, has sent to the International Cyclists' Association the following statement, which is interesting and comprehensive, as it sets forth in full the present racing situation in this country as viewed by the leading professional racing men:

New York, Oct. 26, 1898.

Mr. Henry Sturmev, Hon. Secretary International Cyclists' Association, Coventry, England.

Dear Sir: \* \* \* This breakaway from the L. A. W. has been contemplated for some time by the professionals, owing to a government of the sport which has been far from satisfactory, and coupled with the fact that the organization which controlled us, while admitting other wheelmen to membership, declined to open the doors to us, the assertion having often been made in national assembly debates and in print that we were undesirable as associates. Nevertheless, we have been taxed, fined and punished by this body, which, while affecting to despise us, has profited by its self constituted authority over a sport in which it has no financial interest at stake, and which it uses as a political football in the annual elections, the remunerative offices going to the faithful for services performed.

Sentiment in the L. A. W. for a long time has been growing in favor of relinquishing racing, until now the majority appear to be desirous of divorcing the two. Naturally those who are occupying salaried positions object to such action, and a decisive tussle between the two factions is expected in the next assembly, with the chances in favor of the anti-racing element. \* \* \*

In all sections of the United States, except in the East, the League's control of the sport has been undermined. In the Pacific coast states the California Associated Cycling Clubs are supreme; in the middle west, with headquarters at Denver, Col., the Western Cycling Association is usurping the League; in the South the Southern Cycling Association, with headquarters at New Orleans, La., has assumed the direction of affairs, and in Wisconsin, Michigan and other states a similar condition prevails.

There will be held in New York city early in December a meeting of race-promoting clubs, track owners and professional riders, for the purpose of forming a new body in the East which will effect alliances with the governing associations in other parts of the country. When this is accomplished an application for membership in the I. C. A. will be forthcoming. As the championships for your association are scheduled for Montreal, Quebec, next year, we presume that our presence will be desirable, in order to assure a success. For this reason we would suggest that a final judgment on the present situation in America be deferred by your association until matters shall have reached a more definite conclusion. \* \* \*

The American Racing Cyclists' Union contains all the leading professionals of the country, and since its formation there has been only one prominent deserter. The riders are determined never to accept government again from the L. A. W., and at the same time they fully appreciate the necessity for a direction of the sport which will make it absolutely free from taint. For this reason the riders have banded together in their efforts to induce the race-promoting clubs and track owners—the ones who have everything at stake—to perfect a new organization in the East, the other sections of the country already being provided, for the

control of cycle racing, which with proper guidance can be made second to none.

We realize that it will take time to formulate another organization, and our action was timed so that it would come at the termination of the outdoor season. Before the '99 campaign opens we expect to be riding under the rules of a body in which we will have a vote. In our opinion the time had come when it was better for the professional cyclist to be disassociated with the L. A. W., and incidentally we might express the opinion that the League, unhampered by racing, could devote itself to the objects for which it was formed, and enter upon a new era of prosperity and increase.

\* \* \*  
E. C. BALD,  
President American Racing Cyclists' Union.

### Miller Makes Prophecies.

C. W. Miller, of Chicago, is home again, after his three months' trip abroad. His only victory across the water was the winning of the 72-hour race in Paris, but he believes he would have had a good chance at first money in the Berlin 24-hour race if it had not been for the breaking of his wind shields and ten of the chains on his three petroleum motor tandems during the first nine hours, and a bad fall in the tenth hour. Huret won the race, and now Miller wants to meet him in a match race in Paris next year. Frederic, the Swiss rider, who ran second to him in the 72-hour race, and rode continuously for 42 hours without a dismount, he looks upon as a dangerous competitor, and prophesies that he will finish among the first three in the coming New York six-day race. If Miller wins this race he says he will go for the 24-hour record in Paris, and feels confident that, paced by motor tandems fitted with wind shields, he can cover 700 miles.

### CONCENTRATED POT-POURRI.

Chairman Mott announces that the following foreign racing bodies will recognize the suspensions by the L. A. W. of the members of the A. R. C. U., who have competed in unsanctioned meets: Canadian Wheelmen's Association, Canada; National Cyclists' Union, of England; Irish Cyclists' Association, Ireland; Scottish Cyclists' Union, Scotland; Union Velocipedique de France, open, and Union des Societes Francaises des Sports Athletiques, amateur, of France; Deutscher Rodfahrer Bund, Germany; Allgemeine Niederlausche Nieldrieder Shond, Holland; Ligue Velocipedique Belge, Belgium; Union Velocipedistica Italiana, Italy; Cape Colony Amateur Athletic and Cycling Union, Cape Colony, and Union Ciclistas Mexicana, Mexico.

Henri Fournier, the French cyclist now in New York, was riding his motor bicycle on Fifth avenue the other day when a policeman tried to stop him. Fournier supposed the policeman wanted a race, and putting on about twenty-five miles speed, left the policeman behind at once. The latter kept him in sight to his hotel and then arrested him. The police locked up the automobile and let Fournier go on his own recognizance.

John S. Johnson is being brought forward as the original inventor of the detachable tire. In 1890, when he was working in a Grand Rapids repair shop, he made a detachable tire and fastened the outer cover to the rim by means of little hooks placed about an inch apart. It did not occur to him to patent the device.

Fred Schade, intercollegiate champion of '96, who was this summer thrown into the professional class because he declined to answer Chairman Mott's list of questions, is now an editorial writer on one of the Boston newspapers.

A circuit had been arranged in California for this fall, including eight nights and two afternoons of racing indoors at San Francisco, and meets at San Jose, Santa Rosa, Los Angeles and elsewhere.

An English exchange expresses wonder that Michael does not go to Australia for a racing tour, pointing out that he would undoubtedly be a great attraction there.

Tom Cooper expects to keep in training this fall and ride in the Madison Square Garden and other indoor races the coming winter.

The present membership of the L. A. W. is 80,516 as compared with 99,615 a year ago.

Walter Wilson, of Buffalo, acting as temporary racing chairman for the A. R. C.

# Columbia

## Bicycles

PRICES ON AND AFTER NOV. 1ST, 1898.

Columbia <sup>Bevel Gear</sup> Chainless, - \$75.00 Models 50 and 51.	Columbia Tandems, - - \$75.00 Models 47 and 48, Diamond and Combination Frame.
Columbia Chain Wheels, - 50.00 Models 57 and 58.	Hartford Bicycles, - - - 35.00 Patterns 19 and 20.
Columbia Chain Wheels, - 40.00 Model 49, 1899 Improvements.	Vedette Bicycle, { Pattern 21, for Men, 25.00 Pattern 22, for Women, 26.00

We will be in a position to supply 30-inch Bicycles at \$60, built on the same general lines as the model 57, to meet a limited demand for tall men. We also have a few Columbias, Model 46, and Hartfords, Patterns 7 and 8, on which we will quote prices on application.

There is going to be a great big demand for the Columbia Chainless at \$75.00. We are preparing to meet this demand and we have facilities for making many thousand Chainless wheels. The prudent dealer, however, will not delay in sending in his orders early. Besides you should be able to do a good business this fall and winter. The Columbia Chainless, you know, is not affected by the weather and can be ridden the year round.

The Columbia chain wheels, Models 57 and 58, are up to date in every detail, and we believe are the handsomest and most stylish chain bicycles that have ever been put on the market.

Columbia Model 49, with 1899 improvements, is the greatest bargain at \$40.00 that we know of. There ought to be good business in them for you.

Hartfords at \$35.00 and Vedette bicycles at \$25.00 and \$26.00 give a complete and well rounded line for any dealer.

Call on or write now to the Columbia distributing point in your territory and secure the agency before your competitor gets it.

### BRANCH HOUSE DISTRIBUTING POINTS:

BOSTON, MASS., 223 Columbus Ave.  
Maine, New Hampshire, Eastern Massachusetts to the Worcester county line.

NEW YORK CITY, 12 Warren St.  
Following counties in New York state: Kings, Queens, New York, Orange, Putnam, Richmond, Rockland, Suffolk, West Chester.  
Following counties in New Jersey: Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Union, Sussex, Warren, Hunterdon, Somerset.

PHILADELPHIA, PA., (Hart Cycle Co.) 816 Arch St.  
Following counties in Pennsylvania: Chester, Lancaster, Lebanon, Dauphin,

Schuylkill, Berks, Lehigh, Carbon, Northampton, Bucks, Montgomery, Delaware.

Following counties in New Jersey: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean, Salem, Mercer (except Princeton.)  
State of Delaware, Eastern Maryland, eastern peninsula of Virginia.

PITTSBURG, PA., 435 Wood St.

Following counties in Pennsylvania: Allegheny, Washington, Beaver.

BUFFALO, N. Y., 609 Main St.  
Following counties in New York State: Erie, Chautauqua, Niagara, Cattaraugus.  
Following counties in Penn-

sylvania: Erie, Crawford, Warren, McKean.

ROCHESTER, N. Y., 32 East Ave.

Following counties in New York State: Monroe, Orleans, Genesee, Wyoming, Livingston, Wayne, Allegany, Steuben, Ontario, Yates.

DETROIT, MICH., 272 Woodward Ave.

State of Michigan, except the western half of the northern peninsula.

NEW ORLEANS, LA., 1757 St Charles Ave.  
Louisiana, Texas, Mississippi.

ST. LOUIS, MO., 817 Pine St.  
Missouri, Kansas, Arkansas, Oklahoma, Indian Territory, Southern Illinois.

CHICAGO, ILLS., 105 Wabash Ave.

Indiana, Wisconsin, Minnesota, North and South Dakota, Nebraska, Northern Illinois, western half of northern peninsula of Michigan.

PROVIDENCE, R. I., 15 Snow St.  
Rhode Island.

PORTLAND, ORE., 134 Sixth St.  
Washington, Oregon, Idaho and Montana.

SAN FRANCISCO, CAL., 344 Post St.  
California, Nevada and Arizona.

DENVER, COL., (Gano Cycle Co.) 1614 Stout St.  
Wyoming, Utah, Colorado, New Mexico, El Paso, Texas.

All points in the United States not specified above will be supplied as heretofore from the Home Office of the

**POPE MANUFACTURING CO., HARTFORD, CONN.**

Mention The Cycle Age

U., pending the formation of the new association, which will meet for permanent organization in New York city in December, will suspend all the men who pace the black-listed Major Taylor in his coming record trials at Willow Grove this week.

Lee Richardson, the trick cyclist, and W. H. Pickens, his manager on his recent southern trip, have been suspended by the racing board pending settlement of certain claims.

Arthur Gardiner, who left Chicago on a hunting trip after his return from the circuit, expects to ride in exhibitions at the New York six-day race in December.

Louis Gimm will enter the six-day race in New York.

**MISCELLANEOUS.**

Advertisements under this head 5 cents per word first insertion, 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received.

**WANTED**

**WANTED**—Competent salesman desires position, indoor or on the road; seven years' general bicycle business experience. H. S., care Cycle Age.

**WANTED**—To hear from manufacturers of bicycles and supplies and novelties for 1899. F. S. PROUTY, wholesale and retail, Wayne, Mich.

**WANTED**—Position as foreman of assembling room; ten years' experience; best references. Address, ASSEMBLING, care Cycle Age.

**WANTED**—Reliable party to manufacture or buy a newly patented ball bearing. FRANK GUSTAVESON, Wabasha, Minn.

**WANTED**—Position as manager or foreman in bicycle repair shop; understand brazing, enameling and vulcanizing; three years with last employer; references. Address, R. F., care Cycle Age.

**ANY FIRM** who wants electric motors designed for horseless vehicles should address, VEHICLES, The Cycle Age.

**WANTED**—Agents throughout the United States and Europe to sell the Best Double Roller Chain on the market; large commission; every chain warranted. THE AETNA HARDWARE CO., Unlounville, Connecticut. \*

**WANTED**—Old bicycle tires and scrap rubber. How much have you? THE TREMONT RUBBER COMPANY, New York City.

**WANTED**—Position as traveling salesman by a young man of wide experience in the business. F. L. H., care Cycle Age.

**WANTED**—Second-hand portable blacksmiths' forge, 12 to 16 in. fan; Champion preferred. GEO. COOK, Bloomingburg, O.

**WANTED**—A small second hand gasoline brazer in good order for repair work. Address H. C. BICKLE, Chardon, O.

**FOR SALE**

**FOR SALE**—100 bicycles, 1 1/8-in. tube, 2-piece hanger; 200 bicycles, 1 1/4-in tube, 1-piece hanger. These machines are all flush joint, 2 1/2-in. dr p. 1899 models. A limited number of 30-inch models are also offered. H. C. O., care of Cycle Age. \*

**FOR SALE**—Bicycle and plumbing business for sale cheap. E. H. WESTON, Alma, Mich. 1

**FOR SALE**—Bicycle Chain Plant; in use two seasons; capacity, 200 chains per day; Gas Generators, Sprocket Miller, Hub Machinery Wheel Truing Stands and other bicycle machinery; owners retiring from business. For particulars and prices, address THE MOORE CYCLE FITTINGS Co., Harrison (Newark), N. J. \*

**FOR SALE**—A four horse-power gasoline motor carriage, but little used. GILBERT J. LOOMIS, Westfield, Mass.

**FOR SALE**—M. & W. vulcanizer complete with all tools. cheap. F. W. & Co., care Cycle Age.

**FOR SALE**—Ideal metal shear and punch, capacity up to 1/4 inch thick; indispensable to repairmen. These tools are very cheap considering their efficiency. Send for circulars and price to the manufacturer. G. M. MARSHALL, Kilbourn, Wis.

**FOR SALE**—One Columbia Chainless, slightly shopworn, in first-class condition, fully guaranteed; price, \$90. Address, DUNN, TAFI & CO., Columbus, O.

**FOR SALE**—Crescent Racer, Hoffman Racer, Dayton Special, Crescent No. 12 all '98 wheels; good as new. Address, C. C. X., care Cycle Age.

**Bicycle Grips.**

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THE CODLING MFG. CO. BRISTOL, CONN.

Mention The Cycle Age

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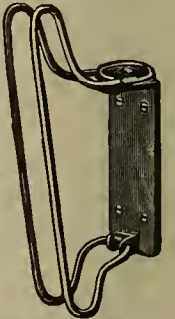
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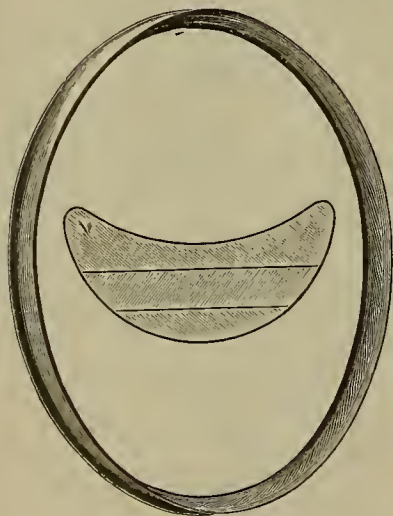


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'99 Catalogue of Fittings Now Ready.

# THE CYCLE AGE

## AND TRADE REVIEW

VOL. XXII—No. 2.

CHICAGO, NOVEMBER 10, 1898.

NEW SERIES No. 51.

### LOCAL BOARD RECEIVES AID LAW SUIT BY SHOW MANAGERS

**Chicago Dealers Association Hard Pressed  
Gets Legal Assistance from  
National Board of Trade**

At the last meeting of directors of the National Board of Trade of Cycle Manufacturers money was voted to aid the Chicago local cycle board of trade in defending a lawsuit in which the local board finds itself involved in consequence of action taken by it to prevent a promoter's cycle show in Chicago from interfering with the legitimate course of trade. The Chicago legal representative of the National board was also placed at the disposal of the Chicago board as assistant counsel. The history of the case is substantially as follows:

In September, 1897, an announcement was made by an association terming itself "The National Cycle Racing Association" that from November 20 to November 27, 1897, the "Fourth Annual Cycle Show" would be held in Battery D, Chicago, and that the "1898 models of all prominent manufacturers would be exhibited," the announcement causing much surprise in trade circles. The Chicago local board investigated and found that the association termed "The National Cycle Racing Association" was composed of a lawyer named Tackberry, one J. D. Guinea, a newspaper reporter, and the manager of the show, Frank Hall.

#### Views of Chicago Dealers.

The Chicago local board did not find anything in the reputation of these men to warrant a belief that the proposed show would in any manner reflect credit on the cycle industry, but came to the conclusion that the situation which they had to face was about as follows: A set of men were about to foist on the Chicago public a "fake" show; these men termed it the "Fourth" annual show in order to mislead the public to class it with the Third Annual Show held the year previous in the Coliseum under auspices of the National Board of Trade; they boldly claimed to exhibit 1898 models of all leading makers, although such models were not and could not be ready for the dates set for the show; and they claimed that the leading makers had taken space and would exhibit, a statement which the local board found contrary to the facts as ascertained by the board's own investigation.

Under these circumstances, the local board first announced that it had refused sanction to the show; second, sent a paper to all manufacturers and dealers in Chicago to be signed, agreeing not to exhibit; third, passed a resolution setting forth what appeared to it the correct character of the show, which was sent to all the newspapers, asking that they properly represent the affair to the public, so the

cycle trade as a whole should not be injured in the eyes of the public.

The show was held and was made up principally of small repair men, only one dealer and manufacturer at that time prominent—the Warman-Schub company, now defunct—being represented. According to reports in daily newspapers, which were serviceable to the promoters, the affair was a "howling success," but Messrs. Guinea and Hall apparently saw further opportunity for gain ahead; for they entered suit against the Chicago local board of trade, collectively, and each of its directors individually, for \$100,000 for libel, claiming this damage under the conspiracy and boycott act of Illinois for the ruination of their venture.

#### The Aid Comes.

This suit is now being pushed through the courts as fast as possible, leaving the Chicago board of trade little time for preparing a defense, and the board has therefore recently applied to the National Board of Trade of Cycle Manufacturers for support and assistance in fighting the case. The local board feels that in having championed the cause of a large number of leading manufacturers, who are not in any way liable under the damage suit, it was only following out a policy advocated and advertised by the National board, and that it is therefore entitled to protection by the National board against dangers arising from such a course.

The appeal of the local board was not in vain. On Monday this week it received assurance from the National board that the cause would be considered one of vital interest to the trade at large and the Chicago attorney for the National organization was placed at the disposal of the local board as assistant counsel for the defense of the suit.

#### New Board of Trade Secretary.

New York City, Nov. 5.—At the last meeting of directors of the National Board of Trade of Cycle Manufacturers the resignation of Secretary W. Wardrop was accepted and George E. Hammanu, heretofore assistant secretary, was appointed to fill the vacancy.

### TACTICS OF SHOW PROMOTERS

#### BID HIGH FOR BOARD SANCTION

**Trade is Led to Suppose That Cost is  
Small and National Board Will-  
ing to Negotiate.**

A few leaves from the correspondence which has been exchanged on account of a proposition for holding cycle shows in New York and Chicago extended by B. E. Greene, special agent of Grand Central Palace building in New York, throw light on the position taken by the National Board of Trade of Cycle Manufacturers in regard to cycle shows in general and may also serve to place show propositions made by promoters in other localities under a new angle of vision to the trade in general.

#### Preparations Are Made Early.

On March 30, Mr. Greene first approached the National Board with a detailed proposition for the two projected exhibitions, offering the Board the entire gate receipts of both shows in return for its sanction of the enterprise. It was a business proposition worth listening to if it had been the Board's intention to replenish its coffers without regard for the trade interests of its individual members and manufacturers in general.

This letter was followed on August 6 by a letter addressed to the secretary of the Board. Copies of it were mailed to manufacturers. It runs as follows:

Confirming my recent conversation with you, there are several different propositions upon any of which I would be willing to conduct a cycle show with the cooperation or sanction of the Board of Trade.

You already have in front of you one providing that the entire gate receipts should go to the Board and that we should assume all the liabilities.

We would also be willing under the same general conditions to allow you 50 percent of the gross receipts.

Or we would allow you 60 percent of the net receipts, specifying in detail the sum to be expended for different purposes.

If it should be the policy of the Board to hold a show, making the expense to exhibitors as small as possible, this plan could be carried out by charging a nominal entrance fee of \$10 for each exhibitor, allowing the Board to allot the space, and we would rely on the gate receipts for rental and expense. On this plan the Board would receive no financial benefit.

We would also be willing to conduct a show on very much the same terms on which the last show at Madison Square Garden was conducted, and would be willing to give the Board of Trade a considerably larger percentage on the same sliding scale.

In fact, if the Board decides to take any part in the show, I do not think we will have any difficulty whatever in devising a plan which will be satisfactory to both of us, and on any proposition suggested above I am prepared to give ample bond for the carrying out of the contract.

In considering the question from the standpoint of the individual exhibitor, you will

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of course remember that my first proposition provided that the cost of extra electric lighting would be made one-third less than at the last show in this building.

Subsequently, on November 1, Mr. Greene sent to the trade another letter in explanation of the one addressed to the Board. This letter reads:

We have mailed you a copy of a letter which was sent to the National Board of Trade of Cycle Manufacturers a few months ago. In explanation we desire to state that the tentative propositions contained therein were offered without any solicitation on the part of the Board or its officers. While we do not pretend to any specific knowledge of the bicycle business, our ideas on the trade shows in general are not based on theory, but on actual experience, and our object in laying this matter before you, as stockholders in the Board of Trade, was to show you that the large expense heretofore entailed in making an exhibit as a bicycle show was entirely unnecessary.

#### Board Disclaims Connivance.

This letter was barely in time to forestall the charge of misrepresenting the Board's position to shows in general, which might have been brought against Mr. Greene, for on the next day, November 2, the Board's secretary found occasion to set the trade right on the situation by the following letter mailed to Board members:

To members of this Board:—B. E. Greene, the agent of The Grand Central Palace in this city, has recently sent a copy of the enclosed letter, the text of which in many places makes it appear as if the Board was again negotiating with him for the conduct of a cycle show.

The proposal contained in Mr. Greene's letter is but an amplification of a similar proposal made to the Board on March 30. Neither of these proposals received consideration at the hands of the directors of the Board, who, in session on August 18, voted adversely upon the question of holding cycle shows.

The general issuance of Mr. Greene's letter bearing date of August 6 was unauthorized by this Board and was accomplished without the knowledge of any of its officers.

#### DEALERS' COSILY VENTURE

##### Broken Bones at Race Meet to be Paid for by Agents Who Conducted It.

Minneapolis, Nov. 7.—A verdict has been secured against Minneapolis bicycle dealers in the case brought by parties injured by the falling of the bridge at Lake Harriet during the road races, June 18. The verdict is for \$1,500, and was in the particular case of Merrick Shirley, by guardian, against the Moore Carving Machine company, Northwestern Cycle company, Tribune-Deere agency and Honstain & Weston. A stay has been taken, as there are several important exceptions on the records. There are seventeen more cases to come, and should they all result as this one has, it will prove that the races were a very expensive venture for the Minneapolis cycle dealers.

During the first part of the week the cases as applying against the city were argued, but were thrown out of court, it being held that the city could in no way be made a party to the action. The bridge which fell was a temporary affair built over the track, so that people could go to the pavilion from the street car without interfering with anything that might be going on. Over a hundred preferred to view the races from the bridge, and although the policemen spoke to them about getting down, they remained. The break came as the riders were about to finish in the first event. As the riders passed under the bridge, there was a general rush to the finish side. The strain was great, and down the structure came, precipitating the people to the ground a distance of fifteen feet. No one was killed, but there were a few cases of broken bones and bad bruises.

## INJURY DONE BY SHOW TALK

### ARGUMENTS OF A TRADE LEADER

#### Every Healthy Form of Trade Activity Is Delayed So Long as Shows Are In Prospect

New York City, Nov. 5.—Opposition to a national cycle show or even to a local show that may pose as one and entail expensive assistance from the wholesale trade is undoubted, emphatic and almost universal among leading makers with headquarters here or who have visited the city since the proposition was formally promulgated by Manager Sanger of the Madison Square Garden. As the representative tricycle manufacturer of the Metropolitan district and one of the leaders in the cycle trade of the country, R. H. Wolff, of R. H. Wolff & Co., Ltd., was interviewed to-day as to his opinion of the advisability of the trade supporting a show in this city in January, either national or local. It is well known that Mr. Wolff's arguments and influence at the meeting of the local board of trade last winter greatly availed in the abandonment of the local show then proposed.

#### Generic Advertising Superfluous.

"In general," said Mr. Wolff, "the bicycle has passed the period when it needs advertisement as a vehicle of convenience or pleasure. It is under present conditions a superfluous kind of advertising that the trade cannot afford. Manufacturers should avoid every move that tends toward extravagance; and the enormous cost of these shows to the exhibitors is well known. They must do business on a close basis if they would at present low prices give the public a good machine. For our part we have maintained one quality and we cannot do so and spend money in this foolish way. These shows are responsible for the mushroom manufacturers whom they give birth to and perpetuate. If makers foster and encourage them further they will have themselves to blame for the results. This show proposition should be sat upon at once and emphatically before it can work any injury to next year's trade."

"What do you mean by that?"

#### Mere Schemes of Promoters.

"I mean that a show and perhaps the mere serious proposition to hold one will upset the whole bicycle trade of the country. The makers have their plans under existing conditions and have sent out their salesmen. If the dealers believe a show will be held or even think that one may be possibly held they will refuse in many instances to make purchases or close agencies until the show is held or probability of holding one is settled. If manufacturers countenance such a show they will be responsible for upsetting the entire cycle trade for this season. The suggestion for a show is not the outcome of any desire to help the bicycle trade, but is a mere private money making scheme of private promoters."

"But suppose the January show at Madison Square Garden be only a local show?"

#### Theory Advanced by the Unsuccessful.

"If it pretends to be a local show then it can be of no avail in influencing retail trade if held in January; for by the time the buying season comes two or three months later the public will have forgotten all about the models they have seen and all the value of the advertisement will be lost. A local show in January will be of no profit to the dealer and he will have spent his good money without

benefiting any one but the promoter of the show."

"How has the loss of advertisement by the abandonment of shows affected sales since they were given up?"

"Not only have the exhibiting makers saved the thousands of dollars the shows cost them, but among the recognized makers of standard goods at least there has been no complaint of a falling off in sales. As for ourselves, we have gained in sales. It is the unsuccessful maker every time who is found advancing the theory that his falling off in business is due to the loss of show advertisement. Some cycle makers want to exhibit other goods than bicycles, for instance, motor carriages. Why should the bicycle makers of the country be asked to pay big money merely to make an exhibit of their rivals' motor vehicles a success? I tell you the trade should at once announce an emphatic refusal to lend itself to a mere private money making scheme before damage comes through upsetting trade. A cycle show is not only extravagant, unwarranted and unnecessary, but will prove a serious injury to the trade as well."

#### Spaulding Machine Screw Co.'s Affairs.

Carlton H. Ladd, who was appointed referee in the proceedings to wind up the affairs of Spaulding Machine Screw Company, has made a report to the Supreme Court. Mr. Ladd took a mass of testimony, and reports that there is due John R. Keim, of New York city, \$52,000 for money advanced to conduct the business and which is secured by a mortgage. The referee holds that the mortgage should be foreclosed. Counsel for Mr. Keim made a motion before Judge Laughlin in special term Saturday to confirm the report. He also asked for \$1,500 costs in the proceedings. The judge withheld his decision. In all probability the plant will be sold about the first of December. Loran L. Lewis, receiver of the business, hopes to sell the plant for a sum that will satisfy all the indebtedness against the company and still have money for the stockholders.

#### Poor Goods by Fall Shipments.

It is estimated that from 1,200 to 1,500 American bicycles were sold in Rotterdam, Netherlands, during the season of 1897, and it is expected that when the figures for the current year are completed they will show a heavy increase over the preceding year. Unfortunately, most of those imported last year were of the lower grades, and the impression got abroad that no first class machines were made in this country. Probably on this account the English bicycle had the preference when a first class machine was desired. However, it has lately become generally understood that a cheap American machine is better for the price than the average British machine. Rotterdam dealers complain that some American bicycles show that they are made in a hurry, and that better goods are sent out in the spring than in the fall.

#### Parts Makers Soon to Meet.

The leaders in the Stockton movement for organization of makers of hubs, pedals and other parts announce that a meeting of the manufacturers to adopt plans of organization and elect permanent officers will be held at Waldorf-Astoria hotel in New York city, Thursday, November 17, at 11 o'clock, a. m.

When a sale of goods is made for cash on delivery and the goods are delivered, but the price is not paid, the title remains in the seller.

## WANTS OF BRITISH RETAILER NET PRICE SYSTEM IN ENGLAND

**Changes in Bicycle Equipment That  
English Dealers Would Appreciate  
—Latitude in Price Needed**

Tardily following the example of the Rudge-Whitworth company, which declared a net selling price for its bicycles shortly after the \$75 price had been generally announced in United States by leading makers in the fall of 1897, and whose dividend and surplus for the current season seem to have convinced other English makers, the whole English industry is now alive with pronouncements of new net prices. The nominal reductions announced in the figures given are very radical, but the practical price-lowering is much smaller, as in most cases agents heretofore have taken it upon themselves to bring the figures to a competition level by shaving down their abnormally large trade discounts. The new move contemplates to tie the agents down to a fixed selling price and thereby enable the large manufacturers to quote prices in advertising which will not make the machines built by local assemblers appear as the cheapest in the market. A real reduction of prices, besides the nominal one, has been necessary to create the desired effect, but it seems that several makers have gone so far in this direction as to interfere seriously with the agent's profit and latitude in negotiating sales. It is this side of the matter which has called forth a letter from a prominent English dealer to Cycle Referee, which is of interest to American exporters as well as to English manufacturers, by stating the requirements of English agents in regard to construction and equipment of the cycles he shall sell. The letter is as follows:

### Competition With Local Makers.

"Time is money, but the agent has to have his time monopolized from day to day with clients who over-patronize him, not to say anything of little repairs, adjusting, inflating, oiling, etc, which is not expected to be charged for. If net prices are generally decided upon sufficient margin must be allowed for a substantial profit to cover all the agent has to contend with.

"It appears to me that manufacturers have taken up the net price question in order to compete against local makers, but for the agent who does not build net prices will be too final in treating with a customer, consequently the intending purchasers will not call again, and the small maker will be better able to treat with them. If a change is necessary better not list the price at all; that can safely be left to the agent in quoting.

### Points for American Exporters.

"There are a few suggestions I would like to throw in for next year's machines which are of significance, such as chain-wheels minus of the shroud, chains running more silent and easier without lateral support. Ladies' machines to be geared higher, spokes of all machines to be enameled or stained instead of plated, and straight-laced dress-guards. As it rests with the agent to suit his client with saddles, full allowance to be made by cycle firms less saddles when so ordered, foot-rests that can be fixed with the bolt and screw on the outside of the forks, and so avoid the accidents caused by the foot-rests becoming loose and slipping down into the spokes of the wheel, a little more handlebar and brake rod for adjustment, a more acceptable inflator than the one generally supplied

with tires, and tires that will not crack and break to pieces."

Commenting upon the net price problem, Cycle Referee suggests a modification in favor of small discounts. From opinions that have been expressed by agents throughout the country, says the Referee editor, it would seem that, if the reduction in both net and list price is to have the effect of increasing the enthusiasm of the agent for the factory-made machine, it will be advisable to still leave a margin between the price at which the machine is listed and the lowest figure at which the agent can sell, he still obtaining a living profit. By no other means can the agent make the adjustment which is necessary in dealing with people who require different lengths of credit. It is not intended that any return should be made to the 20 and 25 per cents, of the old days, but there is undoubtedly a strong feeling that from 5 to 10 per cent difference between net and list prices will be of benefit rather than otherwise.

## TRADE IN OLD MEXICO

**Flourishing Neighbor Republic Has No Bicycle Factories—Excellent Field if Properly Cultivated.**

Our bicycle trade with Mexico has trebled within the last year or two, and yet it is only in its infancy. The move for better streets and roads, a move that comes with the bicycle everywhere, has reached Mexico and is bound to benefit the bicycle trade. Monterey, one of the principal cities of the republic, since the laying of a few miles of modern brick pavement, has taken to the bicycle in a way that is bewildering. The same results can be counted on in every one of the chief cities. As there is now not a single bicycle factory in the republic, although a concession for one at the capital has been granted, it behooves our manufacturers in this line to press their goods with vigor.

Manufacturers should consider Mexico as they would a state of the Union, and should seek trade there as they would at home. They should remember that it is only a few hours' ride from us and has a population as large as that of Canada, New England, and all of the Rockymountain and Pacific states and territories combined. Trade must be talked for in Spanish. Nothing works so well in Mexico as a local agency. Competent Spanish-speaking agents are next in efficiency. Every point of importance has an American consulate and more or less Spanish-speaking Americans, who are available as trade seekers. Every route by rail into Mexico has its customs agent, whose business is to give information as to duties and to facilitate the passing of goods through the Mexican custom house. They are men of exceptional intelligence and experience, whom it is well for American manufacturers to consult. Long credits are the rule in Mexico, and with well established houses are entirely safe. A mercantile agency under American auspices is in thorough working order in Nuevo Laredo and performing those functions so necessary to the safeguarding of trade.

### Sundries Makers Robbed.

Minneapolis, Nov. 7.—Thiem & Co., St. Paul, manufacturers of the Thiem toe-clips, have for some time past been systematically robbed, the thieves paying particular attention to the small tools in their die making department. Last week they carried off a complete set of twist drills and fluted spiral reamers to match drills. Two employes were arrested and a large amount of stolen property recovered.

## DOUBLE LICENSE FOR AGENTS

### EXCHANGE OF MACHINES TAXED

**Washington Dealers Compelled to Pay  
Junk Shop License Tax or Quit  
Trading-In Practise.**

Washington, Nov. 7.—The cases of the several bicycle dealers who were recently arrested for alleged violations of the law requiring second-hand dealers to pay an annual license tax of \$40, were called in the police court last Friday. The prosecuting attorney and the attorneys for the defense agreed that one defendant should be selected for trial, and in this case, should the court decide that the law was applicable to bicycle dealers, the question involved could be taken to the court of appeals and finally settled. J. D. Lasley, who was one of the first dealers arrested, and who is one of the most prominent dealers in this city, was selected to stand trial. Counsel for the defense then made a motion to quash, alleging legal reasons why the paper filed should be set aside. The form of the information was even attacked, but all these attempts to end the case were overruled by the court.

### Regular Second Hand Business.

The prosecuting attorney argued that the handling of second-hand bicycles by dealers brought them within the provisions of the law. He pointed to the fact that dealers accept these bicycles in part payment for new machines, and that after repairing these old bicycles the dealers then put them on sale. The defense admitted these facts. Counsel then cited various authorities in support of their position and the case was then given to the jury, who brought in a verdict of guilty. Mr. Lasley was placed under \$200 personal bonds.

The prosecuting attorney stated that should the court of appeals uphold the decision, it will mean an annual increase of about \$100,000 in the revenues of the district. A decision against the dealers, he said, will mean that all business men who take second-hand goods in part payment for new, and then dispose of the old goods, will be liable to a license tax of \$40. Dealers in bicycles, typewriters and harness will be among those who will be most affected. The decision of the court of appeals will be awaited with interest.

## WOOD RIM JOINT PATENTS

**Milwaukee Judge Renders Sweeping Decision  
Affecting Rim Makers.**

A decision was rendered last Monday in the United States circuit court in Milwaukee which may prove of interest to wood rim makers. The suit was brought by Indiana Novelty Mfg. Co. of Plymouth, Ind., against Crocker Chair company of Sheboygan, Wis., and the Smith-Flanders company of Milwaukee to enjoin these firms from making wood rims with the Plymouth joint. The court found objection to the validity of the Indiana company's patent in the fact that wood rims were used long before the date when the company's patents were obtained and declined to sustain the injunction.

From reports so far obtained it seems uncertain whether the decision has reference to the manufacture of wood rims in general or only to the employment of certain means for joining the meeting ends of the hoop.

The size of a bill is never reduced by filing.

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AND INFINITELY  
SUPERIOR FABRIC  
TO THAT WHICH GOES INTO  
THE  
COMPOSITION OF ANY OTHER  
PNEUMATIC EVER  
MANUFACTURED.

PALMER TIRES  
HAVE MORE  
MERITORIOUS FEATURES  
THAN ALL OTHER  
MAKES OF TIRES COMBINED.  
NO OTHER TIRE  
IS SO FAST, SO RESILIENT,  
SO EASY RIDING,  
OR SO EASILY REPAIRED  
AS THE PALMER.

THE  
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**THE PALMER PNEUMATIC TIRE CO.**  
**CHICAGO.**

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# THE CYCLE AGE

## AND TRADE REVIEW

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

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### DEALERS' PROPER FIELD

The sideline idea, as first advocated and elaborated in this paper, is being strangely distorted by correspondents and editors who at a late hour have perceived the necessity of paying attention to this phase of cycle retail business. Found napping when there was first need of missionary work for the idea in its general features, they now fail to perceive its natural limitations and run afoul of another trade phenomenon—the department store—which has nothing to do with cycle trade as such. They are to all intents and purposes championing the promiscuous adoption of all other lines of goods by cycle dealers and advocating that every cycle dealer should strive to sail as close to the department store plan as his purse and opportunities will permit. Their advice may do no great harm, for cycle dealers are far ahead of these advisers in understanding of the situation. They will in many instances take up a line of goods which seems to be neglected in their community, and will make money out of it even though it has nothing in common with cycle trade, but they know full-well that they are not taking the first or the second or any step toward conducting a general store by so doing, but are simply availing themselves of the privilege to turn an honest dollar, which is open for any business man whose perceptions of trade chances are not dimmed by the routine of his own particular business. If they find that their facilities for selling cigars or stoves or millinery are really of permanent value they will naturally be as willing to make profits out of those lines as from bicycles, and a few may discover in themselves a formerly unsuspected genius for trade in such other lines which will insure them greater success than they could hope to attain in the bicycle trade. Nothing would be more natural under such circumstances than to abandon the bicycle business for the better paying line or to continue combining them if possible. But these are rare instances which should not be magnified into an example for the whole retail trade to follow.

It is ridiculous to suppose that any considerable number of bicycle dealers should find it practicable to establish new general stores in their respective communities and make them profitable, or that very many of them should have special ability for any one of the lines of goods which are regularly handled in those established channels of retail trade in which competition is strong enough beforehand.

As a remedy for the short season and limited sales in the cycle trade generally expansion on a promiscuous basis promises no better results than generally attends the opening of a new place of business, and those who recommend it might as well recommend anybody who has money enough to open a store to go straightway and do so. The great difference between adding bicycles in a small way to the stock of an establishment which has already hundreds of customers for other goods and, on the other hand, adding other goods to the stock of a bicycle establishment, needs to be recognized. Unless it is possible to point out a certain class of goods which the public would readily accustom itself to find in a bicycle store and which cannot be regularly found in any other kind of store under local conditions, all rational foundation for expansion of the bicycle trade falls away and nothing remains of the sideline idea except a vacuous

and idle exhortation to display enterprise. And enterprise under untoward conditions is a much overrated quality.

The attempt has been made in previous issues of Cycle Age to show that there is a large range of articles, however, which are nowhere handled together except in some modern, progressive bicycle stores, and each of which has a too-limited sale to be the main article in a special store, except in very large cities. To articles of this kind the sideline idea must be restricted if it shall be consistent with the requirements of the whole retail bicycle trade. On this idea every bicycle store in the country may expand its scope and take in as varied an assortment of articles as are found in a drug store, a hardware store or a stationery, and yet the general character of all bicycle stores would be recognized as the same all over, varying only in completeness according to the size and conditions of the town of location. The bicycle store under such a development would be a sort of commercial missionary station in its locality, where the inhabitants might be reasonably sure of finding all those numerous things—largely the products of modern invention—of which they could not be certain of finding any in any other one class of the commercial establishments to which the particular locality would afford permanent support.

It should even at this early stage be possible to furnish lists of articles approximately representing the possible scope of bicycle sidelines graded from a long list for towns of five to ten thousand inhabitants to shorter lists for larger cities and also shorter lists for the minor towns and villages. To compile such lists and offer the goods embraced in them to the retail trade in a practical commercial manner, remains one of the business opportunities which enterprising sundry jobbers have before them.

### CHANCES OF THE CHAINLESS

With a winter before them and prospects none too promising for turning the days to account by assembling bicycles in competition with larger establishments, repairmen may have time to familiarize themselves with bevel-gear and other chainless bicycles, and those who avail themselves of the opportunity for doing so are likely to have a considerable advantage over competitors when next riding season shall have rolled around to its zenith. It has for some time been fairly well understood that the probationary period for bevel-gear bicycles has been passed and that manufacturers no longer harbor any serious misgivings in regard to them. A year ago conditions were different. There were considerable stocks of finished and unfinished chain-and-sprocket bicycles on hand, making it undesirable to market a large product of chainless machines at any ordinary price.

It was not quite certain what part repairs, under—or over—the guarantee, would play in the chainless trade. The possibility of radical improvements was not precluded. In brief, there were so many risks to be taken by forcing the sales of the new type of machines that all manufacturers who took it up at all, as of one mind readily fell in with the ultra-conservative price and policy that marked its introduction. All these things have changed, however. First of all the market was forced down by the appearance of cheaper models of the same general type. This alone has had a strong influence, but of still greater importance for prognosticating the probable position of chainless machines in the '99 retail market is the general cleaning up of old stock which has been characteristic for this business season, and which has cleared the atmosphere for any amount of vigorous campaigning for chainless machines that the manufacturer's of the same may see fit to indulge in. Their convictions in regard to mechanical fitness, elegance and saleability are no longer handicapped by tender regards for money invested in other directions, routine of their shops and similar considerations. They are practically foot-loose, and the first admonition of what may be coming has already been given in the form of a radical price reduction.

As if made to order to assist the makers of chainless machines, a good sized fad for 30-inch wheels has at the same time put in its appearance, removing to some extent the objection which might be raised against the bevel-gear type on the score of its weight, by increasing the weight of that class of chain-bicy-

cles which, by novelty and courtesy if by nothing else, might be classed as a competing article. When to all this comes that the public during the present season has gone through the slow process of learning to "embrace the monster"—no reflection on chainless machines implied—and has abandoned its borrowed pseudo-scientific objections to "transmission around corners," "side-thrusts," &c., &c., which were so faithfully absorbed by it last fall, winter and spring, it becomes a matter for careful consideration by dealers and repairmen as well as manufacturers to form an advance estimate of the proportion of chainless machines which is likely to be sold next year.

This proportion will not be alarmingly great. The price after all precludes that. But it will probably be sufficiently great to spell a good margin of profit or loss accordingly as the estimate is more or less close to the actual trade results. It seems also to be worth considering that possibly there may prove to be a close interdependence between sales of chainless bicycles on one side and 30-inch wheel bicycles on the other. There would seem to be a certain probability that the two styles will not thrive together in the same locality. Where the chainless gains the ascendancy among those looking for "up-to-date" mounts, the large wheeled machine will probably be frowned upon, and vice-versa. For the public rarely favors two fashions at the same time in an article like bicycles.

\* \* \* \* \*

That the value of a pneumatic tire depends very largely on the facility, or otherwise, with which it may be mended when punctured or cut, is usually taken as one of the recognized truths in bicycle lore nowadays. Mending of large rents will perhaps always remain a precarious job, so far as the rider is concerned, but it is being more and more vehemently insisted upon that ordinary punctures shall not cause permanent trouble. In this respect the usual single tube road tire with canvas fabric has suffered in public estimation. Fabric leaks and the unreliability of plug repairs have been the two drawbacks to this class of tires, even more than excessive adulteration of the rubber which enters into their composition. The latter is simply a question of price for which the remedy lies in the public's own hands. They can get good single tube tires with canvas fabric as well as with thread fabric, if they will pay for them. Some tire manufacturer might make the experiment of publishing the exact proportion of ingredients that go into his tires at the various prices, and await results. If he takes the trouble of safeguarding his statements so as to carry conviction to the most incredulous, it seems likely enough that he would enjoy a gratifying trade in his best article, for the public's inclination for the cheapest grades has undoubtedly been due very largely to the apprehension that a better price would not always be sure to secure them a better article.

\* \* \* \* \*

In regard to construction and repairs of single tube tires with canvas fabric there are two points, however, on which it seems as if something might be done to improve the situation. The suggestions are those of a layman on tire science, but no convincing objections have so far been offered against them by men in the tire industry to whom they have been mentioned. To prevent tire fabric leaks of the sinuous and insidious kind which makes the locating of a puncture as hard a task as its mending, it is thought that it might be useful to dip or soak the fabric in a very weak solution of rubber before it is wound on the mandrel or otherwise placed in position between the other layers. In thread fabric tires fabric leaks are partly obviated by imbedding the threads in rubber; still leakage occasionally takes place through the threads. Even this class of tires might therefore perhaps be improved by the proposed process. With fabric leaks eliminated the value of single tube tires would undoubtedly be enhanced. When a reliable and facile repair method were added the eventual results in regard to trade would be incalculable. Plug repairs have not been a decided success, and the question arises if the use of plugs is not wrong in principle as well as in application.

\* \* \* \* \*

The popular tendency, when the "repair strip" is not available, is in favor of plugs with very large, patchlike, disks or heads, but in reality the plug stem is a hindrance for the inser-

tion of such large plugs through a small puncture. The stem is too bulky and, moreover, its attachment to the flat circular portion makes it necessary to mold the latter with greater thickness than would be necessary for a patch, lest the violence of insertion shall tear a hole where stem and disk are joined. Much might be gained if makers of single tube tires would resolutely devise suitable means for the insertion of thin patches through a puncture. A very simple instrument would suffice, it seems. It might comprise a thin hollow rod, with butted end, around which the patch would be wrapped with its center against the butted end; and an outer split metal protector which might be gathered around the patch by means of a friction ring, as in a slate-pencil holder, coming together at a point below the patch and guiding rod. In this position the instrument should be forced through the puncture, lubricated with water or saliva if necessary, and the protector should be withdrawn while the hollow rod pressed the patch against the rim side of the tire. Being perfectly dry the patch would spread out by its own elasticity. Then cement could be poured or pressed into the hollow rod from the outside of the tire and caused to flow out of holes near its butted end. A little manipulation of the tire would serve to spread the cement over the patch without any danger of gumming more than one side of it, and when the desired degree of "tackiness" were obtained, the punctured portion of the tire could be permanently joined to the generous-sized patch while the rod were withdrawn.

\* \* \* \* \*

Probably the method might be further simplified. The main thing seems to be that manufacturers of single tube tires should cut loose from their exclusive allegiance to the plug repair, and try methods by which the vicinity of the puncture may be covered for a greater area than usually spanned by a plug disk, so as to guard against the uncertainty which arises from "cementing in the dark."

\* \* \* \* \*

The latest cry among bicycle constructors is directed against front forks of oval section. They are too stiff, it is said, and throw too much strain and vibration on to the stem and frame. Much more trouble has been experienced with the modern shapes of forks than with the forks of round section which were used by some manufacturers several years ago, but which are now employed, so far as known, by only one American manufacturer. In England the round forks used on the new Triumph spring frame models have raised the same question and Mr. Lovelace, an English manufacturer, who has specified round forks for all his machines for fourteen years, states that the advantages of the springy front fork are beyond questioning and experiment. The truly scientific front fork, it is claimed, should be made of tubing not only tapering in diameter but also in gauge, running from  $\frac{7}{8}$  inch by 16 gauge at the junction with the crown to  $\frac{1}{2}$  inch by 20 gauge at the axle end.

\* \* \* \* \*

An amendment to the spring fork idea is offered by a manufacturer who claims that the crown is too stiff and heavy. By making the crown lighter and sufficiently soft to bend under excessive stresses he proposes to obviate all chances of having the forks strained or the fork-stem broken. Whether this method also produces the easy riding which is claimed as one of the advantages of the round-section forks, is not stated.

\* \* \* \* \*

The argument on the whole seems likely to be taken up by makers of wood forks who might easily prove that suitably tapered one piece hickory or ash forks would respond perfectly to the requirements of springiness at a cost much below that of taper-gauged tapered tubing. Manufacturers of open-seam steel fishing rods may also be able to offer a solution of the problem.



# We are Prepared to talk '99 business with a few large jobbers.....

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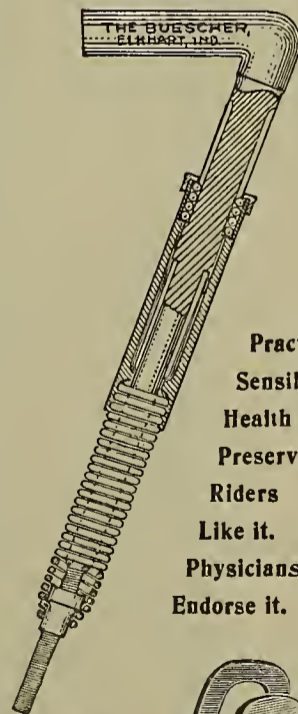
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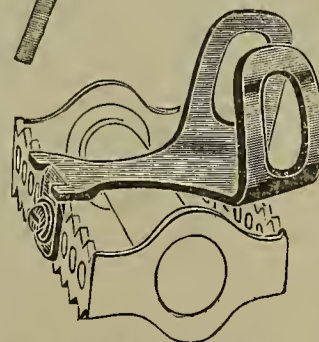
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design, 35c pair.

## FATE OF NATIONAL BOARD

### Disruption of the Board Threatened By a Faction—Stockholders Will Decide Its Future

New York City, November 8.—Mixed emotions agitate the members of the National Cycle Board of Trade as they endeavor to pierce the mystery contained in the following surprising announcement:

To Board Members.—You are hereby given notice that a special meeting of the stockholders of the National Board of Trade of Cycle Manufacturers will be held at the offices of the corporation, No. 320 Broadway, in the City of New York, on Thursday, Nov. 17, 1898, at 10 o'clock in the forenoon, for the purpose of considering the future work of the board.

This call is issued under authority of a resolution passed at a meeting of the directors of this board, held on Nov. 3, 1898.

Yours truly,  
Walter Wardrop,  
Secretary.

New York City, Nov. 4.

The interpretation of the foregoing official communication is that the stockholders of the Board, who are its members, will be asked on the day of the meeting to provide for the support of the organization without resorting to the discreditable practice of holding cycle shows. At this moment the Board is in receipt of no greater income than is derived from the dues of its 300 members—about \$1,500 a year. The present administration, not deeming it courteous or fair that the next board of directors should face the work of another year with insufficient funds, is in doubt about the proper course to pursue.

#### Income Is Insufficient.

At the meeting of the directors held on November 3 it was the prevailing opinion that the dues should be raised from \$5 per annum to something like \$50. If this is not done it will be necessary to so reduce the operating expenses of the Board that the sum of money now in the treasury will last for a longer time than it would under conditions which tolerated heavy expenditures without any sign of a supporting income. There is in the treasury of the Board at the present moment about \$10,000 in cash. The annual expenditures under the existing form of government are in the neighborhood of \$11,000. It is, therefore, quite plain that if additional income is not obtained the Board cannot carry on its business unless severe retrenchment is practiced.

At the special meeting of the stockholders it is probable that efforts will be made to disrupt the organization, the value of which is again gravely doubted by the controlling spirits in the organization. This intention, however, in no way foreshadows the action of the stockholders, who have never been taken into the confidence of the directors, either under the present administration or in previous reigns. To offset the determination of the powerful people who, it is alleged, are ready to undertake the strangling of the Board, there is the declared intention of a minority of the directors and a strong following of stockholders to continue the organization, though, as it may well be supposed, not under the present form of dynastic rule.

#### Radical Changes In Organization.

If two-thirds of the stockholders—that is, two-thirds of the stock issued—shall say that the Board work is worthy of continuation, some radical changes will in all likelihood follow this decision, chief

among which will be that all members shall exercise equal voting power. To this end it may be necessary to return the charter under which the Board now transacts business and make the organization voluntary.

The future of the Board lies with the stockholders. In this respect the situation is considerably different from what it was last January when, after much fervid talk of dissolution, the effort to disband was, through the activity of the loyalists, completely frustrated.

Between the present unsound method of financing the organization and the renewed talk of dissolving the corporation there is intimate connection. Between the ardent hope of the reconstructionists and the disappointment arising out of the past year's work there is an equally intimate relation. Thus the forces are divided—one party believing that the Board has a thorough right to enjoy perpetuation, though perhaps not in its present form on account of the opportunities which it has taken advantage of as well as the opportunities which have been neglected; and the other party contending that by virtue of the inability of the Board to rise superior to all obstacles placed in its way, it should be disbanded.

#### Existing Conditions Untenable.

Whatever the outcome of the controversy which is imminent, it is not to be denied that for the good which in the past the Board has accomplished, though the nature of its good works is habitually viewed through a telescope, it is worthy of perpetuation in some form or other. The confession of inability to make progress under existing conditions is by no means an irrefutable argument for the dissolution of the Board.

The present roster of the Board membership is as follows:

Arnstein, Eugene, 88 West Lake St., Chicago, Ill.  
Abbott, W. L., Duquesne Mfg. Co., Pittsburgh, Pa.  
Andrae, H. P., Jullus Andrae & Sons Co., Milwaukee, Wis.  
Blaurock, B. A., American Tire Co., Havemeyer Bldg., N. Y. City.  
Billings, F. C., Billings & Spencer Co., Hartford, Conn.  
Black, Geo. I., Black Mfg. Co., Erie, Pa.  
Bowe, J. L., Syracuse Cycle Co., Syracuse, N. Y.  
Brownridge, W. T., Rex Cycle Co., Chicago, Ill.  
Butler, C. J., Peoria Rubber & Mfg. Co., Peoria, Ill.  
Benjamin, C. A., Olive Wheel Co., Syracuse, N. Y.  
Bailey, B. M., Fairbanks Boston Rlm Co., Bedford, Mass.  
Bunker, W. I., Bunker Saddle Co., Chicago, Ill.  
Beach, N. M., Bridgeport Brass Co., Bridgeport, Conn.  
Blanchard, T. F., Mechanical Rubber Co., 230 E. Randolph St., Chicago.  
Becker, J. H., Elmore Mfg. Co., Clyde, Ohio.  
Bentley, W. H., Straight Mfg. Co., Jamestown, N. Y.  
Bidwell, Geo. R., Spalding-Bidwell Co., 29 W. 42nd St., N. Y. City.  
Brown, Kirk, American Dunlop Tire Co., Belleville, N. J.  
Bruff, W. J., Remington Arms Co., 315 Broadway, N. Y. City.  
Burriss, Elliott, Humber & Co., Amer. Ltd., 3 Park Place, N. Y. City.  
Caswell, D. W., Adams & Westlake Co., Chicago, Ill.  
Carey, F. W., Thomas Chain & Stamping Co., Norwich, Conn.  
Clark, Geo. C., Wheeler Saddle Co., Detroit, Mich.  
Centlivre, L. A., L. A. Centlivre Mfg. Co., Fort Wayne, Ind.

Chapman, T. B., Columbus Bicycle Co., Columbus, Ohio.  
Child, A. Kennedy, Hartford, Conn.  
Cannon, H. B., Bridgeport Gun Imp. Co., 315 Broadway, N. Y. City.  
Carter, J. A., Geneva Cycle Co., Geneva, Ohio.  
Climo, Jos. D., Cleveland Machine Screw Co., Cleveland, Ohio.  
Cole, G. W., G. W. Cole & Co., 111 Broadway, N. Y. City.  
Coleman, R. Lindsay, Western Wheel Works, 36 Warren St., N. Y. City.  
Colton, Geo. B., Colton Cycle Co., Toledo, Ohio.  
Cockley, D. L., Shelby Steel Tube Co., Shelby, Ohio.  
Crawford, R. S., Crawford Mfg. Co., Hagerstown, Md.  
Curtis, A. B., Reed & Curtis Mch. Screw Co., Worcester, Mass.  
Cushman, Jos. W., Cushman & Denison, 172 9th Ave., N. Y. City.  
Davis, J. E., Boston W. H. & Rubber Co., Boston, Mass.  
Davis, W. E., March-Davis Cycle Co., West 44th St., Chicago, Ill.  
Day, Geo. H., Hartford Cycle Works, Hartford, Conn.  
Dickerson, C. W., Sterling Cycle Works, Chicago, Ill.  
Dikeman, C. S., Eagle Bicycle Mfg. Co., Torrington, Conn.  
Dunbar, J. Frank, Newton Rubber Works, 123 Pearl St., Boston, Mass.  
Eldridge, B., National Sewing Mach. Co., Belvidere, Ill.  
Faxon & Co., O. J., 2 Appleton St., Boston, Mass.  
Fitchburg, M., The League Cycle Mfg. Co., Milwaukee, Wis.  
Fowler, Frank T., 136 W. Washington St., Chicago, Ill.  
Funnell, C. H., Buffalo Cycle Mfg. Co., Buffalo, N. Y.  
Friedenstein, J., Amer. Cycle Fittings Co., 320 Broadway, N. Y. City.  
Fries, G. Frank, Day Mfg. Co., Idlewood, Erie Co., N. Y.  
Fulton, H. H., Eclipse Bicycle Co., Elmira, N. Y.  
Fletcher, E. C., Indianapolis Chain & Stamping Co., Indianapolis, Ind.  
Frost, W. H., Frost Gear Case Co., Indianapolis, Ind.  
Faulkner, Arthur, Trinity Cycle Mfg. Co., Keene, N. H.  
Finkenstadt, F. C., National Cycle Mfg. Co., Bay City, Mich.  
Fanning, Frank J., Fanning Cycle Mfg. Co., Chicago, Ill.  
Fallanbee, H. S., Brown Saddle Co., Elyria, Ohio.  
Featherstone, A., A. Featherstone & Co., 32 Warren St., New York City.  
Fisher, C. H., Gendron Wheel Co., Toledo, Ohio.  
Fewsmith, L., Peerless Mfg. Co., Cleveland, Ohio.  
Garford, A. L., Garford Mfg. Co., Elyria, Ohio.  
Gilbert, Jr., A., Fenton Metallic Mfg. Co., Jamestown, N. Y.  
Goetz, P., Albany Mfg. Co., Albany, Ind.  
Goodspeed, C. E., Geo. Barnard & Co., Brooklyn, N. Y.  
Gormully, R. Phillip, Gormully & Jeffery Mfg. Co., Chicago, Ill.  
Graham, W. A., New Departure Bell Co., Bristol, Conn.  
Gump, A. W., The Shelby Cycle Mfg. Co., Shelby, Ohio.  
Goodrich, P. N., Ideal Plating Co., 3 Appleton St., Boston, Mass.  
Greenburg, Geo. G., S. D. Childs & Co., 140 Monroe St., Chicago, Ill.  
Gates, W. H., Baldwin Cycle Chalm Co., Boston, Mass.  
Griggs, R. F., The Matthews & Willard Co., Waterbury, Conn.  
Hastings, W. W., New York Standard Watch Co., 11 John St., New York City.  
Hord, A. C., McIntosh-Huntington Co., Cleveland, Ohio.  
Hulbert, M. H., Mesinger Bicycle Saddle Co., 70th St. & Ave. A., New York City.  
Hunt, J. A., Hunt Mfg. Co., Westboro, Mass.  
Halladay, L. B., Marion Cycle Co., Marion, Ind.  
Hawks, Edw. W., Ariel Cycle Mfg. Co., Goshen, Ind.  
Hardy, H., 42 West 67th St., N. Y. City.  
Hatt, Fred H., Empire Cycle Co., Syracuse, N. Y.  
Hay, Thomas, Hay & Willits Mfg. Co., Indianapolis, Ind.  
Hodgman, Geo. F., Hodgman Rubber Co., 459 Broadway, N. Y. City.  
Hoffman, L. E., Hoffman Bicycle Co., Cleveland, Ohio.  
Hopewell, John, L. C. Chase & Co., Boston, Mass.  
Hulbert, W. A., Hulbert Bros. & Co., 70th St. & Ave. A., City.  
Hunter, Thos. (2), Hunter Arms Co., Fulton, N. Y.  
Huffman, F. T., Davis Sewing Machine Co., Dayton, Ohio.  
Indiana Novelty Co., Plymouth, Ind (Geo. H. Thayer).  
Ingersoll, C. H., R. H. Ingersoll & Bros., 156 Washington St., City.

Johnson, F. I., Iver-Johnson Arms & Cycle Works, Fitchburg, Mass.  
 Johnson, Llewellyn H., Cycle Health Supply Co., 107 Chambers St., New York City.  
 Kundtz Bending Co., Cleveland, Ohio.  
 Kirk, Ezra E., The Kirk Mfg. Co., Toledo, Ohio.  
 Kurtz, S. S., Gilliam Mfg. Co., Canton, Ohio.  
 Keating, Robt. M., Keating Wheel Co., Middletown, Conn.  
 Kenfield, W. W., Rochester Cycle Mfg. Co., Rochester, N. Y.  
 Kiser, J. W., Monarch Cycle Co., 32 N. Halsted St., Chicago.  
 Kelley, A. L., Mechanical Fabric Co., Providence, R. I.  
 Kirkpatrick, T. J., Kirkpatrick Saddle Co., Springfield, Ohio.  
 L'Hommedieu, S. V., National India Rubber Co., 223 Broadway, City.  
 Lovell, Ben. J., John P. Lovell Arms Co., Boston, Mass.  
 Lozier, H. A., H. A. Lozier & Co., 34 Superior St., Cleveland, Ohio.  
 Lyall, Wm., Brighton Mills, 540 W. 23rd St., New York City.  
 Llewellyn, Jno. T., Ferrite Steel Cycle Fittings Co., Racine, Wis.  
 Lester, H. W., The Veeder Mfg. Co., Hartford, Conn.  
 Lonn, E. Julius, J. Lonn & Sons Co., La Porte, Ind.  
 Mowry, W. C., Hopkins & Allen Mfg. Co., Norwich, Conn.  
 Metz, C. H., Waltham Mfg. Co., Waltham, Mass.  
 Maslin, H. E., Tourist Cycle Co., Syracuse, N. Y.  
 McLymonds, L. K., N. Y. Belting & Packing Co., 25 Park Place, New York City.  
 McDonald, Hugh, Demorest Mfg. Co., Williamsport, Pa.  
 McKee, Joseph, McKee & Harrington, 175 Grand St., N. Y. City.  
 Measure, Walter, Union Cycle Mfg. Co., Highlandville, Mass.  
 Mendenhall, W. B., American B. H. O. & Sewing Machine Co., Philadelphia, Pa.  
 Miller, John R., Relay Mfg. Co., Reading, Pa.  
 Moore, A. L., A. L. Moore Co., Cleveland, Ohio.  
 Morse, Henry C., Revere Rubber Co., Boston, Mass.  
 Manson, Louis H., Manson Cycle Co., 153 W. Jackson St., Chicago.  
 Meiselbach, A. D., A. D. Meiselbach Co., N. Milwaukee, Wis.  
 Meyercord, Geo. R., The Meyercord Co., Chicago, Ill.  
 Oliver, John I., Bardons & Oliver, Cleveland, Ohio.  
 O'Connell, W. J., Arnold Schwinn & Co., 244 W. Lake St., Chicago, Ill.  
 Page, T. C., Lamb Mfg. Co., Chicopee Falls, Mass.  
 Palmer, J. F., Palmer Pneumatic Tire Co., Chicago, Ill.  
 Peck, A. R., Barnes Cycle Co., Syracuse, N. Y.  
 Pepper, C. L., Spaulding Pepper Co., Chicopee Falls, Mass.  
 Pierce, Geo. N., Geo. N. Pierce Co., Buffalo, N. Y.  
 Pierrez, J. C., Columbia Rubber Works, 65 Reede St., New York City.  
 Pope, A. A., Pope Mfg. Co., Hartford, Conn.  
 Pope, Geo., Hartford Rubber Co., Hartford, Conn.  
 Prial, F. P., The Wheel, 88 W. Broadway, N. Y. City.  
 Punnett, R. A., Punnett Cycle Mfg. Co., Rochester, N. Y.  
 Patee, Fred, Patee Bicycle Co., Peoria, Ill.  
 Peacock, F. E., E. P. Peacock, Chicago, Ill.  
 Post, D. J., The Cycle Supply Co., Hartford, Conn.  
 Pratt, D. S., Elastic Tip Co., Boston, Mass.  
 Packer, G. D., Packer Cycle Co., Reading, Pa.  
 Porter, Fred H., National India Rubber Co., Boston, Mass.  
 Rempiss, W. F., Reading Standard Mfg. Co., Reading, Pa.  
 Ryman, R. L., Strieby & Foote, Newark, N. J.  
 Reber, J. C., Acme Mfg. Co., Reading, Pa.  
 Redding, W. A., Redding, Kiddle & Greely, Potter Bldg., New York City.  
 Rockwell, E. D., P. & F. Corbin, New Britain, Conn.  
 Rouse, H. G., Rouse, Hazard & Co., Peoria, Ill.  
 Rountree, H. H., Turner Brass Works, 122 Kinzie St., Chicago, Ill.  
 Richmond, F. B., American Specialty Mfg. Co., Hartford, Conn.  
 Rastetter, W. C., Louis Rastetter & Sons, Fort Wayne, Ind.  
 Smith, C. S., C. S. Smith & Sons Co., Milwaukee, Wis.  
 Scheffey, A. M., A. M. Scheffey & Co., 92 Read St., New York.  
 Schlesinger, Leo, Stanley Cycle Mfg. Co., 281 9th Ave., N. Y. City.  
 Schlesinger, Louis, Capital Mfg. Co., 125 Rees St., Chicago, Ill.  
 Shrader, Geo. H., A. Shrader's Sons, 32 Rose St., N. Y. City.

Seiberling, C. W., The India Rubber Co., Akron, Ohio.  
 Smith, C. F., Indiana Bicycle Co., Indianapolis, Ind.  
 Snell Samuel, Snell Cycle Fittings Co., Toledo, Ohio.  
 Spalding, A. G., A. G. Spalding & Bros., 147 Wabash Ave., Chicago, Ill.  
 Stall, W. W., Room 1318, 320 Broadway, N. Y. City.  
 Stearns, E. C., E. C. Stearns & Co., Syracuse, N. Y.  
 Smyth Hill C., Keating, Smyth & Southard, Chicago, Ill.  
 Sturgess, Lee, Chicago Stamping Co., Chicago, Ill.  
 Smith, O. H., Indianapolis Rubber Co., Indianapolis, Ind.  
 Stover, D. C., Stover Bicycle Co., Freeport Ind.  
 Sidway, H. T., Sidway Mfg. Co., 240 W. Lake St., Chicago, Ill.  
 Spencer, Geo. G., 318 Royal Ins. Bldg., Chicago, Ill.  
 Sidwell, Arthur, Sidwell Pedal Co. Boston, Mass.  
 State, John C., Ames & Frost Co., Chicago, Ill.  
 Spraker, D. C., Kokomo Rubber Co., Kokomo, Ind.  
 Silverman, L., Artemis Plating Works, 74 W. Jackson Boul., Chicago.  
 Tinkham J. R., Tinkham Cycle Co., 306 W. 59th St., N. Y. City.  
 Thayer, C. L., Hamilton Cycle Co., Hamilton, Ohio.  
 Thompson, A. G., Phillips Mfg. Co., 307 Broadway, N. Y. City.  
 Thompson, Geo. L., Geo. L. Thompson Mfg. Co., Chicago, Ill.  
 Thomas, W. S., The Thomas Mfg. Co., Springfield, Ohio.  
 Very, A. O., Warwick Cycle Co., Springfield, Mass.  
 Van Arsdale, H., Beebe Mfg. Co., Racine, Jct., Wis.  
 Williams, H. C., Fay Mfg. Co., Elyria, Ohio.  
 Wainwright, L. M., Roger B. McMullen & Co., 309 Broadway, N. Y. City.  
 Ward, Eugene, Butler & Ward Co., Newark, N. J.  
 White, Frank N., New York Tire Co., 59 Reade St., N. Y. City.  
 White, W. T., White Sewing Mach. Co., Cleveland, Ohio.  
 Whitten, W. W., W. W. Whitten Cycle Mfg. Co., Providence, R. I.  
 Wilmarth, L. T., Grand Rapids Mfg. Co., Grand Rapids, Mich.  
 Wilson, Wm. F., Liberty Cycle Co., 4 Warren St., New York City.  
 Wilson, Wm. N., Richmond Bicycle Co., Richmond, Ind.  
 Wolff, R. H., R. H. Wolff & Co., Foot E. 118th St., N. Y. City.  
 Wright, Rufus, Morgan & Wright, Chicago, Ill.  
 Wood, F. W., Indiana Chain Co., Indianapolis, Ind.  
 Webster, G. W., Chicago Handle Bar Co., Chicago, Ill.  
 Welles, R. H., Badger Brass Mfg. Co., Kenosha, Wis.  
 Warren, J. M., J. J. Warren Co., Toledo, Ohio.  
 Williams, J. H., J. H. Williams & Co., 9 Richard St., Brooklyn, N. Y.  
 Wilmot, Frank A., The Wilmot & Hobbs Mfg. Co., Bridgeport, Conn.  
 Yost, Jos. L., Toledo, Ohio.

United States whatever his decision might be, and a final determination at an early date is the most important object sought by the litigants. A part of his opinion as he chooses to deliver it, is as follows:

"I start with the proposition that as between individual citizens originally there is the right as to who should bear the burden of service rendered. That a common carrier is subject to regulations by congress as to limitations upon its powers to make agreement with the individual citizens is not disputed. The proposition is, Has congress prohibited in this particular case the carrier from requiring the shipper to pay the increased expense of performing the act of transportation? There is no express language in the act that I can find laying the burden of that prohibition upon the carrier, and inasmuch as restrictions of the right to contract, which is a right of a great deal of value to the citizen, should not be spelled out of any uncertain language. I am induced to reach the conclusion, without the careful examination and analysis of the cases which might lead me to a different conclusion. I am constrained, I say, to reach the conclusion that the act has not prohibited the carrier from requiring the party tendering the goods to pay to the carrier the increased cost which the act of congress has made.

"It seems to be of the utmost importance, not only to the express company, but to the individual shipper, to have this matter authoritatively settled. It is extremely necessary that there should be an early decision in the court of last resort. A decision here is worth nothing; it will not settle the question."

**BROOKLYN BOARD ON SHOWS**

**Announces That it Will Neither Support Nor Oppose a Bicycle Exhibition Given by Cycling Clubs.**

The Brooklyn Cycle Board of Trade has passed the following resolutions in order to declare its attitude toward shows:

Resolved, That this board repudiates in their entirety the statements recently made in a Brooklyn paper purporting to show animated opposition on the part of the board to the cycle show to be given by the Associated Cycling Clubs of Long Island, and characterizes such statements as being without foundation and untrue in every particular. That this board, while still of the opinion that a cycle show is neither necessary nor advisable, so far as the welfare of its members is concerned, will not object to nor oppose in any manner an exhibition held by any other responsible body or association.

President George W. Bennett of the board has also issued an open letter stating that while the board as a body will not support shows, it will not oppose the one being promoted by the Associated Cycling Clubs of Long Island.

**Small Boys Steal Accessories.**

Toledo, Nov. 7.—The theft of license tags, bells and repair kits from bicycles have recently become so frequent that the police made it their business to look for the perpetrators of the troublesome crimes. Late last week two ten-year-old boys, sons of prominent parents, were arrested. The boys were given a hearing and were sent to the industrial school.

**Error in An Advertisement.**

In the one-page advertisement of Pope Mfg. Co., which appeared in this paper in the October 27 issue, the price of Vedette, pattern No. 22, for women was given at \$25, or the same as the Vedette pattern for men. The price should have been \$26, or one dollar more than the diamond frame pattern.

**DECISION ON WAR TAX**

**Circuit Court Judge Holds that Express Companies May Put Revenue Burden on Shippers.**

New York, Nov. 7.—In a test suit brought by Merchants' Association of New York in the name of William Crawford, against Adams Express Company, United States Circuit Judge Lacombe has handed down an opinion, according to which express companies have the right to compel shippers of goods to pay the 1-cent war stamp tax upon bills of lading, imposed by the act of congress, which became operative on July 1, 1898. The case has attracted widespread attention among New York business men, and, being a test suit selected from a large number of similar suits pending, involves thousands of dollars besides the general question of the right of public carrier companies to shift tax burdens imposed upon them onto their customers. Numerous suits brought in United States courts throughout the country have been held in abeyance pending Judge Lacombe's decision. The judge, however, finds it needless to examine the case thoroughly, as, he says, it is undoubtedly destined to be carried to the Supreme Court of the

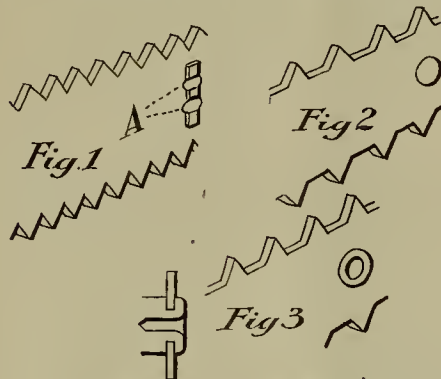
## REPAIR SHOP ECONOMICS

### Broken Pedals Are Usually Replaced But Sometimes It Pays to Mend Them—Various Methods

If there is any branch of cycle repairing concerning which the average repair man has but very vague ideas it is work on pedals. But little attempt has ever been made to do actual repair work on pedals, the extent of the operations commonly performed being to replace broken parts by substituting new ones obtained from the makers. However, this method of substitution has always proved unsatisfactory and many are the repair men who have cursed pedals and pedal injuries in general. Pedals are constantly breaking in some way or another, and while it seems simple to replace, the work of doing so is greatly hindered by the inability to get parts with which to replace the broken ones. There was never a time when pedal breakages were not common and the recent introduction of the low hung frame coupled with the reckless riding of the same over rough and stony roads has made such breakages now more frequent than in the past.

#### Riders Like to Save Whole Parts.

That there should be some way for the repairer to get around pedal injuries in a more facile and remunerative manner than by replacement is apparent. Just what this way is, is not so plain. But



there are several courses which may be adopted at times according to the judgment of the repairer, and which may be adopted with more profit than the common practice of selling new pedals to take the place of old ones which are injured in some respect that does not make the pedal as a whole worthless. The practice of putting on new pedals is sometimes the best, but there are times when it is possible to repair or to replace only certain parts, the latter course should be taken. The selling of new pedals may save money for the rider as it gives him a permanent and first-class repair, and it may often save money for the repairer as it gives him a sure, though perhaps a small profit. But in pedals, as in everything else, the average rider dislikes to throw away whole parts merely to get some small item fixed. The supplying of whole new pedals suits some customers, but the repairer might as well get also the trade of those who do not want to abandon their old parts, even though he have to do a little thinking in order to accomplish a repair in an instance where with another patron he would replace the entire pedal. The main difficulty in the way of putting new parts in pedals arises from the fact that there are many different kinds of pedals which are very similar in design and that it is extremely difficult to get parts even though the customer is satisfied to wait three or four days for the repair, because only one or two brands of pedals have the maker's name stamped on them and the repairer has hard work re-

cognizing the pedal. By supplying a whole new pedal he does not have to exactly duplicate the old one, but can supply from common standard patterns carried in stock.

#### Three Courses Open.

There being three courses open to the repair man it becomes the best policy not to adopt any one of them, but rather to adopt all and in each instance of pedal repairing to judge which one is best suited according to the circumstances governing the job. He may replace entirely, he may replace certain parts by ordering from the factory or supply house, or he may repair the broken parts. Some pedal repairs which may be successfully put into operation are given below. If the repairer can use any of them in the place of his common method of sending for new parts, it will pay him to do so, as he thereby gains the good will of his patron and saves himself the risk of misfits, a very common occurrence in ordering new parts for old pedals. Where the repairs suggested are not available, and where new parts cannot be immediately or satisfactorily obtained, the remaining option of putting on complete new pedals is still open.

#### Difficulties in Making Pedal Pins.

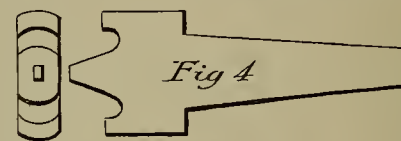
The known facts concerning the home making of pedal cups, cones and spindles are about the same as those relating to cups, cones and axles for hubs and hangers. If the repairer has a lathe and is expert enough to turn out cups and cones he may make such parts for pedals as well as for anything else. He is presented with one new difficulty, however. The pedal spindle cannot be made with the ease with which a hub or hanger axle may be turned up. In the latter there are no bearing surfaces made integral with the spindle. On the pedal pin there are two ball races. In order to harden the ball races the entire pin must be hardened, leaving it without the toughness properly needed to withstand the strains to which it is subjected. Accordingly the working of tool steel into pedal spindles which may be tempered in order to harden the ball races is not satisfactory with regard to strength. The repairer may make a tool steel spindle, but he has no assurance as to the length of time which will elapse before it breaks. He must case harden mild steel in order to get the proper spindle. Unless the repair shop be prepared to meet this need for case hardening or unless the proprietor is satisfied to put on a thin shell by case hardening with potassium cyanide leaving the spindle in first class shape for limited wear, new spindles had better be obtained from the maker.

#### Treatment of Loose Pins and Plates.

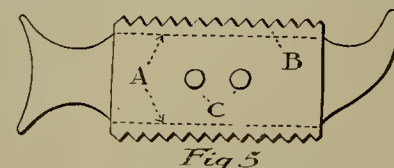
A frequent injury to pedals is the wearing out of the threads on the end of the spindle that screws into the outer crank end. This wearing out is usually accompanied by a similar wearing of the threads in the crank, thus making both spindle and crank practically worthless. As each part is beyond permanent repair a makeshift job may be executed, which while it spoils the nickel on the crank, enables the rider to go his way rejoicing with a tight pedal. The pedal parts should be removed from the pin and the latter wired in its proper place in the crank end. It is then brazed tight and the superfluous spelter filed off. The pedal is then replaced on the pin. After such a job has

been accomplished it is rather difficult work taking the pedal apart, as either the whole bicycle has to be tipped over on its side, or the crank has to be removed from the shaft. The repair cannot, of course, be executed on machines having the one-piece crank system in which the larger cones and cups have to be slipped off over the cranks.

On many of the cheaper varieties of pedals the riveting which secures the side plates to the pedal frame arms is very light and occasionally gives way. The repairer can re-rivet nearly as securely as before by simply driving the plate down to place, and with a center punch or a small cold chisel, upsetting the end of the arm. This is a bad repair to make, however, as the riveting put in by the shop man is very liable to give way within a short time. There are other kinds of riveting which may be satisfactorily done by the repairer, that shown



in Fig. 1, being an example. The frame arm in this instance comprises a flat plate and the riveting is originally accomplished by automatically pounding down two or three crosswise depressions, A, in the projecting end of the arm, thus upsetting the arm at these points. When such riveting gives way it may be riveted again by pounding down the end of the arms at those points between the original riveting depressions, leaving the rivet as strong as formerly. In the case of a common round rivet in Fig. 2, the best plan is to file down the plate seat on the arm before re-riveting, thus allowing for extra projection and an entirely new rivet head. The cold chisel or center punch method of riveting is too light to afford permanent repair. Some of the later pedals of high grade make have arms which are hollow at their outer ends and spun over at the edges, thus riveting the side plates in place, the construction being illustrated in Fig. 3. If such riveting comes loose or if the side plate is to be replaced, the remains of the original spun-over edge should be removed with a file and the seat filed down for the distance necessary to afford new riveting stock. In order to properly spin over the new edge a tool must be made which requires a lathe for its application. The tool is shaped like that illustrated in Fig. 4. It is a head stock center, turned with a head shaped as shown, and filed off on two parallel sides. A plain center is placed in the tail stock of the lathe and the special center inserted in the head



stock. The pedal with the plate driven to position against the seat on the arm is placed against the tail stock center with the center entering the open end of the pedal frame arm opposite to that which is to be riveted. The tail stock is then screwed up, forcing the riveting center into the hollow end of the arm and spinning its edge over, the lathe, of course, running at the time.

#### Renewing Worn Teeth.

The difficulty in the way of refiling teeth in rat-trap pedals on which the original teeth have worn down till they fail to hold is that the filing will reduce the width of the plate to such an extent that the rider's foot will touch the pedal barrel. To get over this obstacle the old teeth may be filed off entirely, leaving the edge of the plate smooth, as shown by



TRADE MARK



30



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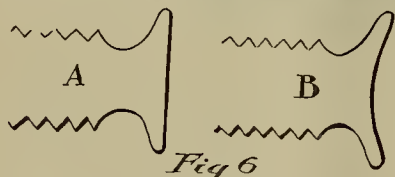
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Mention The Cycle Age

the dotted lines, R, A, in Fig. 5. A piece of flat metal is then cut out to proper shape and teeth filed in its edge, when it is then riveted to the plate as indicated by the piece, B, in the same illustration. C indicates the rivets, which must be placed near the center of the plate in order to avoid the rivet heads which hold the original plates to the pedal arms. Depressions or holes must be made in the new plates to accommodate these latter heads and allow the second plate to fit snugly against the inner one.

Entire new side plates may be cut out of sheet steel and placed on pedal frames as a substitution for the old ones, but unless the owner of the pedal is satisfied to have them go without nickel plating, the work had better not be done. If the repairer has to go to the trouble of having the home made plates nicked he had better order new plates from the maker. But



should the rider be in a hurry and want a fairly cheap repair, not caring for nickel, there need be no trouble in fitting the plates. The only difficulty will be that after the blanks are cut out and bent into the standard U shape the outer end will be straight, as shown at A, in Fig. 6, while in the original pedal the end is likely to have been slightly concave, as shown at B. This makes no great practical difference, and the repairer had better leave the end straight than attempt to hollow it out, working as he is by hand without dies or forms.

#### METHODS IN EXPORT TRADE

**Purchases Induced by Considering Foreigners' Convenience—Busy Men Will Not Translate.**

There are some elementary principles of foreign trade, which, although enunciated in almost every commercial article written upon this subject, still permit of constant repetition. First, the language of the country in which sales are solicited should be used in all correspondence. Equally important in effect are the standards of weights, measures and prices. A busy man will not stop to reduce foreign weights and measures to his own standard, and frequently he who does makes vital errors. The metric system is the only one understood in many parts of Europe, and the American seller, without conforming to this standard, leaves the first chances of even courteous consideration of his goods to the amiability of his prospective buyer. The result is that, in one-half of such cases, the letter goes to the waste basket. Continental nations have a decided advantage in this respect. They use the same standard of weights and measures. This is one of the most important lessons our manufacturers have to learn. If, in foreign trade, United States manufacturers and exporters would use the currency and measures of the country, there is every reason to believe that results would justify the original trouble and expense.

Prices must be made free on board at some well-known seaport of this country; even better in attracting trade, the price should be given at the European port of arrival, or some statement as to sea freight should be made. This information would enable the purchaser to approximately determine the cost of the goods after arrival in his store, and this he must know before he buys. In many cases European buyers have been deterred from buying in the United States because they have an exaggerated idea of freight rates.

## EXPORT PACKING AND MARKING RULES ARE SELDOM OBSERVED

### Annoyance and Losses Caused by Indifference of Our Shippers—Uniform Rule for Countries South

One of the chief complaints against the exporters of the United States is that they do not pack their goods for shipment in the manner in which they are explicitly directed to arrange them. This subjects their customers to great annoyance, and both the exporters and importing firms to pecuniary losses. The result is that both present and prospective customers are driven to other markets. A case in point is that cited by a Venezuela paper in a recent issue. The article contains hints as to the manner of packing and an explanation of why different kinds of merchandise should not be in the same package when passing through the custom houses of Central and South American countries. In view of the interest awakened by the present exhibition of United States productions in the warehouse of the Manufacturers' Association at Caracas, such warnings to merchants and manufacturers who anticipate trade with our sister republics are timely.

#### Fined for Shipper's Error.

The above mentioned paper states that quite recently the customs authorities at La Guaira found themselves obliged to impose a heavy fine on a firm at Caracas which was in receipt of a large quantity of goods coming from the United States, and which did not in anything correspond with the consular invoice. The result was the house had to pay a fine of \$200 and undergo all sorts of unpleasantness. It is painful to have to say, continues the paper, but it is a fact, that in the United States only the commission houses trouble themselves about packing. Meanwhile it remains a vital point for those who wish to trade with Venezuela, and other South American countries as well, and unless they manage to learn this branch so as to meet the exigencies of the customs in those countries they cannot hope for success.

#### Goods Should Not be Mixed.

Double the amount of care should be taken in packing goods for the South and Central American trade that is exercised in preparing goods for shipment to domestic markets in the United States. Packages should be new, clean, and neatly packed, and suggestive of new and attractive goods inside; and while sufficiently strong and durable, the question of weight, which figures materially in the matter of customs dues, should not be overlooked. It is also necessary that goods of a kind be placed in the same package and not mixed with other goods. Duties are levied on the gross weight, and determined upon the highest priced article within the package.

#### Regulations of Southern Countries.

On this subject Cycle Age published an article on February 17, which is herewith reprinted:

Much delay and displeasure is experienced by both shipper and consignee in shipping bicycles to the South American countries, due to the ignorance of the shipper regarding the packing rules and regulations in vogue in the various countries, and as the volume of trade between the United States and the countries to the south of it increase these complications will naturally multiply. To obviate the difficulty a set of regulations bearing on the subject has been compiled from public documents, and is herewith presented:

There is no restriction whatever placed on marking in any of the countries, with the exception of Colombia, Ecuador, Honduras

and Nicaragua. In the countries named it is necessary to be restricted to one uniform mark for each consignee. Two marks will require two sets of bills of lading.

In Brazil, Chili, Honduras, Peru, Uruguay and the Argentine Republic, each package, piece, etc., must bear one individual mark, each differing from the other.

In Bolivia, Colombia, Costa Rica, Cuba and Porto Rico, Ecuador, Guatemala, Hayti, Mexico, Nicaragua, Paraguay, Salvador, Santo Domingo and Venezuela, the regulations provide that packages of the same kind may be numbered alike. But manufacturers are warned not to mix two different kinds of packages under the same number. The following countries require that gross and net weight be given in the metric system for each package: Bolivia, Chili, Colombia, Costa Rica, Guatemala, Hayti, Honduras, Paraguay, Peru, Salvador, Santo Domingo, Uruguay, Venezuela and Argentina. In Ecuador, Nicaragua and Cuba and Porto Rico only the gross weight for each package is required. In Brazil and Mexico it is required that gross weight of package, net weight of parcels inside of packages, and actual weight of goods shall be in the metric system.

Relative to contents, only one kind of merchandise can be packed in one package sent to Argentine Republic, Brazil, Bolivia, Cuba and Porto Rico, Ecuador, Peru, Salvador and Venezuela. In Colombia, Costa Rica, Guatemala, Hayti, Honduras, Mexico, Nicaragua, Paraguay, Santo Domingo and Uruguay, packages may contain several kinds of merchandise packed together, but the net weight and measurements of each must be supplied. Several kinds of merchandise may be packed together for shipment to Chili, and there is no restriction as to the supplying of the weight and measurement of each.

From these regulations it will be found practical to devise one uniform rule for shipment to Central and South American countries, which can be followed in all cases and will save the trouble of looking up the special regulations for each of the republics. The general use of kilograms instead of pounds to designate weight must, however, be one of the features of the rule.

## SOUTHERN TRADE ENTERPRISE

**Season is Long in South Carolina but Dealers Carry Sidelines—Roller Skating Rink Opened.**

Columbia, S. C., Nov. 5.—The conditions of trade in this section may be readily summed up. Repairs are on the increase, as the weather is almost ideal for riding. Second-hand bicycles are in active demand and prices are, as a rule, well maintained, although considerable excitement has been created by recent announcements of '99 prices. The 30-inch wheels are not regarded with favor by local riders, most of whom will bestride a 28-inch mount in '99 as they did this season.

As wheeling is good in South Carolina except two months of the year, side lines to carry over dull times are not strictly necessary, however desirable they may be in some respects, but six of the seven dealers in this city carry them, nevertheless.

One dealer, J. D. Strong, has made arrangements for a roller skating rink, which is to be opened today and is equipped with Raymond's Improved skates.

### Motor Vehicle Race in Russia.

The first road race for motorcycles in Russia was run from Tsarskoye-Sselo to Strena and return—about twenty-five miles—on October 23. There were six starters, and all the machines were tricycles. Two had accidents. The others finished in the following order in the times given: Belajeff, 1:33:36; Merle, 1:45:36; Stepanow, 2:04:00.

### HAWAII AND THE PHILIPPINES.

Send four cents (in stamps) for an illustrated booklet issued by the Chicago, Milwaukee & St. Paul Railway, the direct route across the American Continent to the New Trans-Pacific possessions of the United States. Full of latest reliable information and valuable for reference. Can be used as a text book in school. Address Geo. H. Heaford, Gen'l Pass. and Ticket Agent, Chicago, Ill.



# Fauber 1899 Hanger.

NEW IDEAS—NEW PRICES.

**MANUFACTURERS** who used Fauber Hangers were very successful and well satisfied.

**DEALERS** found them good sellers and bicycles fitted with them not dead stock.

**RIDERS** appreciate the simple and practical construction of the Fauber Hanger and the advantage of a standard article for which you can get any necessary repairs.

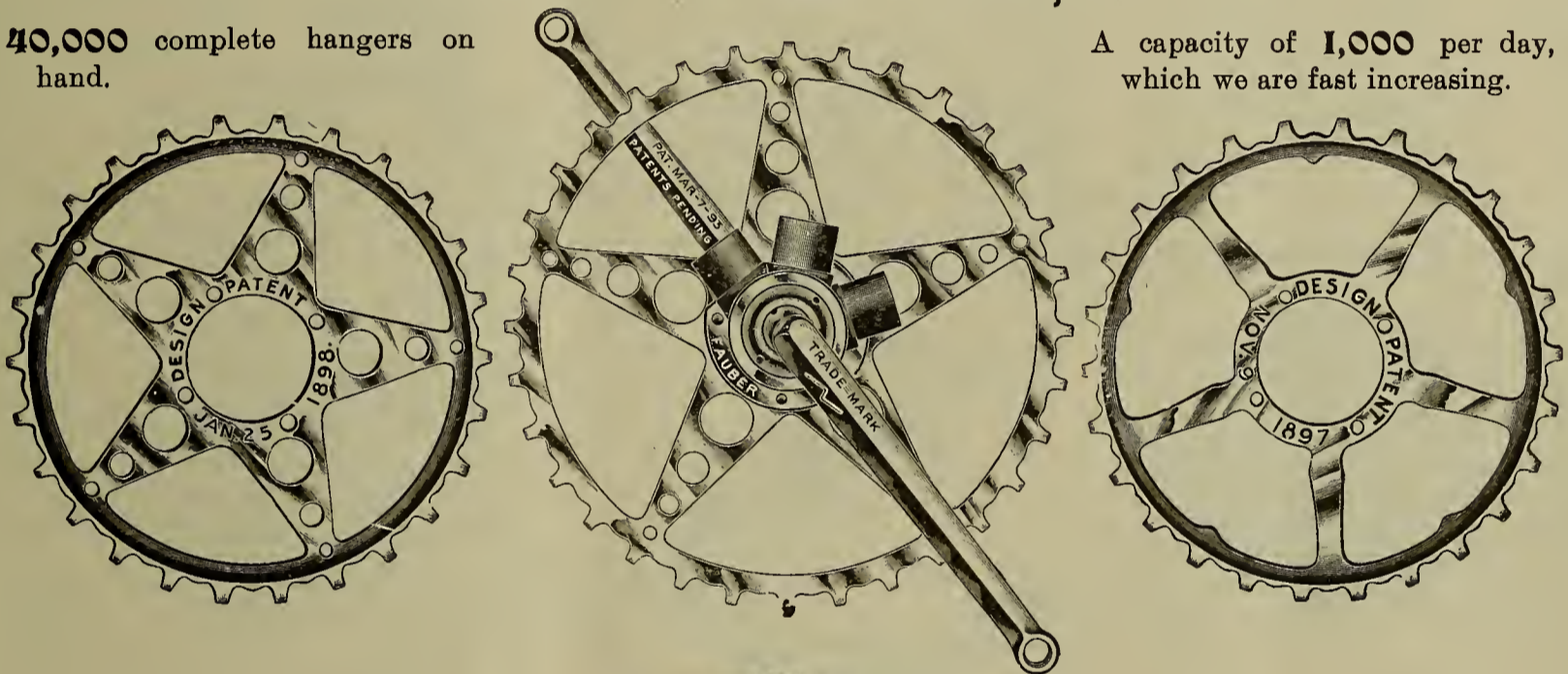
We are **Pioneers** in the manufacture of **One-Piece Crank-Axles** and own more than twenty allowed and pending patents. The **Success** of the **Fauber Hanger** is unparalleled in the bicycle trade.

## OUR RECORD.

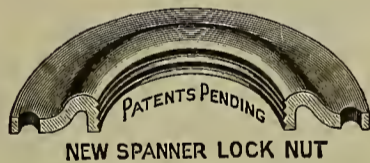
1895	Output over	200
1896	"	9,000
1897	"	30 000
1898	"	100 000
1899	Output estimated	300,000

40,000 complete hangers on hand.

A capacity of 1,000 per day, which we are fast increasing.



Our improved Spanner Lock Nut makes Note this is our



the end of the hanger flush and dust-proof. special construction.

## IMPROVED FAUBER REAR FORKS AND BACK STAYS.

FORK COMPLETE.

PIECES SEPARATE.



**THE COMING CONSTRUCTION**—These forks are made of three pieces ; the neck tube is slotted ; the ends overlap in the joint, making it flush and reinforcing the bend. We furnish the forks ready to assemble. They line up, are easily brazed, finished, strong and light. The shape and style of this fork are perfect. To supply a part of our trade for '99 we have contracted for 500,000 feet of Shelby Tube.

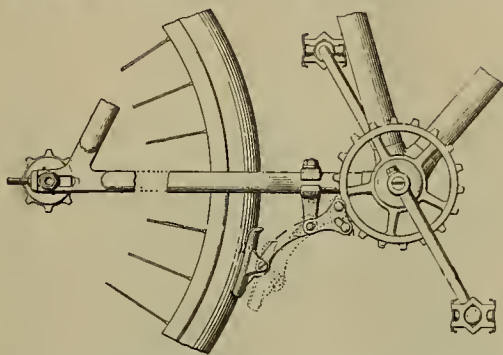
**W. H. FAUBER,**  
 Manufacturer,  
 Jackson and Clinton Streets, Chicago.

Mention The Cycle Age

## RECENT PATENTS

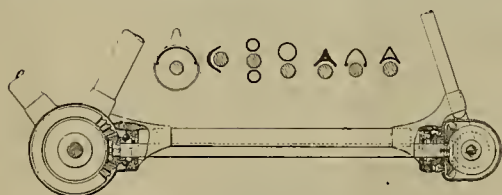
## New Brakes in Two Types — Screw Making Tool For Ordinary Lathe—Chainless Designs

**Coaster-Brake.**—A clamp bracket is secured to the rear forks and near its lower end is mounted a rock-shaft upon which the brake-arm is fixed. A spiral spring wound around the rock-shaft and attached to the brake-arm serves to hold the brake out of action. The brake arm is in line with the sprocket wheel plane and its forward extension carries a tooth which in the normal position of the parts is out of the path of travel of the sprocket wheel. A second tooth is so mounted in a slot in the arm as to be lifted and thrust aside to the inner extremity of the



slot by the rotation of the sprocket wheel. When, however, the sprocket is rotated backward the movable tooth is engaged by a sprocket tooth and the brake arm is turned on its shaft until the fixed tooth comes into engagement with the sprocket. The fixed tooth thus bears the strain of the application of the brake. In order to permit backward rotation of the front sprocket unhindered by the progress of the machine the rear sprocket is mounted on a ratchet clutch. The spring holding the brake out of action is sufficiently strong to permit the rider to rest his feet on the pedals while coasting. The inventor is W. D. Robinson of Philadelphia.

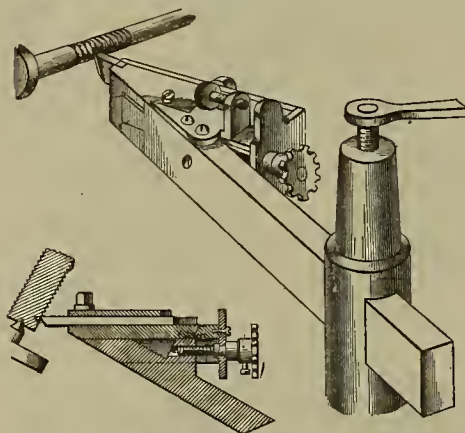
**Cuntz's Chainless.**—This is a construction, intended for bevel-gear bicycles, in which the power-transmitting shaft is not run through one of the lower fork sides. The bearings of the shaft are left accessible for adjustment without removal or detachment of any of the parts. Some of the various cross-sectional shapes which



may be used for the tie-rod that takes the place of a tubular forkside are shown in the illustration. The patent carries ten claims and is numbered 613,621, dated November 1. The inventor is H. F. Cuntz of Hartford, Conn., assignor to Pope Mfg. Co. of the same place.

**Thread-Cutting Tool.**—The device is intended for cutting threads by attachment to an ordinary lathe. The tool consists, essentially, of the combination of a shank adapted for adjustment in the usual way in the tool-post of a lathe, a movable head or bit-holder connected with the shank at an angle, and means for imparting a reciprocating movement to the head, whereby the cutting-bit carried by the head may be applied to its work from

time to time as the depth of the thread progresses. The outer end of the tool shank is chamfered and has a dovetail groove and a projection to connect with the bit-holder formed to correspond. For convenience of assembling the parts and to compensate for wear and readily take up any slack that may for any reason occur between the parts, a key-plate is provided to fill the space between the dovetail tongue of the shank and the wall of the groove in the movable head and one or more set-screws. The parts are to be coupled, held, and guided firmly one upon the other, but so that the head may be freely moved forward and backward upon the shank. Means for operating the movable head consist of a screw, engaging the projection on the shank, and a bracket, connected with the movable head. The screw itself is operated through a thumb-wheel. The cutting-bit is firmly held in its socket by means of a clamping-plate and set-screws. For means of gaging the forward movement of the head with relation to the shank, a bracket and an adjustable screw are provided. "In operation the shank of this tool is adjusted in the same way that an ordinary tool is adjusted in the tool-post, the movable head of the shank is arranged at the angle of the screw-thread, and thus as the differ-

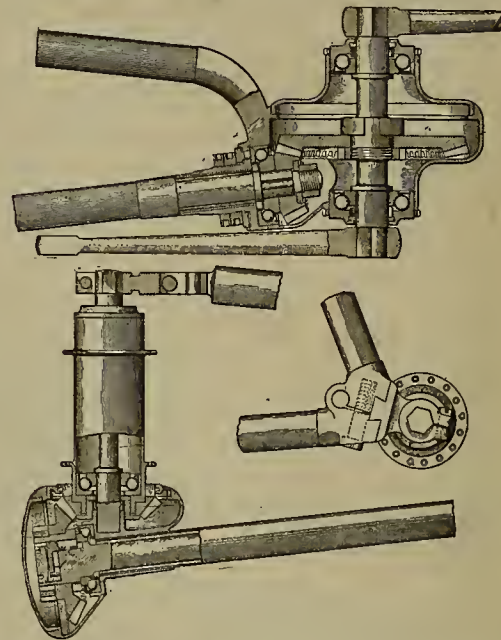


ent cuts are made the side of the cutting-bit will move forward in a right line at the proper angle and the cut will be taken or made by the beveled end of the cutting bit," explains the inventor. "In other words, there will be only one cutting edge for cutting a thread, whereas according to the usual system both faces of the angular point of the tool are cutting edges. In cutting the thread the shank is clamped in the tool-post and the cutting-bit adjusted in contact with the surface of the stock to be threaded, the screw being adjusted so as to firmly clamp the head of the shank and yet permit of free forward movement of the head, then setting up the feeding-screw and starting the lathe. The cutting-bit will enter the work and take off the first chip. Then withdraw the movable head and return the work to the starting point, again set up the head to bring the cutter in engagement with the stock, and repeat." The inventor is John E. Goddard of Spencer, Mass.

**Sterling Chainless.**—The accompanying illustration shows the general features of improvements in bevel-gear transmission designed to facilitate adjustment and positioning of the pinions. Previous patents by the same inventor have been the foundation for the special features in the

chainless bicycle made by Sterling Cycle Works. The patent is numbered 613,282, of date November 7, and carries three claims, of which the first and second are as follows:

1. In a machine of the class described, the combination of a longitudinal intermediate driving-shaft, a bracket portion in which it is held and mounted provided with longitudinal perforations, a bearing portion movably mounted in the bracket portion, an adjustable ring on the exterior of the bracket portion provided with projecting lugs inserted through the longitudinal perforations of the

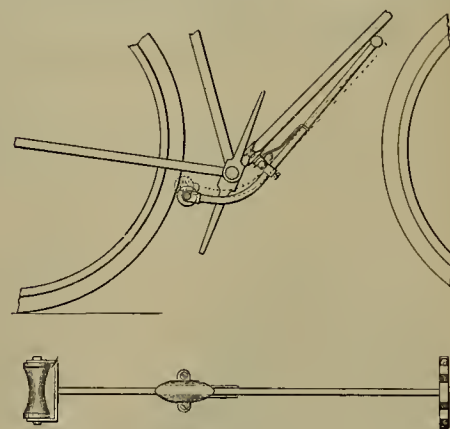


same and arranged to contact the bearing portion, and means for adjustably holding the adjustable ring in position.

2. In a machine of the class described, the combination of a main-frame portion, a rear-fork portion, a driving wheel provided with an axle screw-threaded into one part of the rear-fork portion and with a polygonal head at the opposite end thereof, a removable piece dovetailed into and forming a continuation of the other rear-fork portion provided with a transverse perforation to fit the head of the axle and adapted to embrace the same and hold it in position, and means for clamping and holding the removable end of the rear-fork portion and thereby the axle in position, substantially as described.

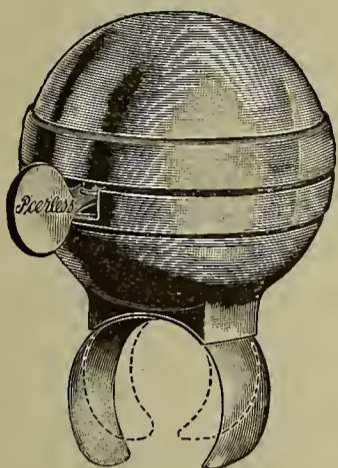
The inventor is F. A. Kershaw of Kenosha, Wis.

**Rear Wheel Foot Brake.**—A short fork is clamped to the lower portion of the lower frame tube. Between the members of the fork is pivoted a block, the free end of the block being provided with a loop for the reception of the brake-lever, the forward end of which is provided with foot-rests, by which the same may be depressed. At the free end of the rear curved extension of the lever is mounted a roller-brake. A wire spring holds the brake out of action when not depressed.



By adjusting the brake lever within the loop which embraces it the brake may be adjusted according to the size of the particular bicycle frame to which it is desired to fit it. The invention might readily be modified, it seems, so as to cooperate with coasters attached to the lower frame tube. The inventor is S. S. Goldman of St. Louis, Mo., assignor of one-half to F. F. Espenschied of the same place.

# PEERLESS BELLS



HOLIDAY



TRADE MARK



ARTISTIC DESIGNS

# SCREWLESS CLAMPS



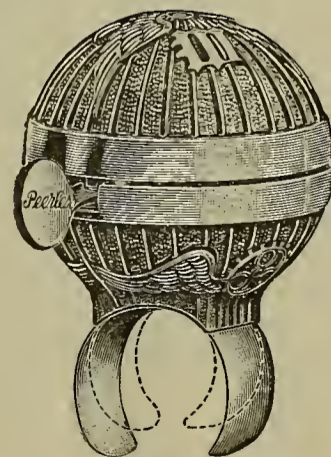
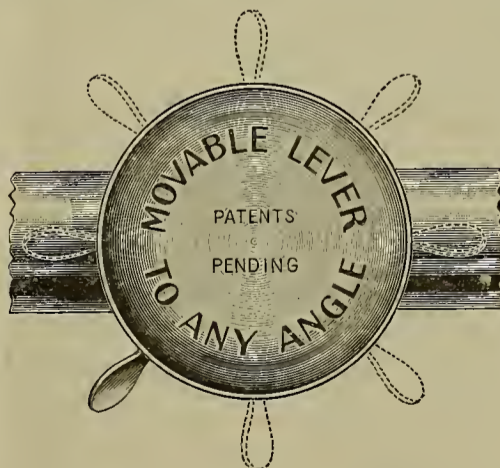
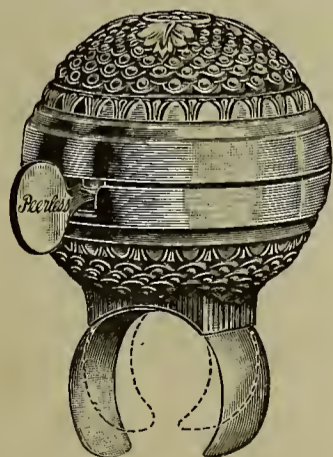
CORBIN BELLS

Catalogs and  
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STANDARD BELLS

# ADJUSTABLE LEVERS



The Bristol Bell Co. Bristol, Conn., U.S.A.

## ROAD CONTACT OF WHEELS

### Means Employed for Obtaining Adhesion by All Wheels to Uneven Road Surfaces

The Whitney steam wagon of which the engine portion and driving mechanism were described and illustrated in last week's issue of this paper, furnishes by its construction of other portions an example of the special care which is required in the construction of the carriage body and the supporting truck of motor vehicles in which the wheels are geared to the power, and which are not to the same degree necessary in ordinary carriages the wheels of which are rotated by ground contact.

#### Slight Rise of Body and Load.

Whitney's one grand objective point, is the production of a wagon which will run on common roads with perfect safety and certainty. With this point in view, he has devoted much thought to the steering lever, and has given great consideration to the springs and frame, with the result of producing a frame which is very strong for its weight, and which supports the wheels in such a manner that they are absolutely free to accommodate themselves to any road surface, however rough and uneven, with the smallest possible vertical rise and fall of the wagon body and the load which it carries. This problem of individual wheel rise or fall is not freely understood by all 4-wheel road wagon makers. In the case of a tricycle the problem does not appear, because the three points of support can always remain relatively in one plane, and yet will always, all three, touch the road surface, no matter how uneven it may be. But in the case of the 4-wheeled carriage it is of the greatest importance that the load shall be raised and lowered to the least possible extent by road level variations, and this "least load lift or drop" is better obtained by the construction used by Whitney than by any other method known to the writer.

#### Question of Front or Rear Driving.

There is, perhaps, an admitted question as to whether in a 4-wheeled vehicle, the front or the rear wheels shall be used as drivers. Morris and Salom and perhaps others, assert that the front wheels should be drivers and the trailing wheels should be used to steer with; this arrangement has been patented by Salom, and is used in the New York Electric cabs. Other motor wagon makers do not view this point as of great importance, and adopt the more natural method of making the rear wheels the drivers. There seems to be but little practical difference in the results obtained. With some forms of mechanism, such as wheels or rollers running on cams, which wheels are supported on the free ends of pivoted levers, the relation of the point of lever pivoting to the direction of the cam rotation is of the utmost significance, so much so that such a chain of elements may operate with perfect smoothness where the motion of the cam surface is from the lever pivot toward the cam wheel or roller carried by the lever, while with a reverse construction, making the cam revolution from the wheel towards the lever supporting pivot, the cam could not be forced to make a revolution. Something of this sort does doubtless belong to the action of a set of driving and driven wheels on an uneven road surface; but the road surface must be extremely uneven before any detrimental action of this sort takes place. Under ordinary road conditions a four-wheeler

seems to run about the same with either front or rear wheels made the drivers, and hence it may be considered good practice either way, with leading drivers or with trailing drivers.

#### Advantages of Pivotal Construction.

But a free lift or drop for two of the wheels of a 4-wheeled carriage is of real and undeniable importance. Suppose all four wheels to bear equally on a level road, and that a single elliptic spring, set crosswise, supports the front part of the wagon, all in the usual manner, and suppose, also, that there is no provision made in the wagon frame for permitting the front wheels to rise independently. Under these conditions, let one of the front wheels be lifted a foot. If the wagon frame is rigid two of the wheels will then clear the ground; these two cleared wheels may be either the two front wheels, or one front wheel and one rear wheel, depending upon the load distribution. Again, suppose the two front wheels to be carried on axles forming the extremities of a beam pivoted in the middle horizontally so as to permit a free vertical movement of either wheel: as before let one front wheel be lifted 12 inches; the result is that the other three

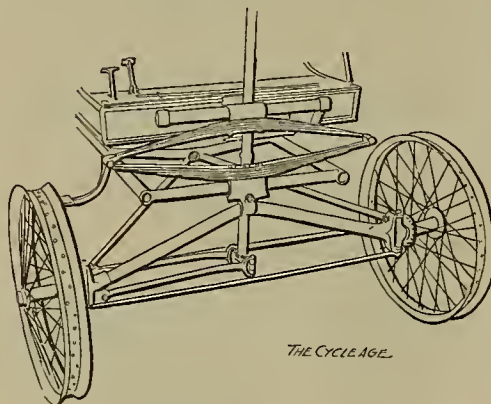


Fig. 1—Showing front axle and elliptic spring.

wheels remain on the road surface, each bearing its normal load, while the middle part of the front of the wagon frame is raised 6 inches, and the back part of the wagon is not raised at all, thus making the total lift of the whole wheel load, if the wheel load per wheel is equal to begin with, 3 inches only. But with a rigid axle support and equal wheel loads to begin with, the whole load is raised 12 inches at one end, which is equivalent to lifting the entire load 6 inches, instead of 3 inches, as is the case with a pivoted front axle permitting free individual vertical motion to the front wheels. There is a third case, in which the wagon frame is not absolutely rigid, but is elastic and can be twisted to a greater or less degree by raising one front wheel, the other three wheels standing on a level plane. In this third case the total lift of the whole load is greater than with the free front wheels, and less than with the rigid frame, proportionately to the resistance which the wagon frame offers to twisting.

#### Load Lifted Over Obstructions by Motor.

The importance of this load lift will be apparent when it is remembered the load lifting must be done by the motive power. Hence we may say, roughly speaking, that it takes about twice the power to surmount a given road obstacle with all four wheels carried on a rigid frame, which is consumed in surmounting the

same obstacle when the steering wheels are on pivoted axles so as to give them a free rise and fall. True, if there were no friction, and rise and fall were exactly equal, then the lifted wheel in running down the incline after the top was reached, would act to propel the wagon, and there would be no loss of driving power due to the rise and fall of one wheel of a 4-wheel carriage over a double incline. But this supposition is entirely outside of obtainable conditions of practice, and the only safe procedure is to consider anything which lifts one wheel as an obstacle, demanding an effort of the motive power to lift the whole load a certain distance, and returning nothing for the subsequent down hill effect.

Assuming this reasoning to be correct, the vast importance of a free front axle vibration in the vertical plane at once becomes apparent.

Supposing, however, once more, that the body of the carriage be made to serve as the wagon frame, as is often done, mounting this body on two springs disposed lengthwise of the body on the rear axle, and on one front axle spring, disposed crosswise of the body. This front spring permits a small lift of either front wheel with very little more total lift of the load than if the front wheels were absolutely free to lift vertically. But if the obstacle is large, then the front spring strongly opposes the front wheel rise, and thus causes a much greater total load lift than would occur with a free front axle.

From all of this it appears that to meet the conditions of common road driving, the front axle should be pivoted so as to give either front wheel a free lift.

#### Absolute Rigidity of Rear Axle Desirable.

Another part of this problem relates to the rear axles and the frame and the motor. Here absolute rigidity is greatly to be preferred so far as the action of the motor on the driving wheels is concerned; to secure this unchanging relative position of the motor and the driving wheels, the motor is often mounted directly on the rear axle. Here the pneumatic tire comes in. So far as the art of the motorcycle is defined at the present time, the use of the pneumatic tire seems to be clearly indicated. In addition to this, it is well known that the pneumatic tire should carry the least possible load. Up to, say about 250 pounds load per wheel it is easy to obtain durable pneumatic tires. As soon as this load is exceeded troubles begin, and increase rapidly with every pound of increase of dead load on the tires. But if this tire load can be carried on springs placed between the load and the axle, the destructive effect of the load on the pneumatic wheel tires is greatly mitigated. Hence it is not favorable to long tire life to mount the motor directly on the rear axle, if the motor is of any considerable weight. The better way is to place as little dead weight as possible on the wheel axles, and place springs of the easiest known form between the wheel axles and the load.

#### Three Varieties of Springs.

Springs may be divided broadly into coiled springs, half elliptic springs and full elliptic springs, the coiled springs being the harshest in effect, and the full elliptic being the softest, and hence most favorable to long tire life. Still softer than the full elliptic springs are the various well known forms of C-springs, compounded with linked half-elliptics, but for the sake of simple and substantial construction, there is a strong tendency among motorcycle designers to use only the three forms of springs mentioned, the coiled spring, the half-elliptic, and the full elliptic. Once more, there are two forms of the full elliptic spring, one having each member shaped in substantially

# Jobbing Bicycles

— ...FOR 1899 Trade

\*\*\*NO OLD STOCK. EVERY MODEL NEW.  
TALKING POINTS THAT HELP YOU SELL.

For the requirements of 1899 trade we shall build three distinct lines of complete bicycles, embodying all features of value known in up to date construction. \*\*\*

## We Are Ready Now

to show you our samples and to figure on your supply, either in complete or stripped bicycles. SNELI. Hubs, Handlebars, Forgings, Pedals, etc., are standard. Our long experience and immense facilities enable us to give you the best of service and guarantee you quality at the right prices. Your inquiries will receive our prompt attention. \*\*\*

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SNELL CYCLE FITTINGS COMPANY,  
TOLEDO, OHIO.

a single curve, while the other form has each half formed with one middle curve joined by two reversed curves which form the ends of the springs; this 3-curve form is by far the more delicately elastic, and is therefore the more suitable for use in a motorcycle, as it absorbs vibrations due to small differences in the road surface height much more perfectly than the single curve form.

#### Springs Supported on Pedestals.

All of this reasoning leads to the Whitney steam wagon frame, as shown in Figs. 1 and 2, which are oblique, front and rear views, taken from two different wagon frames, one with and one without tires.

Beginning at the rear axle, see Fig. 2, Whitney raises pedestals therefrom which support the two rear full elliptic 3-curve springs, and connects these pedestals by a substantial cross tube; from this rear cross-tube two horizontal side tubes lead forward, which are connected by a cross-tube in front, see Fig. 1, and by a third intermediate cross-tube located a considerable distance to the rear of the front one. The front elliptic spring is bolted to the top of the front cross-tube, as clearly shown in Fig. 1.

#### Pivotal Arrangement of Front Axle.

Whitney's front axle is composed of a chevron-bent tube, reaching upward in the middle nearly to the under side of the front cross tube of the frame, to which it is pivoted by a horizontal pin, axially disposed lengthwise of the wagon, the front axle having its bow-strung girder form completed by a straight tension rod underneath. Whitney's very peculiar and effective steering bar is supported at its lower end by a radius rod, jointed to the front axle support at the right, and to the horizontal part of the steering lever at its inner end; this radius rod forms the fulcrum of the steering lever, the links from the free end of the steering lever lower arm being seen in the rear. The steering lever joints must be universal, and are of very complicated construction, which need not be specified in detail here. As so far described, the whole bow-string girder which supports the front axles is perfectly free to vibrate in a vertical plane, but is very meagerly supported against fore and aft stresses. To give the fore and aft support, two oblique truss tubes lead from near the top of the wheel axle pivots upward and backward until they meet in an eye at the midcross-tube of the frame, to which they are pivoted by a free bolt in the prolongation of the horizontal axial line of the pin which pivots the axle girder to the front cross bar, and about 24 inches or 30 inches to the rear thereof. This gives perfectly supported front wheel axles, carried on widely separated free joints, and rising and falling to suit road surface inequalities in the easiest and most perfect manner possible.

#### Compensating Gear and Brake Drum.

From the rear cross-tube of the frame, pendants are dropped to support the compensating gear, and at the lower ends of these pendants the forked chain adjusting strut is pivoted. Whitney's brake drum, see Fig. 2, is not formed on the side of the compensating gear box, but is placed on the right hand section of the rear axle, presumably to bring it in direct line with the brake treadle in front and thus carry the brake rod in a straight line past the boiler. This is a faulty arrangement, as it makes the brake act principally on the tire adhesion of the driver only.

The springs of Whitney's No. 3 wagon are particularly good, and I have never ridden in another automotor so little affected by Belgian block pavement, or so smoothly riding over rough and deeply rutted country roads. Whitney reached his very superior frame construction through a long course of severe practical

tests, and he has great cause to be proud of its perfect adaptation to all the varying conditions of road service.

#### Chain Drive Still Unsatisfactory.

Whitney's first drive was a cycle chain, half-inch blocks, with small sprockets; the chain width and sprocket diameter have been gradually increased, step by step, until he is now using a rear axle sprocket of about 20-inch diameter, 2-inch pitch, 40 teeth, 1-inch working face. The front sprocket, on the engine shaft, has eight teeth, and is made of machine steel, case hardened. The large sprocket was made from a blank of boiler plate steel weighing well towards a hundred pounds to begin with, and whittled down to 16 pounds finished.

The chain is of Jessup tool steel; the chain blocks are not solid, but are made up of five smaller pieces, each 1-5-inch thick; the chain rivets are of 1/2-inch diameter, Stubb's steel. The side links are 5-32 of an inch in thickness. This formidable power transmitting chain does not give promise of long life, and Whitney does not regard it as meeting the conditions of its use. The object of making the chain blocks in five sections instead of one piece is to increase the twisting flexibility. All of the chains Whitney has used have been short lived, and he believed the rapid wear was due to chain resistance to twisting. This laminated block does make a chain which twists a little way readily, but it does not seem to wear any better, or at best not very much better, than the solid block chains. Whitney has also tried

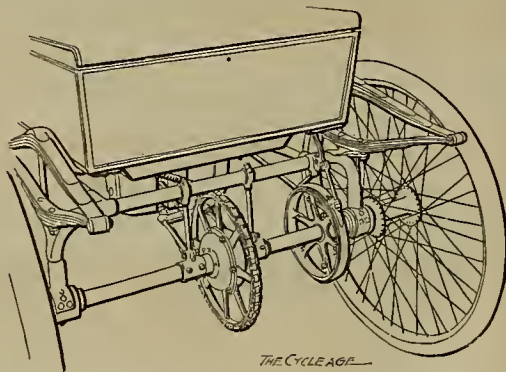


Fig. 2—Showing rear axle and spring arrangement.

large spur gearing, of far more strength and wearing surface than the power of his engines demands, and a few thousand miles of travel sufficed to wear these gears out so that the teeth bent. I myself believe that all of this trouble with chains and gears both, would cease if all of the working parts were enclosed in a perfectly dust proof casing, and it appears to me that it should not be a difficult matter to apply such a casing to Whitney's transmission elements.

The Whitney steam wagon No. 3, which I am most familiar with, weighs about 1,120 pounds, with gasoline for 75 miles and water for 30 miles on board. The tires are very heavy, 3-inch diameter being used with 100 pounds air pressure.

HUGH DOLNAR.

### BOSTON MOTORCYCLE CONTEST

#### Ten Competitors Enter for Trials—Electric Vehicle Makers Want Short Runs at High Speed.

The Massachusetts Charitable Mechanical Association, in connection with its exhibition of motor vehicles at Mechanics' hall, in Boston, has announced a contest of motor carriages to take place at Charles River park on November 9. The prizes aggregate \$1,100 and the object of the trials is to determine the practicability and adaptability of motor vehicles for all purposes where the ordinary horse and carriage is now used, and the following points are to be given consideration by the judges in making their report: Speed,

manageability, simplicity of construction, brake efficiency and grade climbing.

In considering these points the judges are instructed to recognize that the art at present is in a somewhat crude state, mainly in the hands of the inventor, and the newer types of motor vehicles will receive as careful consideration as those older and better known.

Ten competitors are named, representing electric, gasoline and steam driven wagons, and the contest should be of great interest, although it is scheduled to take place on a four-lap cycle track of the wash-bowl type. The makers of electric vehicles do not want more than five miles at top speed, as that distance is about their limit. The steam and gasoline wagons of course want long runs, as the electrics can outfoot them for a short distance, but would be nowhere in a long distance competition. The two classes of carriage, those driven by storage battery and those driven by heat motors of any type, are so wholly different as to make the devising of a really fair competitive test between them difficult. For a few miles the electrics can make the best time, so that they would show well against the gasoline and steam wagons, while in a long run the electrics would exhaust their storage batteries and be forced to fall out of the race.

The greatest interest will attach to the rivalry between gasoline carriages and light steam motorcycles, which will be shown on this occasion for the first time.

### MOTOR VEHICLE INQUIRIES

#### Parties Wishing to Handle Motorcycles in a Commercial Way Seek Information Not at Hand.

Cycle Age is in daily receipt of inquiries in regard to motor vehicles. The development in the new industry is so rapid, however, and withal so uncertain, that the information on hand cannot always be relied upon as being up to date and unbiased.

Until further inquirers will therefore find their questions reproduced in these columns and manufacturers may answer them by mail through this paper accordingly as the address of the inquirer is given, or otherwise.

Among the latest communications are the following:

Editor Cycle Age: I have read many interesting articles on motor cars in your paper and would be obliged to you for asking some of the makers to make us offers, especially for vehicles which work without noise. Any possible inventor of a motor driven by explosion of flour or sawdust (?) is also requested to write.

A. Schubert Mfg. Co.  
Stockholm, Sweden.

Editor Cycle Age: Kindly forward to Stanley Brothers, whose address was not given in your recent article on their steam road wagon, our request for further details and representation of the wagon in Holland and her colonies. Van Rosendaal & Co.,  
The Royal Dutch Metalware Works,  
Nijmegen, Holland.

Editor Cycle Age: Can you give us any information in regard to a motor carriage that will carry from 6 to 8 people (we don't want an electric machine). We have not noticed anything in Cycle Age of that size. We don't want anything with less than three seats. Rex & Dean,  
Novelty Machine Works,  
East Liverpool, O.

It was mentioned in Cycle Age some time ago that the Reeves Pulley company of Columbus, Ind., constructed large steam power motor vehicles, one with capacity for 20 persons having been shipped to Dakota. Several companies are undoubtedly prepared to manufacture large vehicles to order, especially the Duryea company in Springfield, Mass., and Peoria, Ill.; American Motor company, 32 Broadway, N. Y.; Pittsburg Motor Vehicle company, Pittsburg, Pa.; Winton Motor Carriage company, Cleveland.

A Testimonial

(A SURE THING FOR HOLIDAY TRADE)



"In my judgment they make the best wheel I ever rode in my whole life. I win everything I go out after."

TINY FITTINGS for  
TINY BICYCLES for  
TINY BOYS and GIRLS

For Christmas.

COMPLETE SET EXCEPT TIRES  
\$20 LIST PRICE.

You know our discount. No net prices  
advertised.

B. E. HARRIS & CO

47 West Washington Street,  
CHICAGO.

THE  
YALE

We Have the  
Same Agents...

Year after year. There  
must be a reason for this.  
It is not difficult to guess.  
Our BICYCLES always  
please.

THE KIRK MFG. CO.  
TOLEDO, OHIO.

Distributing Agents:

- Conroy Mfg. Co., 28 John St., New York.
- H. B. Shattuck & Son, Boston, Mass.
- Jas. Bailey Co., Portland, Me.
- Carlin & Fulton, Baltimore, Md.
- Mistrot Bros. & Co., Houston, Tex.
- Boutell Bros., Minneapolis, Minn.
- Powell & Clement Co., Cincinnati, Ohio.
- P. E. Allison, Louisville, Ky.

Mention The Cycle Age



A record of over  
40,000 MILES on a

DIAMOND CHAIN

demonstrates that EXPERIENCE and  
GOOD MATERIAL count. Our '99  
line will be the MOST COMPLETE  
ever offered to the trade. Ready soon.

Don't forget that we have the  
ONLY SATISFACTORY BOLT LOCK.



Closed.



Open.

INDIANAPOLIS CHAIN & STAMPING CO.

INDIANAPOLIS, IND.

R. B. McMULLEN & CO.,  
General U. S. Sales Agents,  
309 Broadway, New York,  
88-90 Lake St. Chicago, Ill.,

NEW YORK DEPOT:  
J. S. Leng's Son & Co.,  
4 Fletcher St.  
Mention The Cycle Age

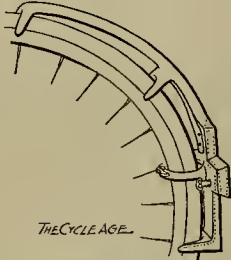
# INFORMATION FOR BUYERS

## STERLING MODELS AND PRICES.

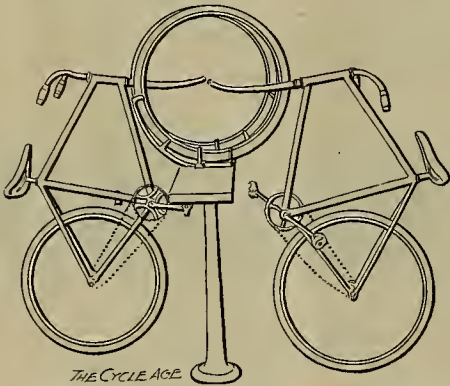
The 1899 prices announced this week by Sterling Cycle Works are in line with the prices made by other manufacturers of standard first class machines, the chain models being quoted at \$50 and the chainless at \$75. Several important changes in construction embodying up-to-date ideas have been made in the Sterlings and the company anticipates that with quality unimpaired and prices reduced there will be a largely increased demand for these machines and is preparing for the coming season with this in view. Mannesmann tubing of larger diameter than that formerly used in Sterling frames has been imported for use the coming winter. Frame joints will be made flush and the hangers will have 2½ inches drop. All nickeling will be over copper and the enamel will be hand polished.

## STEARNS LOCKING AUTOMATIC STAND.

A bicycle stand and lock that is admirably adapted to use in storage rooms in office buildings, factories, schools, clubs and other places where space is limited has just been brought out by E. C. Stearns & Co., of Syracuse, N. Y. Two styles are made, one having the long extension of the upper part as shown herewith and the other terminating at the third set of arms, but the mechanism



of the locking arms is identical in both. The pressure of the tire against the rear ends of the movable arms releases a spring which causes them to automatically close around the rim. The ends of the arms are provided with small rubber tired rollers that prevent marring of the enamel or varnish of the rims. The novel feature of the Stearns stand is its adaptability to the different positions of the bicycle. It will be commonly screwed to the wall to receive the rear wheel, but may be placed on the floor if desired.

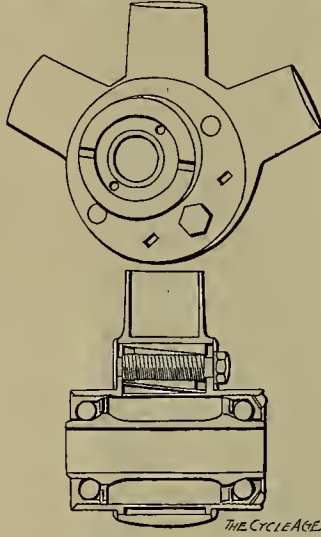


In places where economy of floor space is a desideratum, it can be secured to the wall at the right height to grasp the rim and tire of the front wheel while the rear wheel rests on the floor at the base of the wall. Still another manner of use is to secure a series of them upon a plank supported about a yard from the floor on posts or iron pedestals furnished by the Stearns company. In this position the bicycles can be arranged upon either side with the front wheels supported in the locks and the rear wheels resting on the floor. This affords a very compact storage arrangement of the bicycles, which saves almost 50 per cent of the floor space, as the sidewise measurement over two machines is little more than that of one when both wheels are on the ground.

## THE THOR ECCENTRIC HANGER.

Aurora Automatic Machinery Co., of Aurora, Ill., is distributing its catalogue of component cycle parts for 1899. The newer goods shown are the Thor Perfection hubs, Thor two-piece hanger and Thor eccentric hanger. In the Thor eccentric hanger the Aurora people have dispensed with the lugs on the bottom bracket for clamping the eccentric

in place. This gives a smooth, finished appearance to the hanger and obviates the objectionable weakening of the bracket by splitting. The mechanism for adjusting and tightening the eccentric in the bracket is ingenious. A block is fitted between the flanges of the eccentric and conforms to the



shape of the inside of the bracket. A hole is drilled through a lug on this block at an angle of 6½ degrees and an inside sleeve, drilled at the same angle and screw threaded clear through, is provided to fit in the block but is cut a quarter of an inch shorter. A screw bolt with hexagonal head passes through this mechanism. As the block and sleeve, when assembled, make an angle of 13 degrees, a few turns of the bolt suffice to release the clamp so that the eccentric can be revolved with a special spanner. The side plates fit outside of the edges of the bracket and make a smooth finish. The Thor two-piece hanger, patented in August of the present year, is intended to be used with this mechanism, for which patents are pending.

## M. & W. LAMPS AND PUMPS.

An acetylene gas lamp called the Lancaster constitutes an important part of the line of cycle goods made by Matthews & Willard Mfg. Co. of Waterbury, Conn., for the coming season. This new lamp has a patent water trap and gas seal device which is claimed to render unsteadiness of the flame impossible and to prevent the water reservoir becoming hot; also it has a combination water and gas cock which automatically turns off the water by the same turn of the cock that subsequently shuts off the gas and preserves it for future use. The employment of this cock, the makers state, makes it unnecessary to turn off the water twenty to forty minutes before one wishes to dispense with the light. Another important point on which superiority is claimed is a detachable fish-tail burner which can be readily removed and cleaned. It is the policy of the company for the ensuing year to sell these gas lamps to a selected number of jobbers only, to whom electrotypes for catalogues and advertising purposes will be furnished. The M. & W. kerosene lamp, shown herewith, has not been neglected through bestowal of attention on the acety-



lene lamp, however. The combustion has been made more perfect, an automatic wick lock operated by pushing the turn button inward has been provided, and the oil pot is made reversible and securely locked so that it cannot become accidentally detached from the lamp. The other articles catalogued in

a folder which this company is sending to the trade, are the No. 310 double stroke, Silver Tone, and Monogram bells and the M. & W. combination pumps, constructed to carry a complete charge of carbide for any gas lamp, or a repair kit consisting of a quick-repair tool and cutter, tube of liquid cement, and one or two plugs. The section of the pump in which these articles are contained is opened by turning the knob at the end, which unscrews the metal cap. Instead of having its efficiency diminished by this novel combination arrangement, the makers state that tires can be inflated with this pump in much less time than with the ordinary hand pump.

## FORSYTH WRENCH AND PEDALS.

A new style of wrench is one of a large line of bicycle parts and accessories manufactured by Forsyth Mfg. Co., of Buffalo. This wrench is called the Buffalo and is drop forged. It resembles other wrenches in which the inner jaw is movable, except that the usual knurled screw is replaced by a large knurled collar screw threaded internally and slotted nearly all the way around to receive the head of a screw that is screwed into one side of the movable jaw,



which has two extensions that are arc-shaped to conform to the inner diameter of the collar. The threads of this collar have been cut away longitudinally to form a channel through which the rack in the handle may slide freely when the collar has been turned backward to the farthest point allowed by the head of the screw in the annular slot. By this construction the movable jaw can be set up against the face of a nut and when the collar is turned to the right the threads engage with the ratchet and force the jaws up tighter against the nut, which adjustment it holds until released. The advantage lies in the saving in time effected by changing the adjustment from small to large nuts. Another article of the Forsyth line is the adjustable pedal, which has double sideplates, the outer ones being stamped in one piece and slotted to receive bolts that attach it to the smaller plates riveted to the cross piece. The slots allow a variation of ¼ of an inch in width to fit shoes of different sizes. Other pedals of the same line are non-adjustable, but the bearings and body in all



are alike, the barrel being of tubing of large diameter with cups pressed into its ends. This company also makes a stamped chain guard whose several parts are riveted together and which is adjustable to fit different machines. It is very light but sufficiently strong, and being handsomely nicked and polished, is of attractive appearance. The pedals, wrenches and other goods are equally well finished and are strongly made, as shown by the samples submitted for examination.

## THE NEW TRIBUNE LINE.

The folder giving specifications and prices of the new Tribune models is being sent out by the Black Mfg. Co., of Erie, Pa. The three leading models will retail at the popular prices for 1899 standard bicycles. These are of symmetrical design and attractive appearance, and the makers state that they consider them and the entire Tribune line the best they have ever offered. The standard diamond frame roadster is made in 21, 23 and 25 inches height of frame, has 2½ inches drop of hanger, 7-inch cranks, drop forged flush connections, detachable sprockets of 26 and 9 teeth respectively, is geared to 80 and weighs 22½ pounds. The drop-frame roadster is made in 20, 22 and 24-inch sizes, has hangers dropped 3 inches, has 22 and 9 tooth sprockets and is geared to 68. A 30-inch wheel model is



# JUST A MINUTE WITH THE CLAUS BAR

That's all we need.

That minute will accomplish for the Claus Bar what an hour, day, week, month, year cannot accomplish for any other bar.

It doesn't take people long to recognize a good thing---you have looked at the Claus. You have recognized it, haven't you?

It's the sidewise and upwise taper of each corrugation that clinches the "clinch of a brazing." It can't budge.

Study a year and you cannot

find a weak point on it---anywhere.

It is not like other bars---it "don't" break---wont break---simply can't break.

It is not a bit like other adjustable bars, because it can be adjusted without a wrench---all you need is a thumb and finger.

And, another point---at all adjustments the chest expansion remains the same.

All the parts interlock. They'll sing the song "you can't loose me."

It requires only a Claus bar to have a complete handle bar stock. No matter what kind of bar a man wants you have it in the Claus.

It is a bar for anybody --- everybody --- any taste---every taste.

We are preaching

the gospel of the Claus bar all over the world.

Old riders will change to it---new riders will want it.

We are telling people that if they insist the dealer will furnish it. And they will insist---we are telling them to do so.

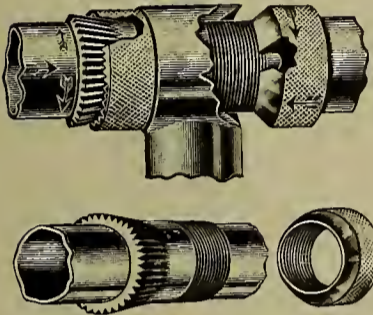
A manufacturer or dealer cannot well afford to equip his wheels with any other bar.

He need not. Our prices are right. Write for them.

## The Claus Handle Bar Mfg. Co.

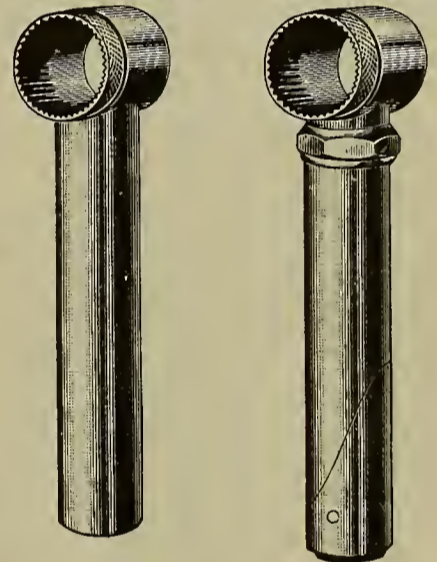
MILWAUKEE, WISCONSIN.

THE CLAUS ADJUSTMENT.



This is the adjustment  
Simple and strong,  
That makes other adjustments  
Appear very wrong.

THE CLAUS PLAIN STEM. EXPANSION STEM.



These are the stems  
Expansion and plain,  
That help in giving  
The Claus its good name.

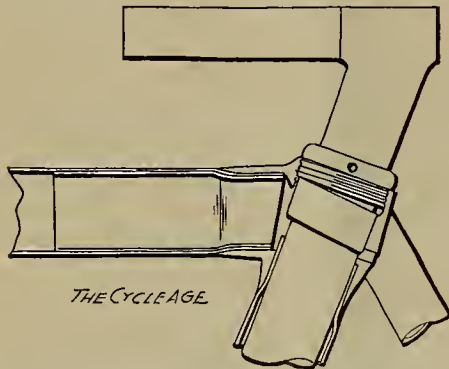
THE CLAUS ADJUSTABLE.



This is the bar  
All complete,  
That other bar makers  
Concede they can't beat.

Patented in America and all  
Foreign Countries.

built similar to the regular roadster for men except that the frames are 23 and 25 inches high, the gear 78 and weight 23½ pounds. The price is the same. The Blue Streak racer has hangers dropped 3 inches, has 28-tooth front sprocket, 7-inch cranks, 87 gear, and weighs 19 pounds. With the above mentioned models option is given on Tribune, Palmer or Dunlop tires. Two medium-priced diamond and drop frame models are also made which differ from the regular roadsters principally in equipment and in the lack of the latest improvements in fork crown and adjusting devices which distinguish the higher priced machines. Other models which complete the Tribune line are a combination and racing tandem and a triplet. The racing tandem is



geared to 84 and weighs 35 pounds. The triplet has 86 inches wheel base, hangers dropped 1½ inches and weighs 58 pounds.

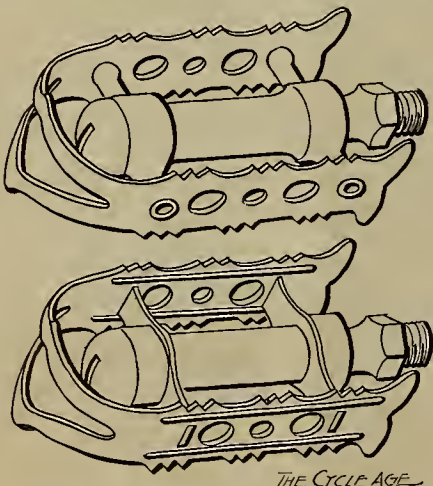
The three leading machines of the line—models 42, 43 and 44—embody a number of new features in cycle construction of which detail illustrations are promised later. The flush joints with 'outside connection are shown in the accompanying sectional drawing of the seat post cluster, which also shows the novel internal seat post binder working on a new principle. Turning the screw threaded ring in the top of the connection forces down the free or upper end of the band or collar whose edges are at irregular angles to its sides, and as the lower end rests on a shoulder in the connection a binding effect is produced around the post.

#### THE NEW TRINITY MODELS.

Trinity Cycle Mfg. Co., of Keene, N. H., will make three grades of bicycles for next season, of which the regular roadsters will list at the standard price for first class machines, while a lower grade line will sell for \$35 and the racers for \$65. All of these will bear the Trinity nameplate, will have the Trinity forks, diamond-shaped cranks, star sprockets and be fitted with the new style Trinity direct spoke hubs. The adjustment arrangement on all models will be simple and of a style that the company has tried and found effective. The machines will have short heads, deep drop of hangers, two-piece cranks and will present a rakish appearance. The company's traveling men are starting out through the east and west with complete lines of samples to show the trade and have a number of new and interesting points to call attention to. The new Trinity direct spoke hub will be manufactured for the jobbing and manufacturing trade to compete with other medium-priced hubs, so that makers and jobbers who desire to use this style of hub can compete with the ordinary flanged hub.

#### PAKE PEDALS ONLY.

Cycle Components Co., of 9 Maiden Lane, New York, is exclusively engaged in manu-

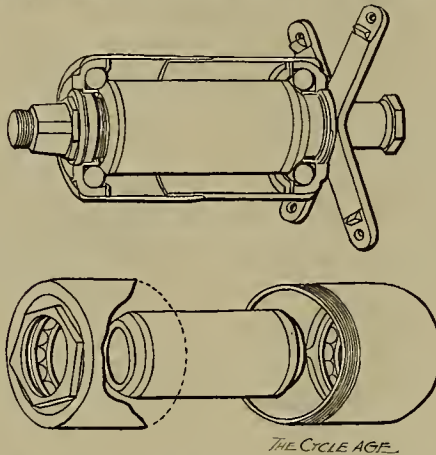


facturing a line of pedals, of which Rodger B. McMullen & Co., of New York and Chicago, are sole selling agent. Two styles of these pedals are shown herewith. The first is the Alvin, whose barrel and cross pins are made of single forging machined down.

The ends of the pins are spun over to hold the side plates, which are a one-piece stamping, bent to shape. This construction makes a pedal of great strength and durability. Cups are pressed into the ends of the barrel and the inner cone is formed on the pin while the outer one is screw threaded on and locked with a ring and nut. A dust cap closes the end. The pins and bearings in the second pedal are the same, but the barrel is formed of heavy tubing expanded at the ends after the stamped arms have been put on. Two longitudinal ridges are pressed in the side plates on either side to strengthen them. All these pedals are made of good steel, the balls and cones being of tool steel case hardened, and the nickeling is over copper. Parts are interchangeable and can be replaced when required.

#### WHITE LINE FOR 1899.

Introducing its '99 catalogue to the trade, White Sewing Machine Co. calls attention to the fact that it has never sought to attain a phenomenal "mushroom" growth by sensationalism, but the progress that has been made is the result of careful study and labor in every department of the business. In the new models it is not the aim of the company to equal past merit, but to exceed it as much as the added knowledge of the year's business will permit. A new feature of the road wheels is the construction of the crank hanger, which is unique. Each cup is pressed into the bottom of one section of a pair of sleeves which screw together in the middle to form a barrel enclosing the whole bearing mechanism. This barrel is securely locked into the bottom bracket by long transverse bolts acting through lugs on either side of kerfs in the bottom bracket. By this construction the White people apparently solve the mooted question of disc-adjusting bearings, getting the acknowledged advantages of fixed cones and at the same time getting cups that can hardly get out of



alignment. Adjustment is effected by loosening the clamp bolt on the left hand side and turning in or out the left half of the barrel. The cones are large and are secured to the ends of a sleeve of tubing, forming in effect a single piece. The axle slides through the cups and cone sleeve and is brought to its proper position by a nut on the left side, which locks the cones and shaft together.

Two chainless models, made under the Pope license, are shown, but prices are not quoted. Besides these and the two road machines, the White racer is catalogued.

#### WELL MADE CYCLES FOR CHILDREN.

A four-page folder showing the Iliion models of juvenile cycles for boys and girls made by Remington Arms Co., 313 Broadway, New York, is being distributed. These machines are made light in weight and easy running, but are of a quality of material and workmanship designed especially to withstand the hard use to which juvenile machines are subjected. They embody all standard modern improvements and are finished and equipped in a manner that is unusual for goods for children.

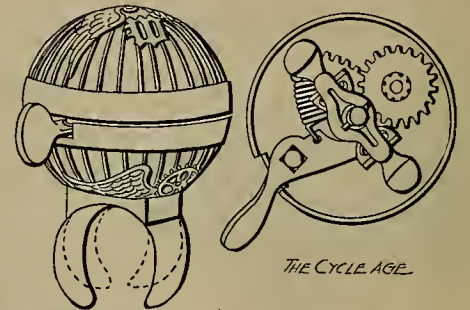
#### STANDARD TOOL CO.'S WELDED PARTS.

Parts made by the electric welding process are illustrated and described in an attractive price list just issued by Standard Tool Co., of Cleveland, O. The line, which is only one of many this concern produces, embraces front fork sides, rear forks and stays cranked to different angles, combination rear forks and stays welded to the end lug. L and T seat posts so welded as to appear as one piece, chain adjusters, and handle bars welded to the stem with flush joint and shipped straight for individual bending. The company commands attention by its observation that "a saving of several brazings produces an economy beyond any other method." Any goods that contribute to economy in the factory, while being in no way inferior to simi-

lar goods in the matter of serviceability, style and finish, are eagerly sought; it is on the knowledge of this that the Standard company is making its bid for trade. Another factor contributing to economy is that the welding process produces a smooth finish and consequently can be plated at reduced expense. Unusual strength is also claimed for the "homogeneous" steel tubing from which the Standard forks and bars are made. Other lines of manufacture by this company include twist drills, reamers, chucks, milling cutters, taps, spring cutters, flat spring and riveted keys.

#### THE PEERLESS BELLS.

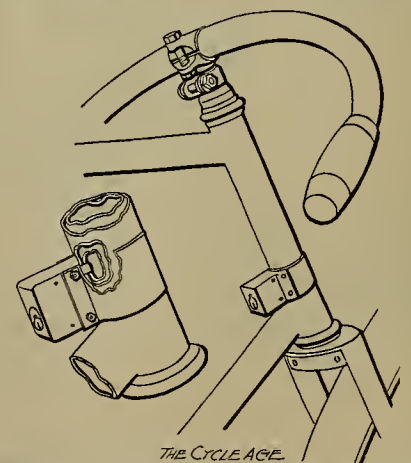
Bristol Bell Co., of Bristol, Conn., is bringing out for next season a new line of bells called the Peerless, which it proudly states promise to exceed in elegance of design and finish all past efforts in this line. The complete line as illustrated in the catalogue consists of four new styles, distinctly varied and



admitting of special finishes. This combination, with the feature of the new adjustable lever described in the October 27 issue of Cycle Age, will greatly add to the already well established reputation of the Corbin bells. The aid of a tool is not required; simply turning the gong to the right locks the bell. In attaching, the lever may be turned in either direction, then turning the gong both fastens the base plate and clamp to the handle bar and fixes the lever at the point desired. The clamp consists of two rigid jaws which close together and draw up into the base or saddle part of the bell, with a double action, admitting a quick and easy adjustment to any handle bar varying in size from 5/8 to 1½ inches.

#### THE SENTINEL BICYCLE LOCK.

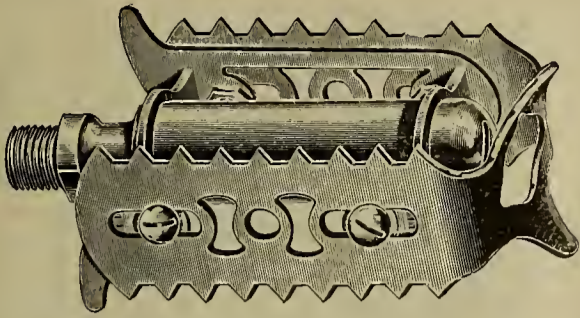
An ingenious bicycle lock, which will no doubt find very general favor with wheelmen, is now being introduced by Yale & Towne Mfg. Co., 9 Murray street, New York. As shown in the illustration, this lock is intended to be permanently fastened to the steering-head of a bicycle, and is designed to hold the front wheel at an angle to the frame, thus rendering it impossible for the bicycle either to be led or ridden away. The locking mechanism is that of the well known Yale pin-tumbler type, which makes the number of key changes practically limitless, thus absolutely precluding the possibility of other keys being in existence which may fit the lock. The lock is of neat design and finish. A number of bicycle manufacturers are



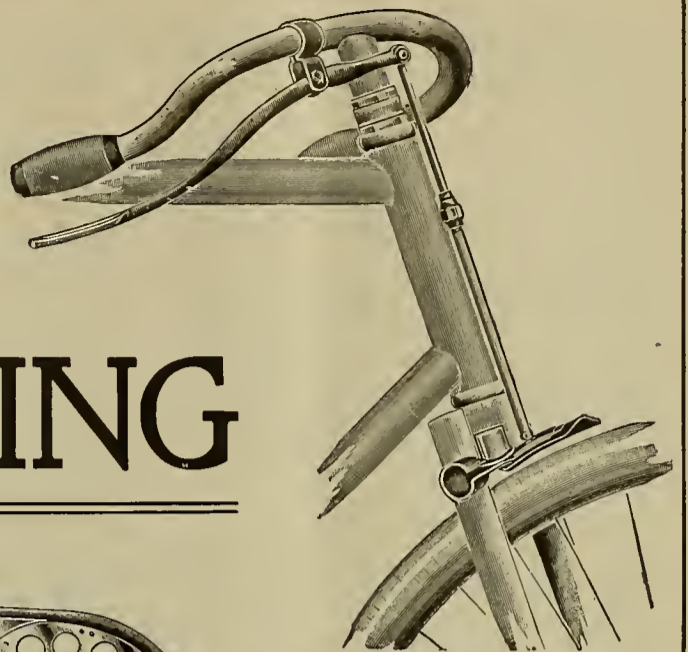
expected to fit these locks as a special feature for the coming season; but they may be easily applied to any machine. While shown in the present cut attached to the head by a separate band, the Sentinel lock may also be used directly behind the name plate, the latter being employed as a band to secure it to the head. One of the largest bicycle manufacturers in the country, having an extensive export trade, has undertaken to introduce the lock throughout Europe.

#### IMPORTED HARD RED TIRE CEMENT.

The American Trading company, 100 William street, New York, announce a new policy in regard to the marketing of Hard



1899

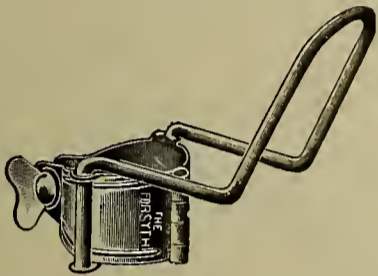


The Only Perfect  
ADJUSTABLE  
PEDAL  
Made, and a Beauty.

# GREETING

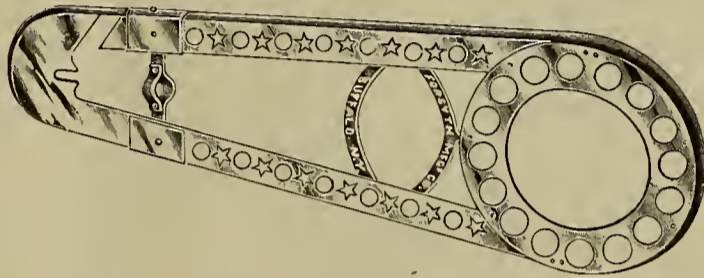
DETACHABLE  
HAND  
BRAKE...

Six styles of brake shoes. We can fit any wheel.



SPRING CLOSING HEAD

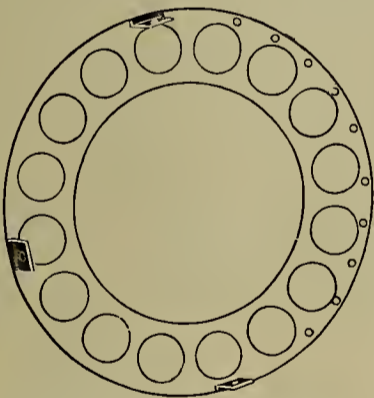
LAMP  
BRACKET  
FOUR SIZES.



ADJUSTABLE, TWO DESIGNS AND FOUR SIZES.

SPROCKET  
GUARDS

In Four Sizes and Two Styles.



SPROCKET GUARD.

**D**OES the WISE buyer consider price only? Does he adopt the parts he can buy by the bushel, and that have no other merit? Does the FOOLISH buyer carefully examine the accessories that he needs for his wheel, determine if they are well made and well finished in every respect and cheap at the quoted price? Does the WISE buyer equip his HIGH GRADE wheel (on which great care, thought, time and expense has been expended to make it beautiful in all respects) with the cheapest equipment that he can buy and then wonder why it does not TAKE with an intelligent public? Does the WISE buyer who has a wheel of the cheaper grade equip same with a STILL CHEAPER grade of equipment and thereby detract from its selling qualities?

**"FAR BE IT FROM SO."**

We are making GOOD, HONEST GOODS, and finishing them as they should be finished to go with the finest wheels made. Our prices ARE RIGHT. We sell only the Manufacturer and Jobber. Investigate and count your time well spent. Correspondence invited.

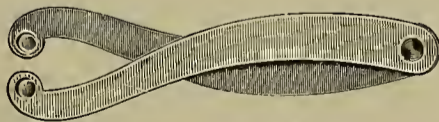
**Forsyth Manufacturing Co.**  
BUFFALO, N. Y.



"BUFFALO"

Q I  
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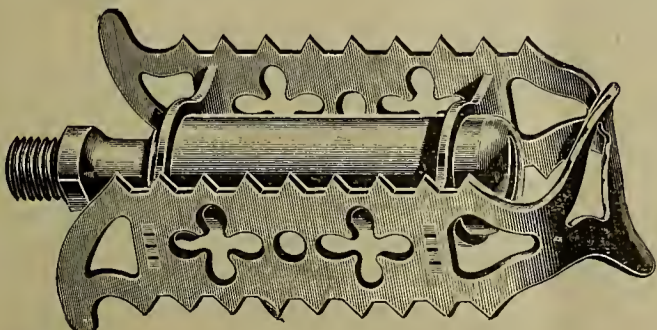
Our Rigid Steel Frame Pedal cannot be excelled in Design, Workmanship and Finish. Price attractive.



Pat. Nov. 9, 1897.

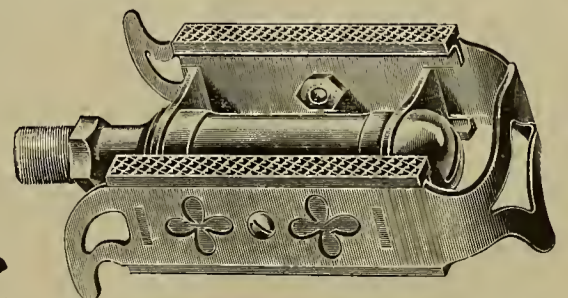
ADJUSTABLE SPANNER.

It is admitted that our Ladies' Pedal is the Best on the market. Its distinctive lines of beauty are immediately recognized.



FOR BEST QUALITY,  
FINEST FINISH  
AND  
PLATING  
WATCH OUR

'99 Line

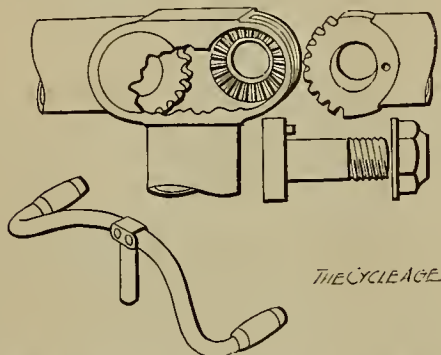


Mention The Cycle Age

Red tire cement. This cement has been known for a number of years to the American public, being supplied in large quantities to a large tire house which made it favorably known as the only good hard cement for securing tires to wheel rims. It was and is manufactured in England, where it is known as Bourne's cement, but the importers, The American Trading Co., will henceforth try to sell it in this country to jobbers and retailers, direct, as the tire firm previously handling it has started manufacturing cements and discontinued the use of the imported article. Selling directly to the trade the importers now offer reduced prices and guarantee that the cement will be maintained at the quality known to the trade until the close of last year. The firm invites inquiries and is desirous of having the goods listed in jobbers' catalogues. A liquid cement will also be offered the trade under the name of Liquid Gutta Percha and will be sold in original packages.

#### THE SANGER ADJUSTABLE BAR.

Samples of the new handle bar here illustrated, which is being brought out by Sanger Handle Bar & Plating Co., 194 East

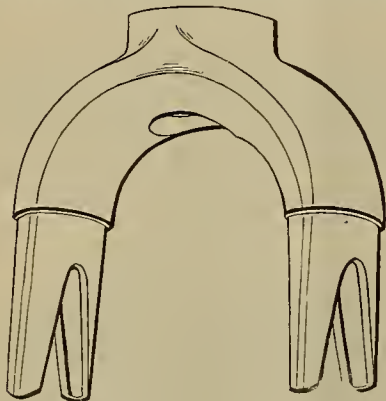


THE CYCLE AGE

Water street, Milwaukee, Wis., are just ready for delivery, and stock deliveries in quantities will commence December 1. The construction and operation of the bar are readily understood from the drawings. Particular attention, however, is directed to the fact that the semi-circular ratchets on the ends of the two bars engage each other when the bar is assembled, and by the reciprocating action thus produced both bars are simultaneously adjusted to the same angle by the movement of one, leaving the other hand free to lock the adjustment. The reverse side of the bar ends have annular toothed faces to engage those shown in the rear of the stem head, and when the two are brought together by the binding bolts, further movement of the grips in a vertical direction is impossible. It will be noted that the heads of these bolts are provided with a small stud to enter a corresponding hole in the end of the bar, to prevent rotation of the bolts when the nuts are being tightened. The heads of these bolts are large in diameter and flat, and set down into the circular openings of the head so that a flush surface is produced and any tendency to play of the bars is overcome. One other good feature of the Sanger bar upon which much stress is laid by the makers is the fact that the angle of the grips remains constant, and there is no longitudinal alteration of their position with relation to the saddle, the movement being entirely in a vertical direction.

#### CAST HOLLOW FORK CROWN.

The Racine Malleable and Wrought Iron company, of Racine, Wis., manufacture the hollow cast fork crown shown in the accom-



panying illustration. It requires little machining except at the fork stem connection.

#### PREPARING FOR INCREASED BUSINESS.

The Eclipse Bicycle Company has recently made arrangements for the production of a large number of medium price bicycles at Oneonta, N. Y. It has secured the services of W. H. Ives, who has been manufacturing

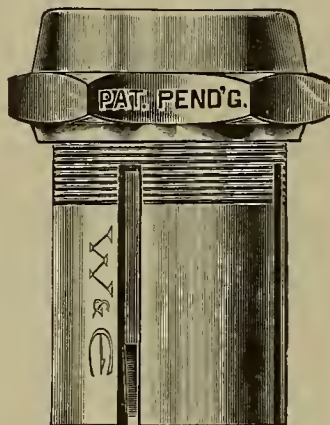
bicycles under the name of Empire State Cycle Co. for the past few seasons, in a limited way, and they will build all the medium grade cycles their trade demand at Oneonta, under the supervision of Mr. Ives. All the stock for these machines is being purchased by Eclipse Bicycle Co. at their office in Elmira, and a general supervision of the work will be given by the Eclipse people. They are to occupy the plant formerly used by the McKammon Piano company with a floor space of over 300,000 square feet, and a large quantity of medium price machines will be produced. They will be known as the Waldorf.

#### G. & J. TIRES IN CANADA.

Arrangements have just been completed whereby the American Tire Company, 166 King street, west, Toronto, Ontario, become the licensees and manufacturers of G. & J. tires for the Dominion of Canada. These tires are made under the direction of the Gormully & Jeffery Mfg. Co. and are exact duplicates of the American tire, both in style and sizes. Under this arrangement it is possible to ship bicycles equipped with G. & J. rims into Canada, and through the American Tire Co. the complete tires can be procured there. G. & J. tires made in the United States must not be shipped across the border line, however. All persons so exporting said tires into Canada will be liable to suit for infringement. It is for this reason alone that this arrangement has been made. By the present means it is a very simple matter to ship bicycles with rims only and have legitimate tires put on in Canada. The agreement with American Tire Co. makes the price of G. & J. tires in Canada lower than ever before.

#### THE '99 W. & E. EXPANDER.

The Walker & Ehrman Mfg. company has recently moved its works into a larger factory where its facilities for turning out work in large quantity and promptly are much increased. The company caters especially to the jobbing and large manufacturing trade, and makes the well known W. & E.



hubs, pedals, crank-hangers, turned head fittings and frame fittings for tandems, triplets and quads. For the expander shown in the accompanying illustration it is maintained that it contains no pins or nuts that may be lost, that all screw threads run in the same sense, that it contains no loose parts that might drop into the frame tubing or be misplaced, that all parts are interchangeable, being turned to hardened gauges, and that it has one-eighth-inch more binding surface than any other expander. These claims are further supplemented by the important statement that the expander will allow for more variation in the dimensions of seat posts and handlebar than other devices and still positively hold.

#### CLAUS BARS IN EUROPE.

Claus Handle Bar Mfg. Co., of Milwaukee, Wis., which has several representatives in Europe, reports that large foreign orders are being received for the Claus bar. This bar came into popularity last year, and the makers predict from the present indications a large demand from the trade and riders the coming season. A feature that commends this bar to the public is its adjustability while riding, besides which the material used and the workmanship are of first-class quality.

#### COLE & CO. BUY ADDITIONAL FACTORY.

G. W. Cole & Co., of 141 Broadway, N. Y., announce that they have recently purchased all the rights, title and interest in the fixtures and business of the Victor Mfg. company, of Detroit, Mich. The leading products of this concern are the Victor Concave Nipple wrench, Lullaby baby seats, Hercules combination lock, Hercules hand pump and Asbestoline. Col. W. G. Latimer, who was proprietor of the company, sold the business because he was unable to attend to it, owing

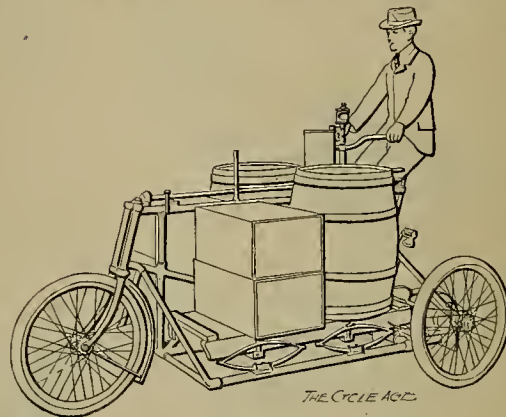
to his having been mustered into active service at the head of his regiment. Cole & Co. have also acquired control of Basch's patent hook toe-clip, which is so constructed that side slipping is absolutely prevented. The new catalogue of the Cole company, which is in preparation, besides the Three-In-One, Pacemaker, and other well known articles, will show a number of novelties for 1899.

#### RUSHING WORK ON BALDWIN CHAINS.

By working day and night forces and with the aid of improved machinery and increased facilities, Baldwin Chain Co., of Worcester, Mass., is making strenuous efforts to keep abreast of its fast growing trade and hopes to be able to deliver goods early and fill promptly all orders. The past season has been a most satisfactory one for the makers of the Baldwin chains, who nevertheless have reason for anticipating increased business during the coming season.

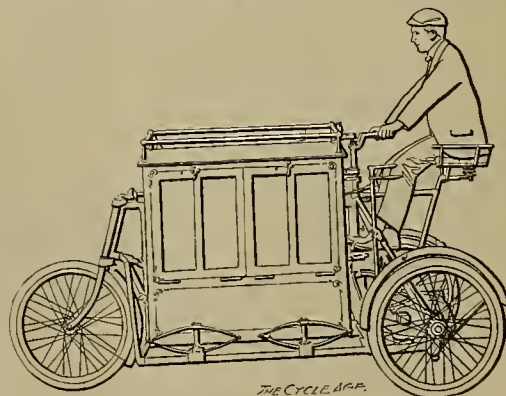
#### COLUMBIA MOTOR CARRIERS.

Pope Mfg. Co. of Hartford, Conn., has published a pamphlet describing the carrier vehicles shown in the accompanying illus-



THE CYCLE AGE

tration. The merchandise capacity of the vehicle is rated at 500 pounds under which it will give its regular speed and power. The structural strength, however, is sufficient to permit a load of 600 or 650 pounds, although under this extra weight the motor will not develop its normal speed. The form and design of the carrying bodies are not necessarily as shown, but may be varied to suit different requirements. The two styles illustrated show wide variation between a light motor truck wagon and a closed-up affair such as would be suitable for a dry goods establishment. The motor is a specially designed gasoline engine for which no water jacket or other cooling device is necessary, thereby saving many complications and much weight, says the company. A supply of gasoline which is sufficient for about 100 miles travel is carried in a tank attached to the frame between the boxes. Like all gas or gasoline motors, the first explosion must be obtained by physical effort, and bicycle cranks and pedals were adopted to give the desired result in the easiest and most satisfactory manner. By the attachment of a clutch with chain and sprocket to the shaft of the driving wheels, foot power may be used to assist the motor when on steep grades, obtaining higher speed than the auxiliary low gear of the motor would



THE CYCLE AGE

normally produce. When the cranks and pedals are not in use they remain stationary. The normal weight of this carrier vehicle is given as 750 pounds.

#### ECLIPSE PRICES FOR 1899.

Eclipse Bicycle Co., of Elmira, N. Y., announce that their prices for 1899 are to be as follows: Model 64, men's light roadster, \$50; model 65, ladies' light roadster, \$55; models 52 and 53, men's and ladies' roadsters, 1898 pattern with 1899 improvements, \$40; model 24, Waldorf light roadster, \$35; and model 25, the Waldorf light roadster for ladies, also \$35. The company has concluded to put its best efforts into the manufacture



## A MOWING MACHINE

costs more than a scythe—but it cuts more hay.

A fine tire costs more than a cheap—but it rides faster and farther. What made the solid tire give way to the cushion—the cushion to the pneumatic? For precisely the same reason the slow pneumatic is bound to give way to the fast.

Nobody wants slow tires; nobody buys them knowingly. And it isn't good, sound business to let people do it unknowingly. If you don't tell them, somebody else will, and they get the impression that they've been cheated.

League Tires need no explanation. Nothing goes into them but the finest rubber and fabric; nothing comes out but speed and staying qualities. "Get there and get back" tires look well in the store, ride well out of the store, and, present or absent, are working steadily in somebody's interest—yours, if you handle them.

### LEAGUEKIT

mends any single tube tire. Quick and sure cement repair for small punctures, quick and sure plug repair for large ones. Only tool that does the work of two kits at price of one. Write for prices.

New York.....25 Park Place.  
Philadelphia .....308 Chestnut Street.  
Chicago .....143-145 Lake Street.  
St. Louis.....210 No. 12th Street.  
San Francisco.....509-511 Market Street.

**NEW YORK BELTING & PACKING CO. LTD**

Mention The Cycle Age

# STERLING CYCLES

*Built Like a Watch*

*Sterling Quality  
Maintained...*

## Announcement!

*1899 Models Now  
Ready.....*

Road Models, - - -	\$50.00
Racer, - - - - -	65.00
Chainless, - - - -	75.00
Diamond Tandem, - - -	75.00
Convertible Tandem, - - -	85.00

WE ARE  
PREPARED  
TO  
TALK  
AGENCY

TIRES ❁❁❁  
Palmer ❁ Kangaroo ❁ Goodrich ❁ Dunlop

SADDLES ❁❁❁  
Christy, Wheeler, Hollenbeck, Garford, Plew

Mention The Cycle Age

*Sterling Cycle Works,  
Kenosha, Wis.*

of only two patterns at the Elmira plant. In the company's Oneonta plant it will produce Waldorf bicycles in large quantities. Both the Eclipse and Waldorf cycles will be fitted with the Morrow Automatic coaster and brake at an extra list of \$10.

#### IMPROVED CLEVELAND MODELS.

The new models of Cleveland bicycles, whose reputation of numerous improvements consistent with the maintenance of last season's prices has gone before them, are out and are now being shown by H. A. Lozier & Co.'s traveling salesmen to agents all over the country. In a few weeks the company will be making deliveries. Regarding the changes in the machines, the makers furnish the following information:

The frame head of Model 66 is larger than formerly, but flush from end to end; the projecting ball cups are flushed into the head out of sight. In doing this, the head adjustments are made neater and more ornamental. The gauge of tubing has been increased, adding to the strength of the frame. The gauge of the top is 22. The seat post mast is 22 gauge, while the lower front tube is now 20 gauge. The front fork forging will be made the same weight as that used on Model 29 in 1897. By thus slightly lightening the fork forging and increasing the strength of the frame, in case of hard head-end collision, the fork forging will bend before the frame will buckle, and the frame will remain unharmed. The crown forging and fork stem will be threaded, the stem screwed into the forging and brazed. The hubs are all formed out of single pieces of cold-rolled steel by means of powerful cupping presses. An entirely new straight spoke has been introduced, the hub end of which terminates in a ball of about 1/4-inch diameter having a lug extension in the plane of the spoke. This ball can be inserted in the spoke hole in the hub barrel when the spoke is at right angles to it, but after the spoke is turned at a tangent the lug engages beneath the edge of the hole and renders it impossible to pull the spoke out. Burwell bearings have been improved by the use of ball separators having rollers to take up the friction. Weights will be slightly less than in 1898. The Cleveland gear case has been improved and will be recommended to general use for road riding. Burwell tires of 1 1/2-inch diameter will be regularly fitted. Cranks will be 6 3/4 inches long on men's wheels, with option on 7-inch.

#### NEW TEST FOR CLINCHER CYCLE TUBING.

Clincher cycle tubing has undergone many severe and critical tests, conducted by disinterested parties who were investigating the claims to superiority put forward by the makers of this tubing, The Wilmot & Hobbs Mfg. Co. of Bridgeport, Conn. At one of the most convincing of these tests, as well as the most recent, a pair of rear forks made of Clincher tubing, was exposed to an endwise compression test in a regular power testing machine in comparison with a pair of forks made from seamless tubing of the same diameter, size and gauge. Under a pressure of 1,400 pounds the seamless tubing buckled and bent. The Clincher tubing only gave way, after being subjected to a pressure, applied in precisely the same way, of 2,400 pounds. These rear forks were then sawed off to shorter dimensions and again exposed to the same test. The seamless tubing bent and yielded at 1,700 pounds pressure, but the Clincher stood the strain till 3,200 pounds was reached, when it buckled slightly. The Wilmot & Hobbs company have recently finished very large additions to their already extensive hot and cold rolling plant with a view of taking care of their rapidly increasing Clincher business, and are already running day and night.

#### BIG FOREIGN SHIPMENT OF SNELL CYCLES.

Toledo, Nov. 7—On Monday Snell Cycle Fittings company made a shipment of 1,000 cycles to Malmo, Sweden. The bicycles were loaded in five express cars. They arrived at New York Tuesday and were at once loaded on a Wilson line steamer. On each car was a big banner with the following words: "Snell Wheels, American Machine Import Company, Malmo, Sweden. Made by the Snell Cycle Fittings Co., Toledo, O." The Snell factory is running over time, 200 men being employed until 9 o'clock at night.

The Washington branch of Eclipse Bicycle Co. has ceased to exist as a branch, the business having been transferred to John D. Lasley, who has been the resident agent for the past sixteen months. The consideration was \$7,600, which was secured by a deed of trust chattel given by Mr. Lasley to Lucas P. Loving to secure David L. Whittier. Extensive improvements have recently been made in this establishment, which is one of the most prominent in the national capital.

J. B. Merrill, traveling representative of Waltham Mfg. Co., of Waltham, Mass., who has been in charge of the Boston store dur-

ing the absence of Manager Gash, has started on a trip for the company through his old territory, embracing New Jersey, Delaware, Maryland, and Virginia.

Thomas Hay, until recently of Hay & Willits Mfg. Co., of Indianapolis, has severed his connections with this firm, the makers of Outing bicycles, and will engage in the sale of bicycles in Indianapolis. The affairs of the Hay & Willits company, he states, are now in the hands of George and Edward Evans who have secured a controlling interest in the stock.

J. C. and H. C. Starr, who make vehicles and harness and sell bicycles and sewing machines and have been doing business in Decatur, Ill., for the past 43 years, have not removed to Ft. Worth, Tex., as announced in a recent issue of this paper, but have merely opened a branch house at Fort Worth.

A dry retort oven for annealing tubing with exposure to the air has just been installed in the Toledo factory of the Shelby Steel Tube Co. and plans have been formulated for adding piercing and rolling mill machinery during the early winter.

Washington Cycle Supply Co., of Washington, D. C., has been given the agency for the District of Columbia, for the lines handled by R. B. McMullin & Co. These lines include Garford, Hunt and Brown saddles, Indianapolis chains, etc.

Porteous Butler, 22 passage de l'Opera, Paris, France, is circularizing American cycle and motor vehicle builders with a pricelist of detached fittings for two horse-power motor cycles. He builds the Butler petrol tricycle.

Adams & Hart, of Grand Rapids, Mich., jobbers and retailers of cycles and sundries, are preparing a sundries catalogue for '99 and would like to hear from manufacturers who desire to be represented in the catalogue.

Frank White, one of the inventors of the quick curing process for rubber tires, formerly with New York Tire Co., is representing the Mossberg Wrench company, of Attleboro, Mass., on the road.

W. P. Murray, dealer in flowers, feathers and fancy goods, has had many inquiries from his foreign agents in regard to bicycles and parts, and has decided to add both these lines to his business.

The Clipper people, of Grand Rapids, Mich., have arranged to have shipments to agencies in Ohio made from their Cleveland depot for next season, so as to save time for the agents.

J. H. Toole, who has been for many years prominently identified with Liberty Cycle Co., of Bridgeport, Conn., has severed his connection with that company.

New Spalding models including a roadster, racer, chainless and a juvenile machine, are being shown to Spalding agents in the principal cities.

R. B. North, who has been employed at the Pope Mfg. Co.'s plant in Hartford, has been transferred to the Chicago office as assistant manager.

The Shelby Steel Tube company is to hold its annual meeting to-day, November 10.

#### TRADE NOTES.

A manufacturer of iron and steel wheels for baby carriages, velocipedes and tricycles in Toledo, is considering the advisability of establishing a similar factory in Kansas City and has written to the secretary of the Manufacturers' Association of that city suggesting association with local parties in order that the business may have a good standing from the start.

E. T. Weiant, a well known cycle dealer of Denver, and manager of the Denver branch of Overman Wheel Co., of Springfield, Mass., has purchased the stock of cycles and accessories of the Victor depot and has also been made general agent for the Overman Company for Colorado, New Mexico and Wyoming.

Wiese Cycle Co., one of the oldest retail firms of Philadelphia, permanently closed its doors last Friday, under execution of judgment for \$3,950 secured by Eva Maria Wiese against Kate S. Wiese, proprietor of

the business, on a note dated September 23, 1897.

A big gang of men were put to work on the roof of Tucker Bicycle Woodwork Co.'s new factory in Urbana, O., on October 27 and the plant is being rapidly pushed to completion.

The shops of Amos Whitely & Co., harvester manufacturers, at Springfield, Ohio, which went into the hands of a receiver four years ago, have been sold to Superior Drill Co., of Cleveland for \$66,700. They are said to have cost nearly \$500,000.

West End Cycle Co. has removed to new and commodious quarters at the corner of Fourteenth and I streets, northwest, Washington, D. C. This concern handles the Keating and Andrae, and is managed by K. von Rodenstein.

Marion Black, successor to Black & Pel-tier, cycle dealers at Fort Wayne, Ind., has consolidated with Meyers Cycle company of the same town under the firm name of Meyers & Black.

W. D. Hyatt, who for several years conducted a bicycle store in Hoboken, N. J., closed up his place of business and disappeared a fortnight ago and has not been heard from since.

A. R. Underwood has purchased the interest of his partner, M. C. Walls, in the bicycle and repair business of Underwood & Walls, of Plymouth, Ind., and will continue the business.

The two-story brick factory of New England Tricycle Co., in Tyler City, Conn., was totally destroyed by fire October 28, at a loss of about \$5,000, covered by insurance.

Hazleton & Love, of Washington, D. C., who handled merchandise and bicycles on the installment sale plan, have been burned out at a loss of \$3,000.

Andrew Brosius, of Ft. Wayne, Ind., has consolidated his bicycle repair shop with his brother's, and they will build bicycles during the winter.

Frank Louis Loeffler, bicycle dealer, of Revere, Mass., has filed petition of bankruptcy, with liabilities of \$4,625 and assets of \$3,162.

Mueller & Watson, of Indianapolis, have dissolved partnership, but their bicycle business will be continued under the same style.

Parker & Schneider, hardware and cycle dealers of Ann Arbor, Mich., have been succeeded by Moore Hardware Co.

David Johnston, of Ithaca, Ill., dealing in hardware and bicycles, has given real estate mortgages for \$2,500.

Harper Blizzard & Co., hardware and cycle dealers of Wauseon, O., have been succeeded by E. W. Blizzard & Co.

Schafer & Stahl, handling agricultural implements and bicycles in Butler, O., have dissolved partnership.

Mrs. D. E. Kreitlein has succeeded to the bicycle business of A. G. Kreitlein & Co., of Indianapolis, Ind.

J. Towhig Temple, dealing in bicycles and notions, has removed from Richmond to Greensboro, Va.

A. Bross has succeeded to the hardware business of Ailes & Caldwell, Advance, Ind.

Baker-Ogden Furniture & Hardware Co., of Oshkosh, Wis., has sold out its stock.

Ralph S. French, cycle dealer of Boston, Mass., has filed a petition in insolvency.

Charles M. Perkins, handling bicycles in Burnside, Ill., has gone out of business.

Kabaker & Debbs, bicycle manufacturers of Chicago, have dissolved partnership.

Oscar S. Lear, of Springfield, O., has discontinued his bicycle business.

C. E. Adams, who dealt in bicycles in Arlington, Vt., has died.

Punxsutawney Cycle Co., of Punxsutawney, Pa., has sold out.

**BRANCH HOUSE****Distributing Points:**

**BOSTON, MASS.,** 223 Columbus Ave.

Maine, New Hampshire, Eastern Massachusetts to the Worcester county line.

**NEW YORK CITY,** 12 Warren St.

Following counties in New York state: Kings, Queens, New York, Orange, Putnam, Richmond, Rockland, Suffolk, West Chester.

Following counties in New Jersey: Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Union, Sussex, Warren, Hunterdon, Somerset.

**PHILADELPHIA, PA.,** (Hart Cycle Co.) 816 Arch St.

Following counties in Pennsylvania: Chester, Lancaster, Lebanon, Dauphin, Schuylkill, Berks, Lehigh, Carbon, Northampton, Bucks, Montgomery, Delaware.

Following counties in New Jersey: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean, Salem, Mercer (except Princeton).

State of Delaware, Eastern Maryland, eastern peninsula of Virginia.

**PITTSBURG, PA.,** 435 Wood St.

Following counties in Pennsylvania: Allegheny, Washington, Beaver.

**BUFFALO, N. Y.,** 609 Main St.

Following counties in New York state: Erie, Chautauqua, Niagara, Cattaraugus.

Following counties in Pennsylvania: Erie, Crawford, Warren, McKean.

**ROCHESTER, N. Y.,** 32 East Ave.

Following counties in New York state: Monroe, Orleans, Genesee, Wyoming, Livingston, Wayne, Allegany, Steuben, Ontario, Yates.

**DETROIT, MICH.,** 272 Woodward Ave.

State of Michigan, except the western half of the northern peninsula.

**NEW ORLEANS, LA.,** 1757 St. Charles Ave.

Louisiana, Texas, Mississippi.

**ST. LOUIS, MO.,** 817 Pine St.

Missouri, Kansas, Arkansas, Oklahoma, Indian Territory, Southern Illinois.

**CHICAGO, ILL.,** 105 Wabash Ave.

Iowa, Indiana, Wisconsin, Minnesota, North and South Dakota, Nebraska, Northern Illinois, western half of northern peninsula of Michigan.

**PROVIDENCE, R. I.,** 15 Snow St. Rhode Island.

**PORTLAND, ORE.,** 134 Sixth St. Washington, Oregon, Idaho, and Montana.

**SAN FRANCISCO, CAL.,** 344 Post St.

California, Nevada and Arizona.

**DENVER, COL.,** (Gano Cycle Co.) 1614 Stout St.

Wyoming, Utah, Colorado, New Mexico, El Paso, Texas.

# Don't Delay

In securing the Columbia Agency for 1899. One day's delay may result in your competitor getting it. If you are wise you will do one of two things **AT ONCE**. Either write to the Columbia Distributing Point in your territory or get on the train and apply for the agency in person. Any of our Branch House Managers will be glad to see you and will take pleasure in explaining fully in detail our line, policy and prices.

# Columbia

## Bicycles

are going to be easy to sell this season. From all sections we are receiving congratulations on the 1899 Prices and predictions of great business for Columbia Dealers. We are feeling good and so will you if you secure the Columbia Agency.

The Columbia Chainless at \$75 will be the most popular wheel on the market. Practical tests have demonstrated its superiority for all purposes—**either track or road.**

Columbia Chain Bicycles, Models 57 and 58 for \$50 are the best chain wheels we have ever built. We don't believe they can be equaled in **style, finish and quality.**

Columbia, Model 49, is well known as a light roadster or track wheel. With 1899 improvements at \$40 it is the best bargain we know.

Hartfords at \$35 and Vedettes at \$25 and \$26 will compare favorably in quality and style with most bicycles at any price.

**Don't Delay. Apply for Agency Now.**

**POPE MFG. CO., Hartford, Conn.**

Mention The Cycle Age

# THE PASTIME AND SPORT

## French Favorite Wins.

Bourrillon, the champion sprinter of Europe for the season of '98, defeated Grogna, the little Belgian champion with whom George Banker is now touring Italy, and Deschamps, one of the best French riders of the season, in a match race at 2,000 meters in Calais, October 23. In the first heat Deschamps led off with Bourrillon following, but these two changed pace at every lap with Grogna last during the entire distance. At the bell the order was the same as at the

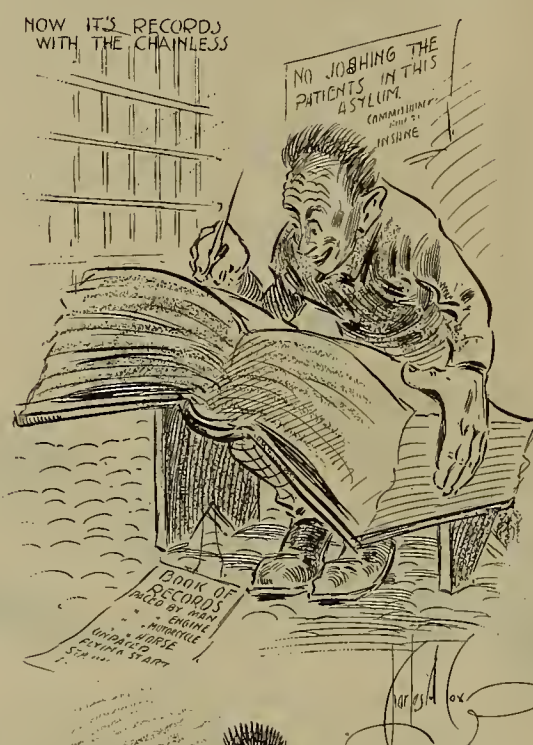
his pedals in a final desperate effort and won by inches only in 3:20 4-5. Deschamps ran third ten inches behind Grogna.

## Losers of Heats Win Final.

In the first day's races of the grand prize meet in Turin, Italy, October 22, George Banker, Pettis and Darlow were defeated in their heats. Broca, Meyers, Protin, Jacquelin, Singrossi and Eros qualified in their heats and Pettis, Bixio, Momo and Tomaselli qualified in conso-

## Racing Association Affairs Brighten.

Springfield, Mass., Nov. 7.—The affairs of the National Track Team Association are being gradually straightened out, and it is expected that a definite plan of settlement will be announced in a few weeks. The liabilities of the association will be considerably smaller than they appeared to be at the time of its collapse. There is also said to have been a reduction in the contingent assets, and the Springfield Bicycle Club, which it was claimed owed the association \$1,500,



start and remained so until the middle of the last lap, when Bourrillon began his sprint and easily passed Deschamps, finishing half a length in the lead. The time was 3:55. Bourrillon had the lead in the second heat until the last lap, when he made a feint to jump, which cost him the race, as Grogna was watching closely and jumped also, winning by half a length from Bourrillon in 4:40 3-5. The final heat was a repetition of the first Bourrillon and Deschamps leading in turn. At the bell the order was Deschamps, Bourrillon, Grogna. Two hundred yards from the tape Bourrillon began a brilliant effort, closely followed by Grogna, who passed him and seemed a certain winner until at ten yards from the tape the French favorite jumped on

lation heats. The final was won by Bixio with Momo second.

## Jacquelin Wins Foreign Riders' Prize.

In the races for the great foreign riders' prize, run at Turin, Italy, October 27, George Banker ran second in his heat and failed to qualify, but qualified in the consolation heat. The final was won by Jacquelin and Banker did not show among the prize winners. Summaries: First heat—Jacquelin, first; Banker, second; Seidel, third. Second heat—Broca, first; Mercier, second; Jaap Eden, third. Third heat—Protin, first; Meyers, second; Roanquette, third. Consolation race—Meyers, first; Banker, second. Final heat—Jacquelin, first; Meyers, second; Protin, third; Broca, fourth.

hopes to settle for about \$250. The National Cycle Track Association has been caused some annoyance by the confusing of the organization with the National Track Team Association. The Track Team Association is merely a combination of eastern track managers who are also members of the cycle track association.

## Class Motor Paced Records Alone.

Motor pacing is attracting a great deal of attention just now in Europe and is about to be tried in this country. There is no doubt that many existing records, particularly for middle and long distances, can be broken by riders assisted by mechanically propelled multicycles fitted with wind shields, but there is a



Our Business Is Built Up By  
**Satisfied Dealers**

\*\*\* HUGHES, WOLF & MILLER \*\*\*

DEALERS IN

Clothing, Shoes, Jewelry and Bicycles.

TERRE HAUTE, Ind., Oct. 3, 1898.  
 NATIONAL CYCLE MFG. CO., Bay City, Mich.  
 Gentlemen—As our '98 season is now over, we take pleasure in stating a few facts. We have sold 274 National wheels this season. Of these one frame showed a slight defect in brazing at the seat-post connection and another had a clamp lug on the bottom bracket broken—both were repaired free of charge. We have broken only one fork side, one crank and can hold in one hand all the cups and cones which we have replaced. Haven't had a broken fork crown, a broken crank axle or a broken front or rear wheel axle.

This is a record that we can all be more than proud of. Defective wheels cause many a gray hair to come in the retailer's head, as if a rider has any trouble he comes into the store and turns himself loose like a cyclone.

We feel more than pleased with Nationals this year and hope that our business relations will be as pleasant in '99 as they have been in the past four years. With best wishes, we remain, yours truly,  
 HUGHES, WOLF & MILLER.

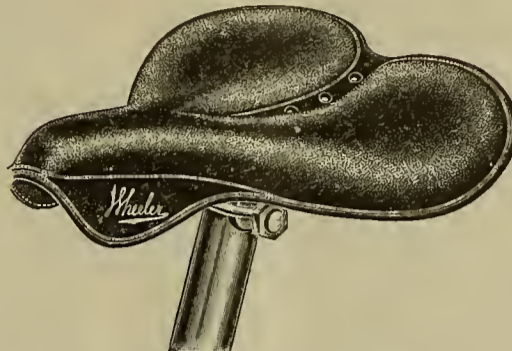


**SUMMARY.....**

- Nationals sold, 274.
- Frames broken, none.
- Fork Crowns broken, none.
- Front Forks broken, none.
- Fork Sides broken, one.
- Crank Axles broken, none.
- Wheel Axles broken, none.
- Cups and Cones broken, very few.

Mention The Cycle Age

**That Curve  
 in the Back**



has always been a distinguishing feature of WHEELER saddles. Manufacturers who purpose turning out a high-grade wheel for '99, will not stoop to the using of imitation and shoddy saddles when they can buy the genuine and original WHEELER saddles at the figure we offer them. Extra grade in every respect.

Send for Samples of the Most Popular Saddles on the Market.

**THE WHEELER SADDLE CO.**

1427-1457 Woodward Ave., Detroit, Mich.

Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT.  
 New York Agents: HARTLEY & GRAHAM.

Mention The Cycle Age

**They  
 All  
 Ride  
 The**



**"Orient"**

MR. AGENT:

**North—East—South—West!**

Our travelers are out with our '99 models, and we can make deliveries at once. Our salesmen will show samples from Canada to the Gulf of Mexico, and from the Atlantic to the Rockies, and if they have not called on you, drop us a line.

The earth will fairly revolve on

**"ORIENT CYCLES"**

in '99 and the agent who sells them "LIVE IN CLOVER." \* \* \* \* \*

**WALTHAM MFG. CO.**

WALTHAM, MASS.

Mention The Cycle Age

growing tendency toward not recognizing them in France or in favor of creating a separate class for them, as it is plainly unfair to give equal credit to performances with the two styles of pacing. The advantage naturally lies with the mechanically paced rider, for no time is lost through frequent changing of machines, and as the motor is indefatigable a perfectly steady pace can be maintained.

### FARMERS JOIN WHEELMEN

#### All Work Together to Secure Road Improvement Laws in Michigan.

Some of the older wheelmen of Grand Rapids, Mich., who have paid their membership fees into the League treasury for a number of years in the hope of seeing something done toward the passage of laws in their state for the improvement of wagon roads, are withdrawing their support from that body and combining with the farmers to elect a state congressional representative who promises, if elected, to introduce a good roads bill.

As a general rule farmers are antagonistic to wheelmen, but in this instance their interests are proving to be almost identical. The wheelmen can probably appreciate good roads more than any other class of people, but they are only slightly behind the farmer in this respect. The farmers realize that if they had good roads leading to the city they could haul twice as much produce to market with one team of horses as they can with poor roads to travel over. And they realize that the trip could be made in less than half the time. Added to these reasons for wanting good roads, the rural residents of the state are beginning to realize more and more what a boon free mail delivery would be to them. With it they could have letters directed to them placed in their hands within two hours after the train arrived at the depot, instead of waiting a week or two for a chance to get to the postoffice and get them. They know that this free mail service will never be theirs until roads are constructed which will permit easy travel by mail wagons, or mail carriers on bicycles.

### RULES FOR OUTLAW RACING

#### Form Proposed for New Organization Admits Pros to Membership—Important Changes Made.

A summary of the rules which have been drawn up for the government of racing under "outlaw" control next season has been given out by Arthur Gardner, vice-president of the A. R. C. U. These rules are subject to the action of the track managers, clubs and riders, who will meet in New York next month. The constitution and by-laws of the proposed new organization are embodied in the form, a summary of which follows:

All racing men competing with Union men shall be members of the order. Professionals and amateurs are admitted to membership. Amateurs are given an extension in territory, and may travel 100 miles from the boundary line of the state in which they live.

The prize limit on professional contests is removed and the rule compelling circuit meet promoters to place championship contests on the programme is abolished. Open competition along the circuit shall be the determined factor in deciding the championship. First, second and third places only will be counted, and the points given will be four, two and one. The grand circuit will open June 1 and close October 1.

Contests against records will be allowed at any time of the year instead of being confined to certain stated periods. The clause of the old rules requiring timers to make an affidavit before a notary is changed, and the referee appointed by the chairman will make an affidavit as to the accuracy of the timers.

### New York Division Election.

Count of the mail votes of the New York division L. A. W. last Thursday

resulted in the election of M. M. Belding, Jr., of New York city, as chief consul, and H. B. Fullerton, of Brooklyn, as vice-consul. For representatives of the First district Dr. L. C. LeRoy polled the heaviest vote, with Isaac B. Potter only one vote behind.

### TAYLOR BREAKS RECORDS

#### The Black Wonder Creates Four New Marks With Ease, Calling for Faster Pace.

Philadelphia, Nov. 7.—After having met with a rebuff from the management of the Willow Grove track, Major Taylor had some red-hot coals heaped on his head by the Woodside park management opening their gates to him for his record trials. They are being well repaid for their forbearance, however, for the colored wonder has not only brought four world's records to their track, but the indications are that he will, before many days, put every desirable short-distance world's record to its credit. His successful attempts up to date include the quarter-mile, third-mile, one kilometer and two-mile records, in :22 2-5, :29 4-5, :57 3-5 and 3:13 3-5, respectively—in the last-named case chopping no less than 7 2-5 seconds from the previous figures. Taylor is just now in excellent physical condition, and when his pacemakers get "on edge" the remaining records are bound to go.

Taylor will continue his record-breaking attempts during the coming week. After the conclusion of his track trials he will be sent by his manager after the Camden-Atlantic City road record, which is the most-sought-after mark within 100 miles of Philadelphia. He will be paced by four quints.

### McDUFFEE IN THE HUNT

#### Rumor Says He Will Go For Records on a Chainless Machine in Florida.

Philadelphia, Nov. 7.—It is said today that McDuffee will shortly gather together an outfit of northern pacemakers, take them to Jacksonville, and there attempt to lower any and all marks made by Taylor and others as well. He is said to be backed by a rival firm to that which employs Taylor, and that McDuffee will use a chainless wheel also.

McDuffee is now in Atlanta with his trainer, Charles Culver, who managed his pacing for him in his season's work in '98. He has a race on for Atlanta and will then go to Jacksonville for another, after which it is reported he will remain to go for the records.

A battle between Taylor and McDuffee for the records at their present stage and upon chainless wheels, would do much for that class of machines. There are at present but the two patents which are in use by the leading makers, and a record battle would do much to demonstrate the value of the two as regards speed qualifications.

Taylor is amply backed to carry on his battle all winter if need be, and his employers are not those to give up until the fight is won.

### CONCENTRATED POT-POURRI.

While Indiana L. A. W. members are pushing H. W. Foltz for first vice-president of the League, the Chicago contingent of the Illinois division have sought to recover the ground that was stolen from them by the Jerseyville members by securing George D. Locke's consent to oppose Foltz for the national office, which would allow the Chicago politicians to put up their own ticket for the state offices, with W. C. Malley as chief consul. Locke blocks the plan, however, by declining the invitation to withdraw.

Representatives of the L. A. W. in St. Louis have laid before the Board of Public

Improvement recommendations for changes in the street sprinkling contracts to be let for next summer, which propose that only enough sprinklings shall be made to lay the dust, not exceeding four per day; that carts shall be equipped with an ellipse of 2½-inch pipe having ¼-inch holes ⅝-inch apart; that a fine of 1 cent per fifty feet be imposed for too much or too little sprinkling; that certain streets frequented largely by cyclists be not sprinkled before 9 a. m. or after 5 p. m.; and that inspectors who fail to report excessive sprinkling be fined \$1.

Washington, D. C., Nov. 5.—For the second time within the past two weeks the New York-Washington record has been shattered. The new holder of the record is Harry Park, a well known road rider, who rode the distance, unpaced, in 25 hours and 45 minutes, which is one hour and forty-seven minutes below the record made by Louis R. Smith, also of this city, some days ago.

Promoters of the Madison Square Garden races have been studying to find a way to hold a six-day race in Chicago this winter without making themselves liable to prosecution under the Illinois state law prohibiting continuous races of longer duration than twelve hours.

St. Louis promoters are planning to bring McDuffee and Michael together in a match race in the Coliseum there this winter, evidently taking small stock in the reports of Michael's ambition to become a jockey and racing horse owner.

A record of 202 miles in 12 hours flat is claimed for Forrest R. Young of Brockton, Mass. Young is eighteen years old and made the trial Thursday. If the time is accepted it will establish a new 200-mile American amateur record.

Paul Lavand, the French match-maker, has wagered 1,000 francs that Joyeux will win the New York six-day race, and C. W. Miller has accepted the bet and will post his money with Paul Rousseau, editor of Le Velo, of Paris.

Bourotte, better known as "the Frog" in Europe, won a 50-kilometer (31 miles) race in Antwerp in 1:10:55 3-5 on October 23, with Miron second at 325 yards and Impens third at one mile.

The Austral wheel race meet at Melbourne, Australia, will be held November 25, December 3 and December 10. The three prizes in the two-mile handicap aggregate \$2,000.

Tom Eck is planning a circuit of indoor meets, to be held in Chicago, Milwaukee and St. Louis this winter. The races will be run under League rules and sanction.

"Pop" Elkes will run a six-day, six hours a day race at Troy, N. Y., beginning November 14. His son Harry will ride exhibitions during the race.

## MISCELLANEOUS.

Advertisements under this head 5 cents per word first insertion, 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received.

### WANTED

**WANTED**—Position; twelve years with bicycle firm who are going out of business. Address M. A. C., care Cycle Age.

**WANTED**—To furnish some reliable jobber with bicycle cements, enamel, polish, chain graphite and lubricating oil for next season. Send in your contracts. LOUIS E. DETTMAN CYCLE Co., Marinette, Wis.

**MANUFACTURES OF SUNDRIES**—Send catalogue and best cash price for '99 goods for jobbing, to MARTIN BREDDER, Paterson, N. J.

**WANTED**—A position as traveling salesman for some bicycle firm. Address 626 O Ave., Sidney, O.

**WANTED**—Position with reliable sundry and bicycle fittings house; indoor or on road; twelve years' experience; competent to take full charge of business; thoroughly acquainted with and control large amount of trade; now employed but wish to make a change. Address CYCLE, care Cycle Age.

**WANTED**—Salesman to carry a special bicycle saddle on commission as a side line. This saddle will be extensively advertised and is an easy seller. WM. B. RILEY & Co., 324 Market St., Philadelphia, Pa.

**WANTED**—Manufacturers' agent to handle a good line in Chicago and vicinity; prices such that large trade can be sold; address with references, S. E. G., 35 Warren St., New York City.

# THE CYCLE AGE

## AND TRADE REVIEW

VOL. XXII—No. 3.

CHICAGO, NOVEMBER 17, 1898.

NEW SERIES No. 52.

### POPE AND COLEMAN COMBINE PROTECT CHAINLESS PATENTS

**Formation of a Company with \$1,000,000  
Capital Stock Controlled by  
Pope Company.**

New York City, Nov. 14.—A chainless bicycle patent combination has been perfected by the Pope Manufacturing Company, its licensees and the Western Wheel Works, by the incorporation at Newark last week of the Bevel Gear Wheel Company, with an authorized capital of \$1,000,000. The announced shareholders are, of course, mere dummies for the present, though their names clearly indicate the powerful interests which are behind them. They are: Elliot Mason, the local Pope representative, \$999,000 shares of stock; Theodore F. Merseles, assistant to the president of the Western Wheel Works; Charles M. Richards, a salesman at the local Pope agency; William H. Miller, one of R. L. Coleman's bookkeepers; Frederick J. Stimson, who is Mr. Coleman's attorney, and Victor W. Hungerford, a Jersey man.

Definite details of the new deal are difficult to obtain. Mr. Mason will say nothing and Mr. Merseles referred the Cycle Age man to Mr. Stimson.

#### Arrangements Not Yet Completed.

"The affair is practically in a nebulous state," said Mr. Stimson, "and as counsel of the company I can make no statement as yet. When the arrangements are completed, I shall be pleased to give the particulars to the press."

It is understood, however, from the combination of various bits of information picked up here and there, that the corporation has been formed to control the existing patents on bevel gear bicycle construction, and that each user of the Pope patents will be responsible to the company for a royalty. The combination will not affect the announced price of the Crescent chainless at \$60. By entering into this combination Mr. Coleman has freed himself from the fighting of any suit to determine the validity of the patents, which in the event of his victory, would yield great advantages to others, who would bear no part of the expense of litigation.

#### The Foreign Outlook.

New York, Nov. 14.—Theodore F. Merseles, of the Western Wheel Works, having just returned from a European business trip, reports that from and after January 1 next, a tariff of \$5 will be charged on every bicycle entering Sweden; that after the coming meeting of the German parliament a duty of about \$5 will be placed on all bicycles imported; that the situation in Germany is so

critical for the bicycle industry that the increase in tariff is made imperative; that the situation in England is one of extreme peril, for makers and dealers alike are stocked heavily with machines, the best of which are offered to the public at from \$40 to \$60 net, the list price being \$125 and \$150. In France, however, the prospects for the coming year are, in the opinion of Mr. Merseles, very bright. American bicycles are popular in France, and are nowadays purchased in preference to English models, which, formerly, ruled the French and many another European markets.

#### MUST PAY FULL PRICE

**New York Judge Decides That Subsequent Price  
Reduction Does Not Affect Bicycle Purchase.**

Buffalo, Nov. 14.—A decision was recently rendered in this city that has a deep interest for dealers wherever located. A woman bought a wheel in April last for \$100. She paid \$77.50 down, and agreed to pay the balance in a short time. The very day that the bicycle was delivered to her, the price dropped to \$75. She declined to make any further payments, claiming that she had already paid more than the price of the wheel, at the time it was delivered to her. Suit was instituted to recover the balance due. The judge decided that the contract was for \$100 at the time it was made, and that the subsequent reduction in price did not affect the contract.

There is a growing sentiment, among the trade of this city, favoring abolition of the custom of giving free sundries to purchasers of bicycles. The local cycle board of trade will endeavor to reach an agreement that will cause the abandonment of the custom entirely or limit the articles to be given away.

The recent reduction in price of the chainless model has led to many inquiries about this particular model. Indications give point to the belief that there will be a good demand for this model next season.

#### Rim Makers Will Appeal.

The Indiana Novelty Mfg. Co. will appeal from the decision of the United States court, in Milwaukee, which held that two of their patents were invalid. They hold several other patents on wood rims, on which they have not yet brought suit.

### CONTEST OF MOTOR VEHICLES

#### TRIALS OF SPEED AND POWER

**Hundreds of Substantial Business Men  
Show Keen Interest in Work  
of Different Styles.**

Boston, Nov. 9.—About twenty-five hundred people gathered to see the automatic racing at Charles River Park this afternoon. The meet had been well advertised, and, considered purely as a sporting event, there was some general interest taken in it, but, not unexpectedly to the management, perhaps, when the gates were opened the people who trooped through were of a class far removed from the habitual race-meet attendant. To one accustomed to cycling and similar crowds the quality of the audience present at once forced attention. The absence of the very young man was apparent at a glance. Among the many thousands there were not more than twenty women.

#### Contemplate Abandoning Horses.

There were business men, merchants, bankers, and men of that class, who could afford a stable as part of their menage. Such looked forward to some entertainment, to be sure, but, primarily, they were there to examine into the merits and possibilities of these new affairs, as exemplified by the electric, gaso-Germany to Delagoa Bay are: First line, and steam arrangements whirling around the track before them. On most of them rested the burden of the daily expense of one or more horses and a cart or two, and the advantages of a horseless carriage with its trifling cost appealed to them. These, therefore, were deeply interested, but before auctioning off blooded stock and removing the stable in the back area they came to pass close judgment on the display before them and to note the practical defects in the workings of the machines displayed for their criticism. The manufacturers were anxious on their side that no virtues of the motor carriages be kept covered, as nearly all spectators represented possible investors.

#### Upholstered Carriages Favored.

The audience were interested mightily, and liberally applauded anything and everything at all worthy of attention. Some of the motormen seemed to be unfamiliar with the banking on the race-track, but the speed attained by the nimblest of the vehicles was sufficient to exhilarate the crowd. The smaller, more compact machines took their eyes. The tricycle, which was given its initial velocity by the rider in the regular cycling way, did not win the favor of the people as did the richly upholstered affair, so much like one of their own carts, with its two high seats and generally

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comfortable appearance. The steam carriage, well-proportioned and not too large, was not unfavorably commented on. It was neat-looking and, because of the speed with which it rolled around the track, the thin stream which trailed behind and evaporated in thin air was not regarded as a detrimental kite.

The absence of any outward evidence of motive power certainly, however, meets with favor among the people. The electricians, on that account, were nodded at approvingly as they flashed past. And as certainly does the public balk at gasoline. To the average man the word "gasoline" suggests explosions. You can't get the idea out of the ordinary man's head that gasoline isn't dangerous. This afternoon a flame four feet high blazed out of the tank of one of the gasoline machines present. It was smothered at once. To one experienced it meant nothing, but to the uninitiated upon the benches it was an exciting moment; and it condemned, forever, gasoline machines in the eyes of hundreds who saw the incident—condemned them beyond the power of any argument.

#### Manageability of Machines Admired.

One strong point brought out during the afternoon was that the new machine was far from being a cumbersome, unwieldy thing. The dexterity with which four-wheeled carriages were revolved and gyrated within the width of the track excited the enthusiasm of all present. This feature was a revelation even to some of those who have been watching and predicting the rapid advance of the motor carriage into public favor. To see an expert handler wiggle his carriage in and out among pairs of sticks barely further apart than the length of his rear axle was indeed a privilege. "Imagine turning your horse and cart like that," was the usual comment of the spectator to his neighbor. The winner of this contest turned up in a man on a tricycle. He was liberally applauded, although the appreciation expressed by the audience was more for the dexterity of the rider than the excellence of the machine. In the climbing contest the machines were allowed a flying start of twenty feet before they were sent up an incline that varied in grade from 15 degrees at the bottom to 36 degrees up the last few feet of a wooden structure 80 feet long. Two machines went the full length and bumped the safety girder at the top in no uncertain fashion. Some got part way up the incline and then stuck. After the gathering dispersed a sturdy looking bicycle rider tried to mount the incline on his wheel but could not make it after several attempts.

#### Keystone Cycle Works Burned.

The Keystone Cycle Works, located in West Reading, Pa., were completely destroyed by fire on Nov. 12. The loss is estimated at about \$75,000. The plant and buildings were partially insured. The concern made a number of factory changes recently, intending to considerably increase its output for the coming season. At the time of the fire, orders for over 5,000 machines were in hand. About 800 new models were destroyed. It is highly probable that the factory will be rebuilt at once.

#### Death of Leonard Voegli.

Leonard Voegli, who for several years held a responsible position with the Indiana Novelty Mfg. Co., Plymouth, Ind., died on November 13. In addition to his fine business qualifications, the personal worth of the deceased was such that his death is deeply felt both in the office and factory; and what makes the sorrow keener at his death is the fact that in a few weeks he was to have been married.

## HOOLEY DISCLOSURES ENDED

### COURT DISMISSES BANKRUPT

#### Titled Personages Make No Defense Upon Re-opening of Promoter's Case —New Revelations.

The examination of Ernest Terah Hooley in bankruptcy proceedings was resumed on November 2 in London and attracted much attention.

Martin Rucker, who was charged with contempt of court in endeavoring to induce Hooley to alter evidence which reflected upon the Humber company directors, was fined \$500 and costs and was further ordered to pay the money at once or go to prison. Hooley declared that Rucker, in behalf of four directors of the Humber company, offered him \$25,000 to change some of the evidence presented in the bankruptcy proceedings.

#### Testimony Causes a Sensation.

Hooley continued to testify to the amounts, large and small, paid to trustees and directors in connection with his promotions. He created a sensation by asserting that he paid Sir William Marriott \$5,000 for introducing him to the Carlton Club, and asserting later that he paid \$50,000 to the Marquis of Abergavenny, a prominent Conservative, for party funds. The witness did not know whether the money reached the party fund. Subsequently, Mr. Hooley explained that he paid the Marquis of Abergavenny \$25,000 first and then paid him a second \$25,000, because he was told that he had promised \$50,000. "But," the witness interjected, "that was a lie."

Continuing, Mr. Hooley testified that he paid \$5,000 to Frank Harris, editor of the Saturday Review, "to square a man named Blake, who threatened to publish something antagonistic to the companies."

The witness then said that Harry Marks, editor of the Financial News and member of parliament, induced him to invest \$110,000 in purchasing the London Sun. Mr. Hooley asserted that he never received a penny from this investment.

Sir Joseph Renals, formerly Lord Mayor of London, was mentioned by Mr. Hooley as among those who received \$25,000 for joining the board of directors of the British Embroidery company.

#### No Cross Examination Offered.

The bankrupt said also that Lord Ashburton paid him \$250,000 for a quarter share of his profits from September 30, 1897, to the last day of that year. On the other hand, Mr. Hooley paid Lord Ashburton \$50,000 for an introduction to a firm of solicitors willing to advance him \$460,000 at 3½ per cent.

As day after day Hooley interwove great names into his stories of unsavory transactions, lawyers clamored for opportunities to refute his allegations by cross-examination, and the court, anticipating a long rebuttal, allotted six days in the autumn for a hearing. When the receiver on the second day announced that he had finished questioning the bankrupt, the court inquired whether anyone desired to cross-examine him. But a heavy silence followed, and the court informed the bankrupt that he need not return unless summoned to do so.

Public opinion, in the light of the so-called "guinea pigs" resting their defense on perfunctory newspaper denials, has no alternative but to record judgment by default against many of the lords and gentlemen.

#### Bicycle Storage at Paris Exposition.

An appeal has been made to the directors of the Paris international exposi-

tion of 1900 in behalf of the cyclists by the Paris cycling daily, *Le Velo*, which suggests that storage quarters for 40,000 bicycles daily be provided for the accommodation of those persons who may be expected to visit the exposition on their bicycles. At a charge of 10 centimes (2 cents) per day, the 40,000 bicycles would produce \$800; and *Le Velo* states that on Sundays and holidays that number would be exceeded. Special accommodations for motor carriages are also asked for.

## BICYCLE THIEVES RAMPANT

### Lake Sailors Suspected of Conducting Organized Depredations in Buffalo.

Buffalo, Nov. 14.—From the first of April up to this date records show that three hundred and fifty odd bicycles were stolen in this city, of which less than twenty-five were recovered, and not more than half a dozen arrests were made where conviction and sentence followed. Many more were stolen that were not reported to the police, and these would bring the number close to four hundred for the season. The thefts averaged five bicycles daily and were made up principally of standard makes, indicating that the thieves knew what models were easiest of disposal and brought the best prices. One day in June the number reached sixteen machines, and from six to eight was an ordinary day's work. The machines were taken mostly from the racks of the stores and office buildings and during business hours, when it would seem that detection would be almost certain. Absolutely no trace of the thieves or the bicycles could be found, so cleverly was the work done and so successfully did they cover their tracks.

About the middle of the season when the thefts were heaviest a report reached here that some of the stolen machines had been traced to Chicago. This tended to strengthen the theory advanced by the police department that the work was being done by an organized band having its headquarters in some of the lake port cities where the bicycles were disposed of. This gang, or rather that portion of it which was at work here, was thought to be composed of sailors employed on the line boats that plied between the two cities, and whose custom it was to put in their shore time stealing bicycles, which were taken to Chicago and turned over to confederates who, after altering the general appearance of the machines, disposed of them and divided the proceeds with the sailors. Nothing, however, came of the investigation that was said to have followed, but a watch was set on the different boats and, when a few weeks ago a party of three sailors were arrested while trying to dispose of several sets of new bicycle tires, the police believed they had captured the main culprits, but they were doomed to disappointment, for all that could be proven against the trio was the theft of the tires from the steamer's cargo.

#### To Make American Parts in England.

The Yorkshire County Cycle Company, Ltd., is the title of an organization which has equipped huge works at Leeds, England, for the manufacture of tires and cycle parts for the wholesale trade. The plant is popularly believed to have been established in the interest of Pratt & Whitney of Hartford, Conn., because nearly all the machinery is supplied by this American firm. It will be operated throughout on the plan of American parts makers and will be a formidable factor in the competition against which American exporters of parts to England and the Continent will have to contend.

**COLORADO TRADE CHEAPENING****EFFECT OF NEW CONDITIONS**

**Only Dealers Catering to Wealthy Class Maintain Luxurious Stores—Chance for Chainless Machines.**

Denver, Nov. 12.—Next spring will probably see the bicycle business in Denver on a somewhat new basis. There will be little resemblance to the ways of the trade in the older days. Concentration, the disappearance of large profits and the persistent reductions in prices have combined to transform the business of the retail dealer. It is noticed that there are but two establishments in the city that still keep up the style and accommodations of the old times, depending a great deal on a good appearance and luxurious appointments to draw trade. One of these stores is as handsome a mercantile place as there is in the city. This dealer's trade is almost entirely among the club men and fashionable folk of the city, and it is plain to be seen that artistic decorations and comfortable chairs and all the accessories of a good lounging place are quite essential in the business. The fact that it is a good machine, as this one unquestionably is, appears to enter less into the success of the concern than that the purchaser there may approve the artistic surroundings and the circumstances of the transactions. One other dealer makes an effort to preserve the traditions of the trade in Denver, mindful of the times when plush and polished nickel and handsome mirrors were considered necessary to the conduct of a successful business in \$100 wheels. But for the rest, the appointments of stores have followed the prices downward till now almost any kind of a room is good enough and there is, in most cases, little attempt made to appeal to the artistic perceptions of purchasers.

**Scramble for Cheap Bicycles.**

This is one of the signs of the change that has come over the trade in Denver. Another is the scramble for the lowest priced stock of bicycles that can be had. What the limit will be in the matter of cheapness can hardly be guessed here. Said one dealer, who is preparing to open up a store next month: "I have had my turn at high priced wheels, and after a struggle I gave it up. I felt a certain pride in handling one of the best on the market, and I regretted deeply the tendency to run after the lowest-priced thing to be had. But that was not to be avoided. I shall have a stock ranging in prices from \$22.50 to \$50, and I bank on the \$22.50 machine for my profits next year. It will be a good wheel, too. Manufacturers, like dealers, have learned a great deal, and I think I can conscientiously tell my customers that as good a bicycle can now be made for \$22.50 as could at one time have been turned out for \$50, or even more. I think the low-priced wheels will be the popular thing next season, though of course there will be still a considerable demand for the top-notch products of the old established factories. It seems to me that the new conditions will help the chainless a great deal. The cheapening of the chain wheel to such an extent that almost the best wheel of that pattern will be within the reach of everybody will increase the demand for the chainless among those persons, and there are many of them in Denver, who want something a little finer and somewhat different from the average rider."

**Show Fever in Canada.**

The World's Meet Committee, of Montreal, Can., which has in charge the ar-

rangements for the international race meet to be held there next summer, is preparing to hold a cycle and motor vehicle show in Sohmer Park next February. It is intended to make this the largest bicycle exhibition ever held in Canada, and a number of motor vehicle builders have promised to exhibit. The show will be under the management of T. T. Cartwright, secretary of the Meet Committee, who is known to the cycle trade of both countries.

**TOLEDO TRADE AFFAIRS**

**New Rolling Mill for the Shelby Tube Makers—Bankrupt Concerns Reviving.**

Toledo, Nov. 14.—The Toledo Machine and Tool Company has finally closed a deal for possession of Yost factory No. 1. Graff Acklin, manager of the plant, says that the lease will run for a year or two, and that the company intends to get the vacant property next the Yost factory.

About a year ago the Shelby Steel Tube Company passed into the hands of the present management, and during that time the business has been so satisfactory that plans are preparing for the erection of a rolling mill in this city. The company finds that the Newcastle rolling mills are not sufficient to meet its demands.

Colonel Terry, receiver for the Maumee Cycle Company, has asked for authority to start business anew. The plant will undoubtedly be operated. Pending the decision, the receiver has stopped the sale of '98 models at the ridiculously low prices at which they have been offered. He is also making arrangements for the operation of the Truman factory, which was taken in charge by the bank last year. He expects to have this factory running within a week or two.

The Union Manufacturing Company will hereafter have its bicycles made by laborers paid by the piece, instead of by the day.

**Rouse-Hazard Property Litigation.**

The Rouse, Hazard & Co. plant in Peoria, Ill., which was sold at sheriff's sale on October 24, to a representative of the Peoria banks for \$5,850, has had a bill in foreclosure issued against it by Joseph Miller & Sons, contractors and builders, who allege that they erected the factory buildings and were obliged to accept a mortgage on the plant in lieu of immediate payment. The suit is against Theodore Miller et al., and the claim is for \$20,000. A petition for involuntary insolvency has also been filed by Excelsior Needle Co., Manufacturers & Merchants Warehouse Co., and M. L. Bennett & Co., creditors of Rouse, Hazard & Co., who allege that the executions and distress warrants issued against the insolvent firm by seven other creditors are issued upon judgments and claims which constitute unlawful preferences under the Torrey bankruptcy law, and notice was given that all persons in whose possession the property now is or may come will be held accountable for the same.

**Stencil Marking on Foreign Shipments.**

A decree has recently been enacted in Chili making the marking of merchandise cases by stencil compulsory, non-observance of the decree making shippers subject to a heavy fine. This is a safe rule to follow in all foreign shipments.

A final settlement has been reached in the matter of the C. H. Seig bicycle factory, and the business is to be placed again in the hands of the original owners. Mr. Seig will continue the management, and a full force will be put to work at the factory.

**AMERICAN PARTS IN ENGLAND****STAMPINGS NOT YET POPULAR**

**Their Introduction Is Found Difficult Because English Tried to Make Them and Failed.**

The use of sheet steel stamping in England is not as general as might have been expected from the changed attitude of makers here, but there are many logical reasons why this should be so, and in another year those who are intimate with the trade predict there will be a boom in American fittings, writes W. S. Mattox in Iron Age. English makers tried to turn out an acceptable quality of sheet steel stampings some years ago, but partially failed and discarded them, going back to malleable castings as more feasible, if more cumbersome and ugly. The process was taken up then in the United States, studied carefully and brought to the perfection it is noted for to-day. American makers did what English makers gave up in disgust—they learned how to make pressed work out of cold rolled sheet steel, and succeeded in turning out an article just as strong and just as light as a malleable casting. But the delicate ethical point of bringing back to England a process originally experimented with here and brought to perfection in America must not be overlooked in accounting for the tardiness with which English dealers have taken up with them.

**More Economical Than Castings.**

It is scarcely necessary to dwell on the manifest superiority of the American fittings. Lugs, brackets, etc., made by the American method can be enameled without further machining. American fittings are practically ready to be assembled into the bicycle when they are bought, whereas the English fittings are still in a crude, unfinished state. The bicycle maker using stampings does not need a costly plant for finishing its parts. By the general use of American fittings cost of labor is reduced and there is an economy of time. All these economical arguments should be palpable, but they are not.

It is true that the price of American bicycle fittings is higher than malleable castings. But the American article is complete, finished, while the work is only just begun when the maker has his castings delivered from the foundry. It is safe to say that if English fittings were bought, finished equal to their rivals, they would cost more than the American product.

The capital tied up in machinery in an English bicycle factory, for finishing castings, is enormous. It takes a man, too, for every machine, the power to run them, and fuel; they occupy valuable space. Here, alone, is an inducement powerful enough in argument, in dollars and cents to prove the superiority of American bicycle fittings. The cost of machinery, skilled labor, space utilized, time lost, power, etc., if converted into capital would have saved more than one firm in the past few months from voluntary winding up.

**Irregular Shipments Hurt Trade.**

One of the serious complaints made against American shippers is irregularity of deliveries, and this has tended to keep down what otherwise might have been by this time a considerable trade in bicycle fittings. English buyers object to the uncertain shipments which have unfortunately characterized our export trade for so long. They have been disappointed so often, buying for delivery in one month and getting their goods six months from date of sale, that they are cautious now. This has been remedied by keeping stocks in England, a costly but necessary proceeding, where a regular business is desired.

# PALMER TIRES

## MARK THE HIGH GRADE WHEEL

**PALMER TIRES**  
ARE MADE OF PURER  
RUBBER, BETTER RUBBER,  
AND INFINITELY  
SUPERIOR FABRIC  
TO THAT WHICH GOES INTO  
THE  
COMPOSITION OF ANY OTHER  
PNEUMATIC EVER  
MANUFACTURED.

**PALMER TIRES**  
HAVE MORE  
MERITORIOUS FEATURES  
THAN ALL OTHER  
MAKES OF TIRES COMBINED.  
NO OTHER TIRE  
IS SO FAST, SO RESILIENT,  
SO EASY RIDING,  
OR SO EASILY REPAIRED  
AS THE PALMER.

THE  
PALMER

# THE PALMER PNEUMATIC TIRE CO.

## CHICAGO.

NEW YORK OFFICES: 66-68 READE ST.

# THE CYCLE AGE

## AND TRADE REVIEW

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

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### FACTORY COST AND PRICE

The worst enemies of the cycle trade are those members of it who cannot figure or think well enough to distinguish profit in theory from profit in business. There was a time when neither factory cost of bicycles or regular selling expenses or incalculable "overhead" expenses were of vital importance in comparison with the question of increasing the volume of trade. If trade enough could be secured the most sinful extravagance in other respects could be borne. Everybody knows, however, that now another order of things prevails, and everybody is willing to reduce his expenses by all means at his command.

Yet while straining at gnats on the score of expense not a few manufacturers persist in throwing money to the public by selling their goods at prices which leave a theoretical profit but an actual loss. The better they have succeeded in reducing their factory cost and their ordinary selling expenses, the more injury are they capable of inflicting on the trade at large by mistaken calculations on other points. The jobber as a buyer makes it his business to induce mistakes in regard to the real amount of overhead expenses which the manufacturer should guard against. The manufacturer himself is inclined to minimize them in his relations with his banker. The press disregards them in its clamor for cheapness. The superintendent poot-poots them in order to bear out his capability. Salesmen exaggerate their chances for making profitable deals with a minimum of expense and thereby argue against them. The owner must to a certain extent distrust not only all of his employes but also his own optimism and calculations, if he shall avoid delusions, for in spite of everything the overhead expenses will be found in the books and accounts of the firm at the end of the year largely exceeding any allowance that might have been based on calculations.

It is customary among makers who aim to take overhead expenses properly into consideration to add a percentage to factory cost; but it is characteristic of the uncertainty which rules that the addition varies from 10 to 33 per cent. Probably the majority add about 25 per cent to factory cost before they begin to think of profits. Other concerns in which bookkeeping has reached a still higher plane abandon the percentage plan as too crude. It might lead to the production of the various models made in the same factory in wrong numerical proportion, and at the end of the year it might be found that overhead expenses had accumulated much faster in one line of production than in another and that in reality the model which was most pushed was least profitable. They are governed almost entirely by the experience of the previous year and allow no model to be marketed at less than factory cost plus the average expense incurred the previous year for a model of the same class, plus profit; and they assert that any manufacturer who does otherwise should do business strictly with his own capital.

While there does not seem to be any unanimous opinion in regard to the absolute average sum that might be assessed against each bicycle on the score of overhead expenses, it is generally conceded that on a percentage basis the charge should be heavier against the cheaper stock than against high grade machines. With the close margins prevailing for the bulk of production it would be interesting to reach definite conclusions

on this point for the benefit of the manufacturers who contemplate to make their greatest efforts for the coming year in a line of such cheapness as it has not been customary for them to encourage in the past.

The importance of fully appreciating the necessity of estimating overhead expenses correctly is probably greater at this time than it has ever been before, on account of the sharp competition between large and small makers in goods of the same price. It is largely to mistakes made in the allowance for such expenses that the whole downward tendency in prices is due, and it is a deplorable fact that a mistake made by any one representative concern is visited upon the entire trade, representing a loss a hundredfold greater to the industry at large than the erring member could possibly suffer by a mistake in the opposite direction.

### ADVANCED MOTOR VEHICLES

It has been continually asserted that France and England are more advanced in motor vehicle construction than America, and the assertion has militated somewhat against the capitalizing of the industry in this country. The recent motor vehicle contest at Boston will perhaps serve to dispel the modest illusion which has made our general public so singularly self-deprecating in this matter. The contest is likely to be commented upon abroad as of much greater importance than Americans at present would be likely to attach to it, for the one reason that a steam vehicle proved to be better powered for its weight than any of the rivaling gas engine or electric carriages. And when foreign judgment is returned to us our capitalists and our general public may learn to look upon American efforts for solving the motor vehicle problem with a higher degree of confidence than has so far been shown.

The advanced position occupied by France and England, Switzerland and Germany in motor vehicle building has reference more to number of vehicles turned out and in use than to superiority of construction. The manufacturers in France especially have paid much attention to high speeds on level roads, but less to ready operation of the vehicles under difficult conditions. In America the problem has from the start been that of constructing vehicles adapted to cope with wretched road conditions. The good roads in European countries have facilitated the use and production of motor vehicles which would not be considered adequate for any practical purposes in this country. The European industry is advanced, but the European construction is a good roads construction, and is therefore in reality behind the best samples of American work. Being more easily satisfied under the favorable conditions, European thought on motor vehicle subjects is likely to lag, if it is not already fallen behind in the race with Americans. This is in accordance with the old observation that men and nations progress more steadily by being compelled to overcome difficulties.

The barren ground of Scotland has produced the school of agriculturists who became the models for farmers in richer countries. The bad roads of United States are likely to produce the most generally acceptable forms of motor vehicles, destined to become an important article for export to all colonial countries where the requirements are similar to our own.

### THE PAY QUESTION ABROAD

When thoroughly examined and understood, the field of international banking offers exceptional opportunity for the profitable use of large amounts of capital and perhaps it is an encouraging sign for our exporters that interest in this matter of American banks in foreign countries is gradually increasing and that the establishment of international banks is being not only actively discussed but contemplated with serious purpose. The establishment of American banks would be of immense advantage to our trade with those countries and may be indispensable if the United States are not to be distanced in the competition for the markets of the world. The mere acknowledgement of the desirability is hardly sufficient to cause their establishment, however, and in view of the difficulties which must be overcome it remains a question whether the American exporter shall pin his faith to the principle of selling his goods for cash only, making a lowered price the

inducement by which the credit habits of the foreign countries are to be circumvented, or shall lend active aid to the establishment of American discount banks which may conduct his exchange operations and collect his accounts, as done by the English, French and German discount banks in Asia and elsewhere.

The principal obstacle to the opening of foreign banks capitalized in this country lies perhaps in the scarcity of unemployed home capital which might be made available for the purpose. The statistics of the nine months ending September 30 of this year show an increase of 123 million dollars in exports and a decrease of 113 million dollars in imports as compared with the corresponding months of last year, and this enormous increase in productivity representing 236 million dollars worth of goods—of which only a comparatively small sum stands for increase in the value of cereals—calls for probably all the available home capital to provide for the extension of manufacturing facilities. The profits on the trade indicated by the figures are almost insignificant for this purpose, and thus it may be expected that there will continue to be a demand for capital for new enterprises in this country, which will make it exceedingly doubtful if the movement for establishing foreign banks will be successful. The projected enterprises for exploiting trade with the new colonies which it is proposed to acquire, will also tend to make the money market tighter for more distant investments.

\* \* \* \* \*

Only an outsider to the bicycle trade might be deluded into thinking that the lower list prices announced by some bicycle makers for 1899 must have the effect of conquering completely all the world markets in which our supremacy has so far been hotly contested by the German and the British industries. Manufacturers know only too well that the question of list prices for '99 already presents a decidedly muddled prospect and between equal grades, have closer reference to variations in commercial policy than to cost of production. It is cost of production, however, which ultimately decides the course of trade in the world markets. Yet the view has found expression in the trade press that the lower list prices for '99 make a tremendous volume of export trade an assured thing. Undoubtedly a good export trade may be looked for, and it may even be predicted that the number of bicycles sold will round off a larger total figure than ever before reached; for while our exporters are losing somewhat in the northern markets they are at the same time continually expanding their field into those southern countries where bicycles are just beginning to win recognition as an article of necessity rather than luxury. But there is small satisfaction in numbers only, and the supposition that our bicycles will be sold at a reduced price in foreign markets in '99 would leave it extremely problematical whether an increased number of sales would yield a larger profit than more modest sales at a better figure. And there is certainly very little reason for supposing that our manufacturers can produce bicycles at lower cost for '99 than for the past season. The effect of the ever increasing sales of bicycle material turned out by our partsmakers must also be entitled to consideration before any very sanguine hopes may be indulged in by bicycle makers. Some reasons have been assigned in previous issues of this paper for the assumption that our export trade in the coming season will probably be on the whole satisfactory if judicious efforts are made to this end, but it must certainly first be recognized that the close relations between the makers and the public which exist in this country and which make certain sleight-of-hand performances pertaining to the relations between reputation and price, grade and price, and prices of the various grades made by the same manufacturer, more or less efficacious at home, are of small consequence in foreign lands where more rational though less interesting conditions of trade prevail. The great public in those countries will not even hear of any reduction of our list prices in the same sense in which this term is understood among ourselves, but will purchase their bicycles as they purchase their clothes: that is, very largely on the say-so of the dealer. And the latter does not consider it one of his duties to confuse his customers with hazy dissertations on "list prices" or any other commercial distinction of American origin. He has his price and he frequent-

ly shaves it down to an individual customer, but he does not encourage higgling by proclaiming prices and list prices as two different and distinct ideas.

\* \* \* \* \*

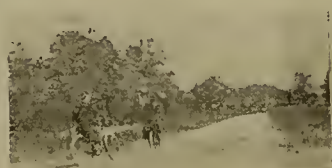
No event in cycle sport has had much influence on the course of trade during the past year or two until the continued century riding of Edwards gradually but forcibly compelled the public to abandon most of that prejudice against chainless machines which was based on ill-digested mechanical theories. The practical usefulness of the bevel-gear machine was demonstrated to the satisfaction of most people by that test. The question of price and general convenience and desirability remained and still remains, but the beginning of unprejudiced comparison of merits and demerits was inaugurated. A more sensational test is now booked in favor of another style of chainless machine through Taylor's capture of the world's mile record on a machine fitted with the Sager gear. This performance is, of course, as much to the credit of the rider as to the gear, but its trade importance is nevertheless being fully recognized, because it is the first decisive speed victory of undoubted authenticity which has been gained for the chainless variety of bicycles, and as such it removes whatever antagonism might have been expected from the sportively inclined against a construction from which the chain and sprocket have been eliminated. Nothing short of the mile record or the hour record of the world would probably have sufficed to have accomplished so much, but with these records is bound up a certain justifiable pride, which has not yet lost its significance for trade purposes.

\* \* \* \* \*

When the public first began to suspect that almost any record could be equalled on almost any chain-driven machine if only the right rider were selected, much of that pride in some particular mount, which made people willing to pay a good price for quality, naturally disappeared, and the tendency to hammer prices down became stronger. It might even be asserted that the inclination to ride a bicycle frequently became considerably weakened among a large class of riders when the superiority in speed of one pattern over others became so doubtful that nobody could derive any very lively satisfaction from displaying possession of any particular machine. This speed-pride has not so far supported the trade in chainless machines. Their convenience for general purposes did not appeal in the same manner to a sentiment which is widespread and powerful among young men. Misgivings in regard to speed were apparently sufficient to neutralize all mere regard for comfort or elegance. By Taylor's performance it seems as if the element of pride in one's mount may be reintroduced to some extent, and it would not be very wonderful if a succession of racing matches between bicycles of different types of construction would be the most immediate result. By arranging such matches on the plan of Boston Whist so as to remove the question of the personal superiority of the riders as much as possible, an intelligent race promoter could perhaps succeed in arousing sufficient public interest to make a venture of this description profitable to himself and inexpensive to the trade.

\* \* \* \* \*

Business sermons should be brief. An Illinois firm uses a letter head which is a lecture condensed. On the side of the firm name three National banks are cited as references and below is the legend: "Our only terms are cash." On the other side one reads: "Our catalogue is our contract; read it carefully," and "We sell to dealers only." It happened that the letter over which this head was noticed contained the clause: "We are still doing business at the old stand are are beginning our 43d year. The Texas store is simply a branch." The long continued success capped with the establishment of a branch lends terse eloquence to the mottos that indicate the means by which the success was accomplished.





# We are Prepared

to talk '99 business  
with a few large  
jobbers . . . . .

MARCH-DAVIS CYCLE MFG. CO.

47 WARREN ST., NEW YORK.

Mention The Cycle Age

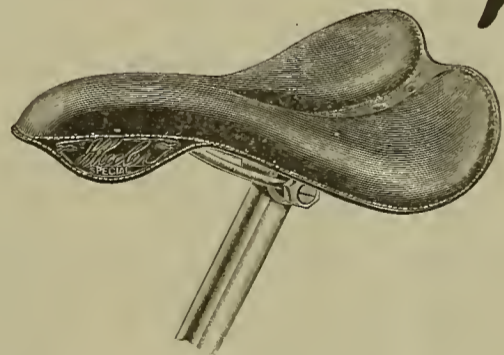
44TH AND NORTH AVES., CHICAGO, ILL.

*Spaulding, Pierce,  
Orient, Stearns,  
Wolff American, White  
Acme, Ivers Johnson,  
Columbus, Thomas,  
Reading Standard,  
Eclipse, and other  
American made Bicycles,  
BESIDES  
Humber, Rover, Triumph,  
Rudge-Whitworth, and  
other English made Bicycles  
will be supplied in 1899 with  
the Morrow Automatic  
Coaster & Brake*

Mention The Cycle Age

## Wheeler Saddles

have always been made with that  
curve in the back ❁❁❁❁❁



OTHER saddles that have that curve are only imitations. We are gratified to note the spirit of fairness displayed by the majority of manufacturers of high grade wheels in their refusal to equip with an imitation saddle. Our numerous contracts for '99 prove this assertion. It shows good business judgment, too, as riders will no longer be put off with imitation and shoddy saddles when they can have the genuine Wheeler Saddles on so many high grade wheels. Send for samples of the most popular saddles on the market.

**THE WHEELER SADDLE CO.**

1427-1457 Woodward Ave., Detroit, Mich.

Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT.  
New York Distributing Agents: HARTLEY & GRAHAM.

Mention The Cycle Age

## TRADE MARK REGISTRATION

### Documents Required for Registration of Trade Marks in Principal European Countries

The procedure necessary for the registration of trade marks in foreign countries, while not varying greatly in any very important particular, is not so similar as to lead to the conclusion that one form of practice will serve all purposes. In the Sept. 15 issue of Cycle Age the cost of such registration in all of the principal European countries was set forth, and it is now only left to present what was at that time omitted, namely, the documents required and the term for which registration may be secured.

#### Requirements in Germany.

1. Power of attorney, signed by the applicant.
  2. A certified copy of the certificate of the registration of the trade mark in the country in which applicant resides, legalized by a German consul.
  3. Five facsimiles of the trade mark. The facsimiles must not measure more than 6.5 centimeters (2 5/8 inches) in height or width.
  4. A wood-cut or electrotype of the same dimensions as the facsimiles.
- Term—Ten years, with renewals indefinitely each ten years.

#### Austria-Hungary.

1. A power of attorney legalized by an Austrian consul.
  2. An official certified copy (if this cannot be secured one made by a notary public will be accepted) of the certificate of registration of the country where the petitioner resides, showing that the trade mark is protected there. This must be legalized by the Austrian consul.
  3. Two wood-cuts or electrotypes of the mark.
  4. Twelve copies of the mark.
- Term—Ten years, with renewals every ten years.

#### Belgium.

1. A power of attorney, signed by applicant, not legalized.
  2. One wood block or electrotype, which must not exceed 3 1/8 inches by 4 1/8 inches in size.
  3. Three copies of the mark.
  4. A description of the mark and the manner of its employment.
  5. The full name and address of the applicant.
- Term—Unlimited.

#### Denmark.

1. Full name and address of the proprietor of the trade mark.
  2. A description of the mark and of the manner it is employed.
  3. Four copies of the mark, not exceeding 15 centimeters (5 1/8 inches) in length and 10 centimeters (4 inches) in width.
  4. A certified copy of the registration in the country where the applicant resides, showing that the trade mark is registered and the sole property of the petitioner in that country. The certificate must be legalized by a Danish consul.
  5. A power of attorney, signed by the applicant, and legalized by a Danish consul, which must contain a declaration to the effect that the applicant will submit to the decisions of the maritime and commercial tribunal of Copenhagen in all questions relating to the trade mark.
  6. Two wood-cuts or electrotypes of the same size as the copies furnished.
- Term—Ten years, with renewals indefinitely every ten years.

#### France.

1. Power of attorney, signed by the applicant, and legalized by a French consul.
  2. Three copies of the trade mark.
  3. A description of the goods for which the mark is used and of the manner of employing it.
- Term—Fifteen years, with a renewal for fifteen years more.

#### Great Britain.

1. The full name, address and occupation of applicant.
2. Four exact copies of the trade mark.
3. A wood-cut or electrotype of the mark.
4. A statement of the goods or articles with which the mark is used.
5. A statement as to how long the mark has been used in connection with the goods mentioned.

Term—Fourteen years, with renewals indefinitely every fourteen years.

#### Holland (Netherlands).

1. A power of attorney, legalized by a consul of the Netherlands.
  2. Four copies of the mark.
  3. One wood-cut or electrotype.
  4. A certified copy of the certificate of registration of the country where the applicant resides, showing that the mark is registered there and is the property of the applicant.
- Term—Fifteen years, with renewals indefinitely each ten years thereafter.

#### Italy.

1. Power of attorney, signed by the applicant, and legalized by an Italian consul.
  2. A certified copy of the certificate of registration of the country where the applicant resides, legalized by an Italian consul, showing that the trade mark is registered, and the sole property of the petitioner in that country.
  3. Four copies of the trade mark.
- Term—Unlimited.

#### Norway.

1. Full name and address of the proprietor of the trade mark.
  2. A description of the mark, its colors, and the articles for which it is used, and the manner of employing it.
  3. Two wood-cuts or electrotypes of the mark, not to be more than 10 centimeters (4 inches) wide by 15 centimeters (5 1/8 inches) long.
  4. Four copies of the mark, of the same size as the electrotype.
  5. A certified copy of the certificate of registration in the country where the applicant resides, showing that the trade mark is registered in his native country, and is the sole property of the petitioner. This certificate must be attested to by a Norwegian consul.
  6. A power of attorney, signed by the applicant, and legalized by a Norwegian consul.
- Term—Ten years, with renewals indefinitely every ten years.

#### Russia.

1. A power of attorney, signed by the applicant, and legalized by a Russian consul.
  2. A certified copy of the certificate of registration of the country where the applicant resides, showing that the trade mark is registered in that country, and the sole property of the petitioner. This certificate must be attested by a Russian consul.
  3. Five copies of the trade mark.
- Term—Unlimited.

#### Sweden.

1. Full name and address of the proprietor of the trade mark.
  2. A full description of the trade mark, and of the articles for which it is used, and the manner of employing it.
  3. Two wood-cuts or electrotypes of the trade mark, not exceeding 15 centimeters (5 1/8 inches) in length by 10 centimeters (4 inches) in width.
  4. Four copies of the trade mark, of the same size as the wood-cut or electrotype.
  5. A certified copy of the certificate of registration in the country where the applicant resides, showing that the trade mark is registered in that country, and is the sole property of the petitioner. This certificate must be legalized by a Swedish consul.
  6. A power of attorney, signed by the applicant.
- Term—Fifteen years, with renewals limited only by term of applicant's protection in his own country.

### PRICES OF CANADIAN IMPORTS

#### Receipt of Bicycles from United States More Than Doubled Yearly Until 1897—Invoice Reduction.

Speaking of the extension of trade relations between Canada and the United States, Consul Linsley, of Coaticook, in his annual report, says the best way is to work through the large establishments in Montreal and Toronto, or to establish branches in large cities to directly cover the territory. While the tariff, he says, prevents the importation of numerous classes of merchandise, there are many which, on account of their merit, will

nevertheless be sold. The bicycle trade is an example of what enterprise in a single line will accomplish. In 1894 the United States shipped 2,805 machines, valued at \$126,550, to Canada. In 1895 the number had risen to 7,514, at a value of \$332,933; in 1896 to 15,543 at a value of \$685,427, and in 1897 to 23,601 machines valued at \$758,783. During the fiscal year of 1898 our exports of bicycles were valued at \$614,003. A statement issued by the customs department of Canada shows that during the month of July, 1897, the imports of bicycles and parts of same from the United States were valued at \$35,872, on which duty was collected to the amount of \$10,708.10. The imports in the same lines during the same month of the present year were valued at \$40,639, on which a duty of \$12,185.91 was collected.

The figures given borrow additional interest by supplying not only values but also quantity of bicycles sold. It will be seen that the average invoice price upon which duty was collected remained in the neighborhood of \$45 per machine during the years 1894, 1895 and 1896, but fell to \$32.50 in 1897.

### FARMERS' BUYING CAPACITY

#### Vast Increase in Exports of Farm Produce Indicate That Country Trade Will Be Large.

The farmers of the United States will receive during 1898 more money from abroad for their products than in any preceding year. A statement regarding the exports of principal agricultural products, just issued by the Treasury Bureau of Statistics, shows that in the item of breadstuffs alone the exports for the 10 months ending October 31, 1898, amounted to \$250,237,455, which is \$65,000,000 greater than in the corresponding months of last year and \$38,000,000 in excess of the exceptional year 1892. Provision exports also show a good record, being for the 10 months of 1898, \$162,830,643, against \$146,607,039 in the corresponding months of last year and \$125,508,568 in 1892. Cotton exports for the 10 months are \$13,000,000 in excess of last year and the number of pounds is larger than in any corresponding period in the history of the country.

The exportation of practically all classes of farm products has increased. In wheat, corn, rye, oats, oatmeal, cotton, bacon, hams, lard, oleomargarine, fresh beef and many other articles of farm production, the exportations of the ten months are not only in excess of those of the corresponding months of last year, but larger than in any previous year.

The following table shows the exports of breadstuffs, provisions and cotton in the ten months just ended, compared with the corresponding ten months of the three preceding years:

Ten months ending October 31.	Breadstuffs, Million Dollars.	Provisions, Million Dollars.	Cotton, Million Lbs.
1895	98	126	2,082
1896	136	135	1,956
1897	185	147	2,023
1898	250	163	2,670

#### Raymond to Sell Palmer Tires.

Howard E. Raymond has accepted the responsible position of sales manager for the tires manufactured by the B. F. Goodrich Co. Mr. Raymond's rare talent will be exercised chiefly in extending the popularity of the Palmer tires. Next week he will move from Chicago to Akron.

City Treasurer Torrence of Pittsburg, Pa., reports that 15,000 bicycle licenses were issued during the spring and summer of this year, which exceeds by more than 1,000 the number issued in 1897.

## ASSEMBLING MISFIT PARTS

### Unmatched Set Fittings Common—Jobbers and Assemblers Ignore Rules for Frame Design

The remark was recently made in a discussion regarding the propriety of cycle building in repair shops, that if each small builder would buy all of his parts at one supply house he would have better success in turning out good frames, and that there would be fewer badlooking joints. Buying of one firm does not, however, let a poor cycle maker into the ranks of high class builders.

The small builder generally buys his stock from jobbers, that is, from supply houses which handle fittings for the small wholesale trade, but which do not make these fittings. The large firms which make their own fittings sell to the large makers or to jobbers of supplies. Hence the small builder buys of concerns which as a general rule have no very candescent luminary on mechanics connected with them, the management being for the most part confined to the commercial end of the business. It is accordingly not rare to find sets of parts catalogued and sold which do not fit with the nicety indicated by the blue print diagrams. The average small builder being a man who has no real insight into the matter of laying out frame lines and who could not draw a set of frame lines under any circumstances, but who has merely the practical knowledge of fitting frame parts together after some fashion hardly to be called intelligent, pinning the lugs, brazing the joints and filing off the superfluous spelter; it cannot be supposed that he can adapt badly matched fittings in such a manner that a first class frame will be the result. The good builder who understands thoroughly the relations of frame parts to each other and the various frame proportions in the different shaped frames, can take fittings which do not match perfectly, and by little changes in specified tube lengths, etc., erect a first class frame. The many queer shaped frames and queer looking angles seen on repair shop bicycles stand in evidence that the average builder is not equal to the task of correcting evils arising from the poor combination of fittings furnished him by the supply firms.

#### Brackets Known by "Drop" Alone.

An example of the carelessness displayed with regard to the accurate fitting of parts is the crank brackets sold. Nearly every supply house in Chicago sells a certain hanger and nearly every repair shop builder buys it. It is a common thing to notice a builder come into a store and ask for one of these hangers, naming certain specifications, and to hear the salesman ask him if he wants the bracket for a three, or for a two and a half inch drop. These brackets when sold at supply houses are made for three and for two and a half inch drop and are sold to match all of the fittings in the city. But few repairmen ever stop to think that the same bracket may give a three inch drop in one frame and a two and a half inch drop in another, and just how it gives a three inch drop in the frames they are building they do not know. The repairman takes his hanger for the three inch drop, goes back to his shop, cuts up some tube, tries the parts together, pinches one angle, pulls another, cuts off the top rail a little, pulls the lower rail nearly out of the sockets, pins the thing together, brazes it, files the joints, sends it over to an enameler's, puts on the other parts and wheels when it comes

back, and sends it out of the shop, a bicycle with an approximate three inch drop and an up-to-date appearance of the kind to which distance lends enchantment.

One reason why so many parts fail to fit together properly is because supply houses often buy of different makers. A house may buy its hangers here, its seat clusters there, its head lugs somewhere else. It may furnish either separate head lugs or one piece heads. The one piece heads are made at some stamping plant, the separate lugs may be made at another stamping plant or at some mitis casting foundry. The one piece head sold by one firm as matching its frame parts is also sold at other houses to match other sets of parts. Such a condition would not be as bad as it is if every builder knew how to adapt what he can get, but nearly every repair shop builder only knows how to assemble in the easiest manner what is supplied him as matching parts.

#### Blue Prints Often Misleading.

A certain line of juvenile fittings made from castings do not match the original drawings, or at least those blue prints which are supplied to patrons. A builder who bought a set of these parts cut his frame tubes as per the blue print figures, but when he attempted to put the frame together he found that it was impossible to make the parts connect. After much tampering with tube lengths and springing of joints the frame was assembled and brazed. After completion it looked no more like the frame in the drawing than if it had been made from an entirely different set of fittings. The head was longer, as was also the wheel base, and when the front forks and wheels were put in it was found that the front angle to the crank hanger was so much larger than it should have been that the top frame tube would not be level, but was raised at the front end.

Another company formerly sent out frame sets in which the bent rear forks were not cranked enough to allow for clearance of the cranks. The common method for the correcting of this evil was the bending of the cranks, though it is known that some builders went to the trouble of rebending the forks. Fork stems, threaded and sold as being cut to lengths for certain height frames built from the seller's parts have very often been found to be either too long or too short. More than one firm has been guilty of such small mistakes as this. The safest plan in buying fork stems of any firm is to get one long enough for any frame and to then cut it off to suit. The trouble with the latter plan is that there are many builders who have not enough mathematical ability to figure out how long they really do want their fork stems. They have to try and, if not right, try again.

#### Sprung Rear Stays—Faulty Catalogues.

The same story is told by nearly every repairman who has used during the closing season the seat cluster marketed by a certain other firm dealing in supplies. It is stated that the angle at which the rear stay lugs are set to the main lugs is so small that were the stays placed on the lugs without springing, they would strike the rear forks somewhere from three to six inches in front of the rear end lugs,

according to the length of the rear frame. This one lug belonging to a popular line of fittings is responsible for a very large part of the bad looking seat clusters to be seen on '98 repair shop bicycles in Chicago. The changing of the angle, by sawing each stay lug nearly in two from the under side, opening each up at the sawed place, filling up with scraps of metal and brazing together again, was recently the subject of an article in a well known machine paper. Even the repairmen who buy the most expensive parts are sometimes put to trouble because the supply house which markets them has not marked the angles of the lugs on the diagrams in the catalogue. If a builder wants to know what the angle of a lug is, he must either send to the office to find out or must rely upon the not always accurate plan of measuring one of the lugs itself.

#### Few Adjustable Rear Fork Lugs.

In Chicago rear end lugs are bought by everyone without regard to angle and are used as they are if they can be made to go, and if not the builder changes the angle as best he may. It is not difficult to change the angle of a rear lug of the common flat stamped pattern, but it takes a rather good workman to change the angle of a heavy cast rear lug, which in nine times out of ten is liable to have a very light connecting body between the branches, thus increasing the liability of breakage. One supply house for a time handled a line of stamped fittings, which were sold in sets, and the buyer was furnished with tube cut to length or with directions and figures for cutting the tubing. A repairer after having tried to build frames from these sets and having found that the frame dimensions as per the supply house's drawings and specifications were far from right, went around and, after complaining, was requested to furnish the company with the correct tube lengths for the frames.

The above instances of careless specification of parts and the differences between specifications and parts themselves carry a lesson for the retail bicycle trade as well as for the parts trade. It being so hard to get parts which fit correctly, and the variety of parts sold by each house under the assumption that any combination will work well together makes it apparent that a well made bicycle is out of the question in a repair shop whose proprietor does not have intelligent ideas on bicycle design and can not do for himself that which the parts firm has failed to do for him.

#### Trade With South Africa.

The remarkable development of trade between South Africa and the United States is indicated by the shipping statistics, which show an increase in the last two years of at least 50 per cent in the shipments of the various articles of commerce that South African merchants order from American manufacturers, and it can be safely predicted that, at the end of the current year, there will be a still more marked increase in such traffic. A line of steamers running at regular intervals is now connecting the two countries, and they are packed with goods as they arrive from month to month. A glance at the shipping freight rates shows the great advantage American exporters have over those in England and Germany. The freight from the United States to Cape Town is: First class, fine goods, \$8.50 per ton; second class, fine goods, \$6; third class, rough goods, \$5.46; fourth class, rough goods, \$4.25. The rates from class, \$12.15; second class, \$9.72; third class, \$9.11; fourth class, \$8.50. The freight from England is: First class, \$13.36; second class, \$10.12; third class, \$8.50; and fourth class, \$7.78.

## REPAIR SHOP ECONOMICS

### Case Hardening in Small Lots—Methods Suggested for Use in the Shop

The working of high carbon steel is a slow process on any lathe and with the best of men in charge. Mild steel, however, works very readily and even the small repairer with the foot power lathe can turn it up into cups, cones, pedal pins, etc., without much difficulty. But having turned it up he is confronted with the problem of hardening it. Having turned up tool steel it becomes but a matter of heating and plunging the piece into cold water or oil to temper it. While this operation is not so simple as it appears and while it takes long experience to temper properly, yet after some practice the repairer will be able to temper after a fashion. But could he case harden he would not have to run the risk of poor tempering, would be saved the work of turning hard steel and the expense of purchasing high priced steel stock.

#### Hardening by Cyanide Process.

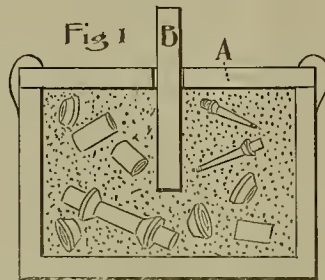
Case hardening has in the last few years become more widely and better understood and the methods employed have been much improved. Still the small shopman has been practically left out of the question. The modern case hardening methods are mainly methods for the large case hardener who can establish a plant for doing the work on an extensive scale. The occasional hardener and he who desires to harden in small lots is still in about the same situation that he occupied several years ago as far as general knowledge on the subject is concerned. The commonly accepted opinion is that to the small shopman there are two courses open. He may either send his pieces to some regular case hardener or he may adopt the original plan of case hardening in cyanide of potassium. The former plan is open to only the repairer in the large cities. The country repairman cannot afford the time necessary to send parts to the nearest large city to have them case hardened. The expense would be such that it would be as economical for him to make the parts of tool steel in the first place, or even to send to the factory, where the original part was made and get a duplicate. If he case hardens he must do it himself. The cyanide process is satisfactory in that it is simple, and one man may with a little experience do it as well as another. But done as well as may be it still is only a makeshift case hardening as the shell of hardened steel on the piece is so thin that it will give but little service. The operations in case hardening by the cyanide process are few. The piece to be hardened is heated to a bright red and then held in the cyanide of potassium for a few seconds. The part is then plunged into the water or oil for hardening. There is one advantage of this process which recommends it to the bicycle repairer. The hardened shell being so thin grinding is out of the question. This relieves the repairer of the conscientious responsibility of grinding the piece. Further, it is hardly necessary to grind a cone or cup hardened in this way, even if it could be done. A tool steel cone may be ever so accurately turned up, but when it is tempered it will be found to have warped out of shape, and grinding made necessary if the cone is to have the proper shape and size for good running qualities in the bearing. Very few repairers out of the several thousand in the country have facilities for grinding. The cyanide case

hardening does not to any perceptible extent warp the cone or cup out of shape.

It may or it may not be possible for the repairer and the small shopman in other lines to case harden by similar processes to those employed on a large scale. A summary of the case hardening processes as they exist will enable the repairer to grasp the situation and discover for himself whether it is possible for him to utilize on a small scale the processes which are practical, profitable and desirable on a large scale.

#### Furnace Hardening With Bone Meal.

Case hardening by the usual methods necessitates a furnace in which to heat the parts, some substance to bake with the pieces in order to lend them the desired carbon, and something, either oil or water, into which to dump the parts in order to harden them. It is the first requirement that is the stumbling block to the small hardener. Any material rich in carbon which when heated will be assimilated by the steel may be used for carbonizing. Scraps of leather, hoofs, bone meal, charcoal, etc., are all used, bone meal, or bone meal mixed with charcoal being the most common and the most generally satisfactory. It may be pur-



chased of firms who make a specialty of such products or it may be bought from stock yards concerns and other large meat houses which waste nothing in the butchering and marketing of cattle and which place for sale in some shape or other everything that can be saved in the butchering of their stock. For ordinary purposes bone meal is doubtless the best substance to use. It should be purchased in a grade which has a coarse granulated appearance, the particles being about the size of rice. The parts to be hardened are placed in a cast iron pot or box together with the raw bone. The box may be of any convenient form, and for such parts as cups and cones it may be about six inches deep, six wide, and eight or ten inches long. A layer of the bone meal about an inch thick is spread over the bottom of the box and then a layer of cones put in, care being taken that the cones do not touch each other. It is well to leave about an inch of space between all adjoining cones. Then sprinkle on more bone to fill up between the cones and cover them with a layer which shall also be nearly an inch thick. Repeat the operation till the box is filled with successive layers of bone meal and parts. The cover may then be put on and the box placed in the oven or furnace, where it is left under a steady medium heat for from four to eight hours, according to the character of the parts, and the depth of the shell desired. Nothing but experience can determine just how hot to heat the pieces and just how long to leave them in to obtain the best results. After the box containing the parts has been

heated sufficiently and the parts have absorbed carbon enough from raw bone to insure a hardened shell of the desired thickness, the pot is removed from the oven and the parts dumped into the water or oil.

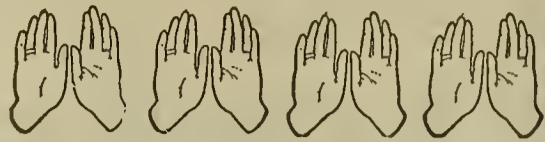
While constant work at hardening will teach one how to judge of the proper time for the removal of the parts for dumping, and while the experienced case hardener scorns anything in the line of mechanical aids to tell him when his work has been heated sufficiently, there are many who have not reached that point of self-confidence where they can repudiate things which will help them to do their work properly. For such it is well to know the simple trick of using the tell-tale. The tell-tale consists of a piece of round iron of nearly the same diameter as the pieces to be case hardened. A hole is made in the center of the cover of the heating box just large enough to receive the tell-tale snugly but not tightly. The iron rod should project above the top of the box to allow it to be grasped with a pair of tongs. Below the cover the rod extends well down into the bone meal. The arrangement of the tell-tale with regard to the box, cover and pieces to be hardened is shown in Fig. 1, in which A is the cover and B the tell-tale. When the box with its contents has been heated for a time that seems sufficient to the operator, the oven door may be opened and the tell-tale carefully withdrawn from the box with a pair of tongs. The contents of the box must not be disturbed during the operation. The rod is plunged into cold water and if upon inspection and after breaking and after trying with a file the rod appears to be hardened sufficiently the pot is taken out and its contents dumped. If the tell-tale is not hard enough or if the shell is not thick enough the box is left in the oven for a longer time. To make the matter more certain, two, or even more tell-tales may be arranged in each box, thus avoiding uncertainty after the first rod has been removed. It is a good plan before dumping the parts into the water or oil, to cool them off and then heat evenly to a tempering heat and then dump. This obviates the probability of dumping the parts at a temperature too high for good hardening. In reheating to a tempering heat the case hardening when obtained will be even and fine grained.

#### Recourse to Banked Boiler Fires.

The question now arises in the repairer's mind: "What chances are there for me to have a furnace in which to heat parts to be case-hardened?" It may be taken for granted that the small case hardener will need but a very small pot in which to heat his parts, and that he will have use for but one box at a time; otherwise he would not be a small hardener. Hence the oven in which the repairer heats his parts may be very small. The main point is that of some means for maintaining an even heat for a time of from four to six hours. The pot may be any iron box which the repairer can get or can make. The easiest way for the repairer to provide himself with a furnace is by making arrangements with the night fireman of some plant having a steam boiler. After the fires of such a plant have been banked for the night the hardening pot may be set in the boiler firebox on the coals and instructions left with the fireman to take it out at a certain time, four or five hours after, and dump the contents. In this way the parts may be hardened without any expense except that of the raw bone, which for case hardening on a small scale, does not amount to much. If there is no night fireman to watch the banked fires the box may be put in late at night and left to be dumped by the repairer himself early in the morning. Case hardening at night



TRADE MARK



# We Have Authorized



the Olds Wagon Works, of Fort Wayne, Ind., to manufacture Dunlop Laminated Wood Rims and use our trade mark on same. The trade is referred direct to them for quotations. They have not at present any stock of rims on hand, but will proceed with their manufacture at once.



## The List of Authorized Wood Rim Makers Now Stands as Follows:

- Fairbanks-Boston Rim Co., Bradford, Pa. and Bedford, Mass.
- Kundtz Bending Co., Cleveland, Ohio.
- Olds Wagon Works, Fort Wayne, Ind.



## The American Dunlop Tire Co.

134 Lake Street, Chicago, Ill.

Belleville, (North Newark) N. J.



TRADE MARK



Mention The Cycle Age

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WHO ?

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They are *looking for all manufacturers who are looking for the best* in our line. We *don't make cheap tubing* for use in cycle construction and *don't believe* any bicycle manufacturer who makes a *good wheel* and *stands behind* it will consider seriously the use of *interior tubing* for one minute.

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is made from the *highest grade Swedish Charcoal Steel* that can be obtained. “SHELBY” has the *capacity and equipment* to meet *all demands*. “SHELBY” has the reputation of *making tubing* of the *highest standard*. Catalogues and further information on application to our offices.

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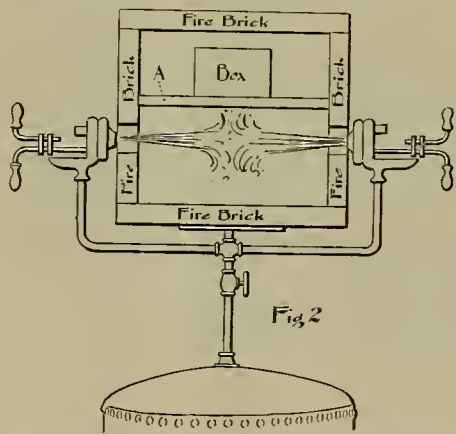
Mention The Cycle Age

in this manner enables a repairer to turn out a cone or cup in the afternoon and have it ready for delivery to the customer on the following morning.

If it is not possible to get the use of a boiler firebox, the repairer must rig up some sort of furnace himself. If he has a forge or the use of one an oven of fire brick may be built on the bed of the forge and the heating pot set inside on the forge coals. In such a manner the best of results may be obtained as the operator may watch the work constantly and if desired, use the tell-tale to help him, but like most good things, it has its drawbacks, these being that somebody must work for about four hours fanning the flame of the forge gently in order to keep up the even heat required. Of course, if access to some factory forge which is fitted with a power blast is had, case hardening on the forge becomes a fairly easy manner, the chief point then being to erect an oven which will be tight enough to maintain an even heat.

#### Scheme for Using Gasoline Brazier.

The remaining practical course that is open for the repairer's trial is case hardening on the gasoline brazier. In Fig. 2 is shown a scheme for rigging up a case hardening oven on a common form of gasoline brazier. It is doubtless worth trying as the expense will be but slight. A table of fire brick in one piece is placed on the brazier head and four walls, each consisting of a single piece of fire brick set up on the bed. One of these



sides should be so fitted and arranged that it can be easily removed. A piece of brick similar to the bed should be laid on top of the walls thus completely enclosing the bed of the brazier and forming an oven. In two of the side walls holes should be provided for the passage of the flames from the burners, or for the burners themselves if they are of such construction that they extend inward toward the center of the bed. A shelf (A) of iron rods is placed above the flame and on this may be set the box or pot in which the part or parts to be hardened are contained. This oven being small will take but comparatively little heat to get its interior up to the proper temperature and if the fire bricks be two or three inches thick and closely set, they will prevent the escape of very much heat. The pieces may be placed in the pot with the raw bone and the pot placed on the shelf and the removable side to the oven placed in position. The brazier may be then started and kept at a slow heat till the parts are ready for removal. The supply of air and gasoline being both under perfect control the flame can be readily maintained at a constant heat. If necessary, the supply of air in the tank can be renewed from time to time without affecting the blast at the burners. The gasoline burned during the four or five hours will not amount to enough to make the process an expensive one. It is not known whether this scheme has even been put into practical operation, but it seems to offer a way for the repairer to do his own case hardening and accordingly is among the possibilities in this line.

## WINTER CARE OF SIDELINES

### KEEPING STOCK IN CONDITION

#### Metal, Leather and Wooden Goods Seriously Affected by Shelf Position—Moisture From the Floor.

Next in importance to the advantageous display of sidelines, is the care of the stock comprising the same. It is of little use that such goods are free from rust, soiling and marks of general abuse if, on approaching the sale, the stock is in such poor condition, from lack of attention or neglect, as to cause a refusal to accept them; or, if taken, dissatisfaction with the purchase results. In carrying on a business involving many different materials and combinations of articles variously affected by changes of weather and other unavoidable influences, it is of the first importance that the stock should be located within the store, not at hap-hazard, or wherever a vacant place is handy, but made the subject of very careful attention.

#### Middle Shelves Safest.

Because it forms the basis for the larger part of many fancy goods in the shape of leather wares, wood work is the first item to take into consideration. Wood, even after years of seasoning, is more or less adversely affected by extremes of either heat or cold. As the stock of fancy wares is largest during the few weeks immediately preceding the holidays, it is well to bear in mind that the fires which have already been started, warm the rooms and buildings with a different quality of heat from that of summer. The former is dry and sudden, and, obeying the natural laws of heat, ascends to the upper parts of the room. Obviously, the upper shelves should not be reserved for goods subject to warping. Equally bad is the lowest, or floor shelves or bins. The sprinkling of the floor in sweeping, the current of cold atmosphere resulting from the opening and closing of the doors in bad weather, and the snow and wet brought in on the shoes, umbrellas and garments of customers, keep the floor during the winter season in a state of continual dampness, as detrimental to wood work as excessively dry heat. A medium place, between the upper and lower shelves, will be found not only better, but actually imperative, for keeping many classes of sidelines as they should be.

Leather, when kept in a damp place, is subject to a greenish mould that destroys the wear of the leather. Too much heat dries and cracks it. A medium shelf for this part of the stock will be found to be the best. Cutlery, so hard to keep long in stock without liability to rust, can be put on the upper shelves, as the dry heat, so detrimental to other stock, is the surest safeguard against rust and consequent loss. The various textile goods liable to be in the stock of sidelines of the cycle dealer, are not ordinarily affected by either heat or cold, and may be kept as convenience of space suggests.

#### Avoid Prepared Metal Polishes.

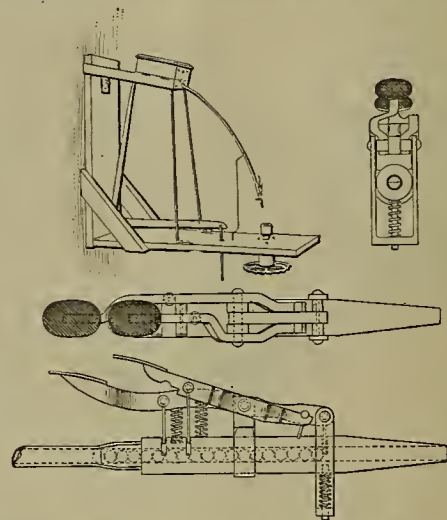
In cleaning nickel, brass, and other polished metals, the thousand and one so called "polishes" should be very carefully avoided. The chemicals of which many of these are largely composed, are acids more or less diluted; and, though apparently effective, will be found in the long run to injure and deface the articles to which they are applied. Jewelers' rouge and alcohol freely applied with a chamois skin, and polished afterwards with dry chamois, will be found the best, cheapest and most satisfactory method of restoring dimmed and lusterless metals. The many minor matters as to stock are too well known to require mention in

this connection; but it should be remembered that with a furnace fire, running the temperature up perhaps to 80 or 90 degrees, care must be taken with some classes of sidelines, or warped and damaged goods will follow as surely as old damaged stock means loss, and well kept, clean good stock, means success.

## BALL NESTING MACHINE

### Kendig Designs Machine for Placing Balls in Hubs and Pedals—Saves Much Time.

Mr. Kendig, foreman of the stock-room of Black Mfg. Co., Erie, Pa., has designed a machine for filling balls into cups of hubs or hangers, etc., by means of which time and labor may be saved. In the old manner of putting the balls in by hand, which necessitated the balls being counted, a man could do 160 pairs of hubs a day and feel that he had done a day's work. By the Kendig machine a novice can fill 140 an hour, the machine counting the balls and allowing just so many to pass each time the lever is pressed. The drawings give a general view of the machine attached to a wall and sectional plan and elevation, and also show the valve or gauge by which the balls are allowed to pass into the nozzle ready for the operator to open the lever. It will be seen that there are two levers, one allowing eleven balls to pass, while the other



allows thirteen. This is for parts such as pedals, where a larger number of balls is used on one side than on the other.

The machine is composed of a box at the top of the support, with a V-shaped bottom in which the balls are stored. Running from this box is a hose the inside diameter of which is the same as that of the balls to be used. At the end of the hose is the valve, the end of which reaches just to the end of the hub when in place. Running from the box to the floor is a foot lever, attached at its upper end to a rod which lies on the box and has a hollow front portion slightly larger in the hollow than the diameter of the balls. This lever, by being pressed with the foot, pushes the hollow rod toward the mouth of the hose, where it enters the ball box. This movement keeps the hose filled with balls, and at the same time does not allow them to clog at the entrance of the hose. The hole in the rod "runs out" about half way of its length so that if the hose becomes full of balls and the lever is pressed, the balls will not be forced into the hose, but will pass out of the hole in the center of the rod or tube. The hollow rod or tube is merely provided for a feed for the hose, as without something of this nature, the balls would clog in front of the hose.

Three international bicycle exhibitions will be held in Belgium during the coming winter, as follows: Antwerp, opening February 1; Liege, March 10, and Brussels, March 20.

# Fauber 1899 Hanger.

NEW IDEAS—NEW PRICES.

**MANUFACTURERS** who used Fauber Hangers were very successful and well satisfied.

**DEALERS** found them good sellers and bicycles fitted with them not dead stock.

**RIDERS** appreciate the simple and practical construction of the Fauber Hanger and the advantage of a standard article for which you can get any necessary repairs.

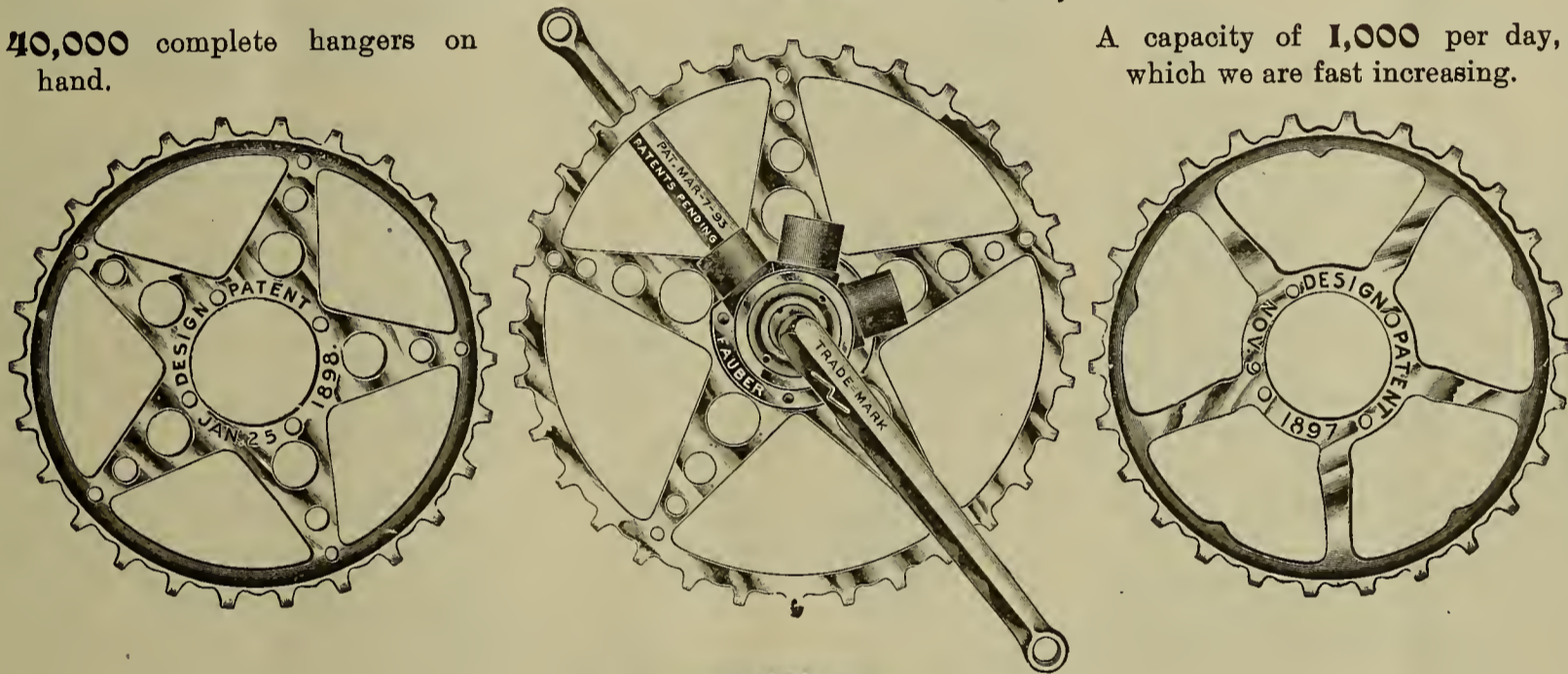
We are **Pioneers** in the manufacture of **One-Piece Crank-Axles** and own more than twenty allowed and pending patents. The **Success** of the Fauber Hanger is unparalleled in the bicycle trade.

## OUR RECORD.

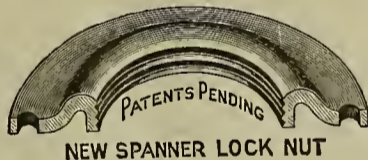
1895	Output over	200
1896	"	9 000
1897	"	30 000
1898	"	100 000
1899	Output estimated	300,000

40,000 complete hangers on hand.

A capacity of 1,000 per day, which we are fast increasing.



Our improved Spanner Lock Nut makes Note this is our



the end of the hanger flush and dust-proof. special construction.

## IMPROVED FAUBER REAR FORKS AND BACK STAYS.

FORK COMPLETE.

PIECES SEPARATE.



**THE COMING CONSTRUCTION**—These forks are made of three pieces ; the neck tube is slotted ; the ends overlap in the joint, making it flush and reinforcing the bend. We furnish the forks ready to assemble. They line up, are easily brazed, finished, strong and light. The shape and style of this fork are perfect. To supply a part of our trade for '99 we have contracted for 500,000 feet of Shelby Tube.

### W. H. FAUBER,

Manufacturer,

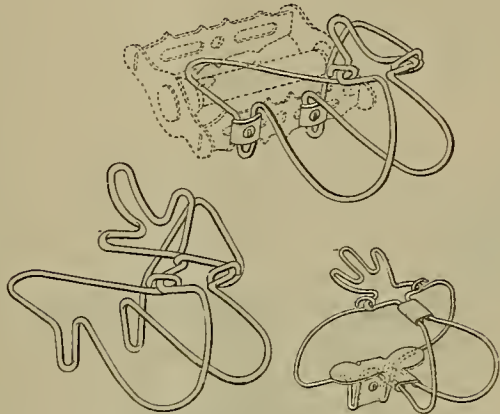
Jackson and Clinton Streets, Chicago.

Mention The Cycle Age

## RECENT PATENTS

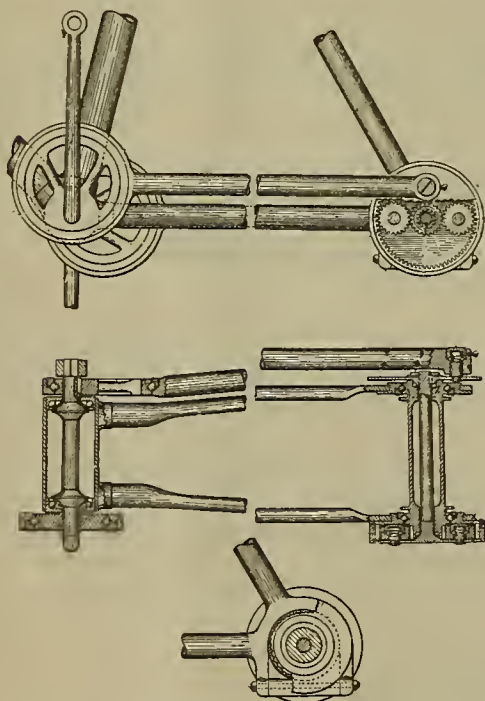
### Adjustable Wire Toe-Clips—Eccentric Driving Chainless— Paper Rim of Unique Form

**Ashworth's Toe-Clip.**—The drawings show three forms of wire bending by which it has been the inventor's object to produce an adjustable toe clip from a single piece of wire, capable of being quickly applied to and removed from a pedal. The adjustment is partly automatic through the springy action of the loops on top of the clip, and partly rigid and



is effected by springing the lower loops more or less apart when attaching them to the pedal plate. The latter adjustment presupposes oblong slots in the pedal plates, giving a certain lateral range within which the small fastening plates may be bolted. In one of the patterns shown the wire is protected from wear by a sheet metal plate bent to clasp the lower wire loop and provided with a vertical slot for central attachment to the pedal plate. The patentee is A. W. Ashworth of St. Cloud, Minn., assignor to Rand E. Ashworth of the same place. The patent is number 613,957, of November 8.

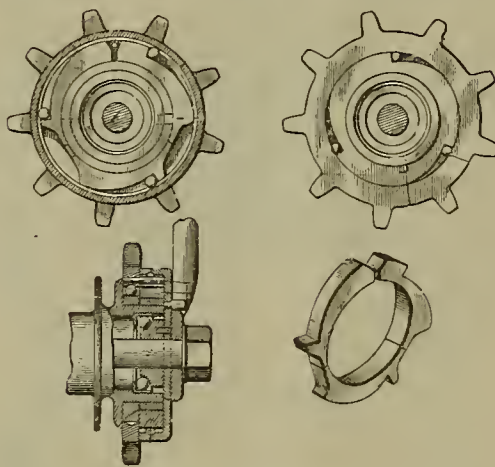
**Annable's Chainless.**—The driving rods are actuated by eccentric disks secured to the crank shaft, with ball bearings between the disks and the circular straps of



the rods. In clips taking the place of the usual fork end fittings are ball races in which the hub may rotate and one of the clips has an outwardly extending flange to the periphery of which is attached an internal gear. Internally of the hub there are ball races in which the axle rotates. The axle is provided with disks at both

ends, one of the disks being adjustable. To each of these disks are attached crank pins journaled in ball-bearings in the driving rods. To the disk on the gear side of the mechanism are two studs, on which are journaled planet gears which engage the fixed internal gear and a pinion on the hub. Thus the axle is rotated through the driving rods on both sides, set quartering, and the motion is transmitted to the hub by gearing one side only. As usually in mechanisms of this kind, the requirement of rigidity and perfect accuracy and correctness of gear cutting is paramount for the easy running of this device. The stresses on the ball bearings in the hub must be considerable. The inventor is Warren W. Annable of Grand Rapids, Mich., assignor of one-half to G. S. Johnson of the same place.

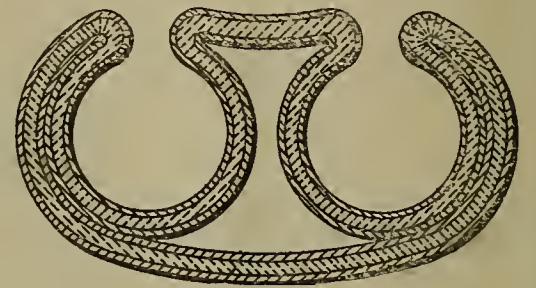
**Clapp's Brake.**—The brake is applied by the first backward movement of the pedals, and may then be held in action by holding the pedal in stationary position, and the brake may be applied with greater or less force, according to the



pressure on the pedal. The hub has a cam-ring of hardened steel, secured by a pin on the hub entering a recess in the ring, and the driving sprocket surrounds this cam-ring, balls being interposed. This permits a backward rotation of the sprocket-ring without moving the hub; but when the sprocket-ring is driven forward the balls pinch between the inside of the ring and the inclined faces of the teeth on the cam-ring and cause the clutch-wheel and hub to rotate with the sprocket-ring. Around a cylindrical extension of the hub is a wearing-ring. A spline projecting from the hub causes this ring to partake of any rotary movement of the hub, and this may be the same spline or stud which holds the cam-ring against rotation independently of the hub. Surrounding the wear-piece are placed cam-wedges, which are curved on their inner faces and conform generally to the wearing-ring on which they rest. The outer face of each piece has an inclined surface and a projecting stop. The total length of the wedge-pieces is a little less than the circumference of a circle, leaving a space, into which space a pin, projecting from the side of the sprocket, enters. When turning forward, this pin or stud causes the wedge-pieces to partake of the movement of the sprocket-ring. Balls are interposed, and when the wedge-pieces are moved in one direction these balls find lodgment against the stops; but when the wedge-pieces move in reverse

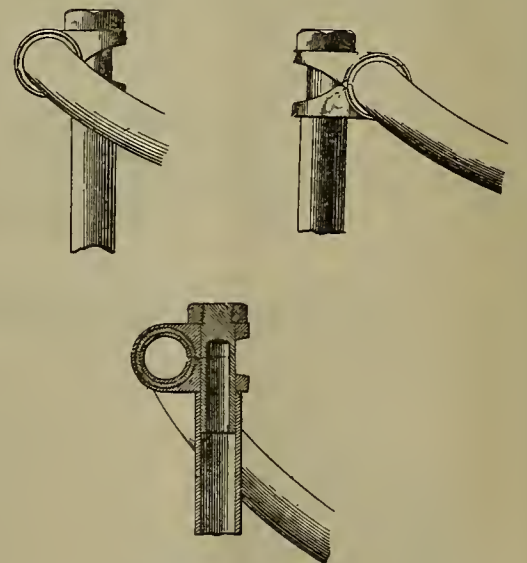
direction these balls are wedged between the wedge-pieces and the cup, which incloses the end of the hub, and is secured to the side of the frame. Inside the cup there is preferably a groove, and in this groove, between the teeth of the wedges and the cup, are balls, having a limited movement when the sprocket-ring and wedge-pieces are moving forward. A reverse movement of the sprocket-ring causes the inclined faces of the wedge-pieces to wedge firmly against the balls, and thus press on the wear-piece, the balls being held against outward movement by a cup. The strains are all compression strains, except on the ring. The inventor is F. L. Clapp of Northampton, Mass., assignor to J. D. Keating of Middletown, Conn.

**Paper Rim.**—The illustration shows the shape of a wheel rim designed to receive two auxiliary pneumatic tubes. The rim



is formed of an inner body of paper pulp made from rhea fiber and an outer covering of a woven fabric also made of rhea fiber. This material is said to produce an exceedingly strong, tough and yet light rim. It will be noticed that a rim of this description takes the place not only of the steel or wood rim used on bicycles, but also of the outer casing used for double tube tires. The shape shown is produced from a tube by compression in a mould. The inventor is J. C. Grant, of London, England.

**Handle Bar Clamp.**—The post is made of tubing and in its upper end is brazed a plug which extends upward far enough to accommodate the clamp. Above the clamp it is reduced and screw-threaded to receive a binding nut. The clamp consists of a sleeve which receives the handle bar, and jaws bored to receive the plug. In practice the lower jaw is brazed to the upper end of the post and the up-



per jaw works freely on the plug. A triangularly shaped key piece with serrations on the broad side toward the bar is inserted between beveled faces on the sleeve portion of the clamp. When the sleeve is contracted, the beveled faces force the key piece against the serrated ferrule on the handlebar. The application for this patent dates back to 1894, was renewed in September this year, and the patent was granted November 8 to



# Stearns Bicycles

**M**ESSRS. E. C. STEARNS & COMPANY desire to announce that their models for the season of 1899 are ready for inspection and that their full force of traveling salesmen are now engaged in covering the territory assigned them, comprising the entire United States and Canada.

Each 1899 Stearns bicycle is new, distinctive, elegantly finished and equipped. The complete list is as follows:

MODELS	WEIGHT	PRICE
Chainless . . . . .	26½ pounds	\$75.00
Ladies' Chainless . . . . .	27 pounds	75.00
Cushion Frame for men . . . . .	23¾ pounds	65.00
Cushion Frame for women . . . . .	25¾ pounds	65.00
Special, 30-inch wheels . . . . .	21¾ pounds	65.00
Special, 28-inch wheels . . . . .	21½ pounds	60.00
Ladies' Special . . . . .	23½ pounds	60.00
Track Racer . . . . .	20 pounds	60.00
Model E . . . . .	24 pounds	50.00
Model F . . . . .	24½ pounds	50.00
Combination Tandem . . . . .	45 pounds	75.00
Diamond Tandem . . . . .	43 pounds	75.00

## EQUIPMENT

### TIRES

Models E, F and Tandem, Hartford No. 80.  
Other Models, Palmer.  
Options, Kangaroo and Morgan & Wright.

### SADDLES

E, F and Tandems, Garford 156, 158 and 161.  
Other Models, the above with Sager Flexible,  
Christy and Stearns Rawhide.

## CHARACTERISTICS

Light Weights.

Narrow Tread.

2¾-inch Drop.

The works of E. C. Stearns & Company are operated continuously. They are never "closed down" except Sundays and holidays.

A large number of 1899 Stearns bicycles are completed and ready for shipment.

During the season of 1899 all orders will be promptly filled.

The "advance" catalogue is now ready for distribution. It describes in detail the most attractive line of bicycles E. C. Stearns & Company have ever produced.

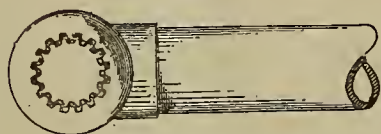
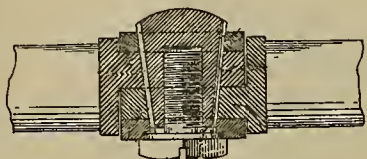
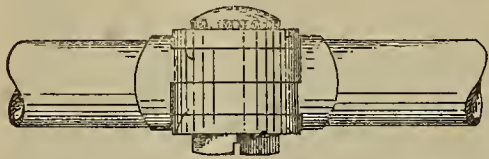
The trade on the Pacific Coast supplied from our branch store,  
E. C. Stearns & Company,  
210 McAllister Street,  
San Francisco.

**E. C. STEARNS & COMPANY**  
SYRACUSE, N. Y.

The trade in the Dominion of Canada supplied from our Canadian factory,  
E. C. Stearns & Company,  
67 Adelaide St. West,  
Toronto, Ontario.

W. G. Jones of Manchester, N. H., assignor to Hunter Arms Co. of Fulton, N. Y.

**Fredrick's Handlebar.**—This bar is already being manufactured. The head of the handlebar stem has a tapered aperture corrugated interiorly. The tapered surface is broken by a central recess to receive the disk-shaped inner ends of the two handlebar sections. These disk portions have tapered corrugated apertures formed to correspond in size and corruga-



tions to the aperture in the head. A taper block with external corrugations to fit the aperture in head and handlebar ends is bored out from the small end and tapped to receive a screw bolt with hexagon head. Tightening the bolt secures the bar sections in any desired adjustment. The inventor is E. H. Fredrick, of Toledo, O.

### SECRETIVENESS OF MAKERS

**Progress Checked by Close Guarding of Shop Secrets—Americans Interchange Ideas.**

The manufacturers of this country, as a rule, are inclined to impart information freely relative to the methods and processes which they use. The tremendous progress which the United States has made in economic production has undoubtedly been accelerated in no small degree by the willingness with which experiences have been exchanged and the freedom with which faulty methods have been criticised when found in use. Valuable points have been gained by visits interchanged between managers of rival establishments and by the publication in the technical press and the proceedings of technical societies of descriptions of new plant, new machines and new processes. Shop secrets may still be jealously guarded in small establishments making specialties for which the market is limited, but they are seldom heard of among manufacturers of staple articles. Advantages for securing raw materials, the employment of the most improved machinery and capable management are relied upon for profitable results to a much greater extent than any special process or method belonging to the particular plant. The branches in which open doors have been conspicuously kept are those in which achievements have been won that have startled the world. Mind has sharpened up mind, and every advanced step taken at one place has been a spur to a further advance somewhere else. The net result has been a vigorous growth and a continuous departure from the traditions of the shop, which always impede progress like the barnacles on the ship. No concern manufacturing staple products can safely claim to have found a process so far ahead of that used by competitors that it can afford to refuse to impart or receive information. Some active competitor will be at work devising a different and perhaps more economical way of doing the same thing. But those who

are unwilling to impart are almost invariably unwilling to learn, and in time must be beaten in the race for business, says Iron Age.

The explanation offered by the Iron paper seems a little far fetched; for those who have something to impart must have been willing to learn before they arrived at the point where their knowledge would be sought. It seems more plausible that those who have learned something in advance of contemporary industry are also most capable of learning something more. They gain by an exchange of courtesies, the fact that they have more to impart being more than balanced by their better ability for absorbing. They get suggestions for a valuable improvement from something which in the hands of a less able competitor is applied indifferently for some small and insignificant purpose. He who has something to impart is in advance of his competitors when he imparts it, and this priority which is advertised by imitation, establishes his prestige in trade. This prestige he continues to keep up by his ability. Hence he prospers by his liberal methods, but it would be futile to deny that there are instances in which a little caution and secretiveness constitute a useful exception to generally liberal methods. Those really gifted with ability will know how to draw the line, while those who close their doors by fixed rule will soon find that competitors and the public have divined the real reason for so doing, viz., that there is nothing to impart and that it is this fact which the institution most wishes to conceal.

### NON-AJUSTABLE BEARINGS

**Engineers Say Adjustability Is Unnecessary—Wear Not Appreciable—New English Hub.**

Cycle machinists have often been sneered at by engineers because of the margin allowed for adjustment in cycle bearings, says Cycle Referee. Certainly it should be possible to manufacture a bearing in which there should be no appreciable wear up to about 4,000 miles, if each bearing part is of perfectly hardened steel, carefully ground, and in all respects a finished bearing when assembled.

A Birmingham company has proceeded upon these lines to make a set of hubs and brackets which have no means for adjustment by the ordinary rider. By making one cup with a right-hand thread and the other with a left-hand thread, and each with a shoulder to come up solid to the ends of the hubs or bracket, an extremely neat and absolutely secure disc adjustment is obtained, and one which cannot be adjusted wrongly if taken to pieces any number of times. In all racing and ladies' machines it is confidently expected that the bearings will last without adjustment as long as the machine.

### WANT CASE HARDENING OVENS

**Repairmen Feel Need of Simple and Cheap Apparatus—Molecular Change but No Carbon.**

There is frequent inquiry among repairmen for a case hardening apparatus by which the hardened shell of cups and cones may be produced of even thickness and with greater assurance of always obtaining the same results from the same manner of working. Makers of such apparatus, if they exist, are not generally heard from.

A case has recently come under observation where a cup which was treated with new bone dust in the ordinary manner showed the same change in the molecular structure of the shell as is usually observable after case hardening, but nevertheless the shell was very soft and chemical analysis showed total ab-

sence of carbon. No explanation of the phenomenon has yet been given and the pedal maker in whose shop it was observed would like to hear from anybody who has had similar experiences or has an explanation to offer.

### Election Bets Attached by Maker.

Washington, Nov. 12.—Counsel for the Bellis Cycle Co., of Indianapolis, has secured a writ of attachment against Wilbur W. Marmaduke, a local ticket broker. The writ was issued on a judgment secured in 1896 by the Bellis company against Marmaduke, who at that time traded as the Washington Cycle Co. The total amount of the judgment was \$1,525.57. The writ was served on Orren G. Staples, a local hotel proprietor, who, it is alleged, acted as stakeholder for Marmaduke and a betting companion. It was learned by his creditors that Marmaduke had deposited a certain sum of money as election bets with Staples. As a bet is an illegal transaction, it is contended that the money can be attached, whether Marmaduke won or lost. Should he have won, however, it is doubtful if more than the actual amount which he put up could be recovered, in case his betting companion demanded the return of his money, as the same point of the illegality of the contract would hold good. Staples has not yet replied to the indictment, and the case will not be decided until he does. Condemnation proceedings against the money will have to be taken, in any event, before it can be collected. Some years ago Marmaduke contracted to handle the Bellis product. Later, the retail firm business was dissolved, and the Bellis company secured a judgment against him for certain money owing to them. Several attempts have been made to collect the judgment, but without avail.

### Utilizing Old Rubber.

A correspondent inquires of Cycle Age in regard to the most profitable way of utilizing old inner tubes and tires for making rubber solution, plugging cement, etc. The inquirer has a quantity of old rubber goods on hand and can get only 3 cents a pound for it. Manufacturers of macerator machines and others may be able to give the desired information, if improved methods exist for reclaiming rubber on a small scale. Cycle Age does not know of any improvements over the methods which have been in use for years, but will forward any information received.

### Berg's European Establishments.

Hart O. Berg, general manager of the new Clement works for making motor carriages and chainless bicycles under Pope patents at Levallois, near Paris, France, states that the Belgian establishment with which he was lately identified, the Fabrique Nationale d'Armes de Guerre, of Herstal, near Liege, is not connected in any way with the enterprises which Mr. Berg is now establishing at Paris and in Germany.

### Scorchers Adopting Rubber Pedals.

Rubber tread pedals are reported to be growing in demand in England, where even road scorchers are changing from the rat-trap to the others, which they find more comfortable for winter riding, where toe-clips chill the feet and the frozen ground causes numbness of the feet by vibration of the metal tread of rat-traps.

A firm of cycle dealers in Gem City, Ia., has fitted up a wood saw and is doing a rushing business. The resources of the versatile bicycle dealer are not easily exhausted.

# Jobbing Bicycles

— ...FOR 1899 Trade

\*\*\*NO OLD STOCK. EVERY MODEL NEW.  
TALKING POINTS THAT HELP YOU SELL.

For the requirements of 1899 trade we shall build three  
distinct lines of complete bicycles, embodying all features  
of value known in up to date construction. \*\*\*

## We Are Ready Now

to show you our samples and to figure on your supply,  
either in complete or stripped bicycles. SNELI. Hubs,  
Handlebars, Forgings, Pedals, etc., are standard. Our  
long experience and immense facilities enable us to give  
you the best of service and guarantee you quality at  
the right prices. Your inquiries will receive our prompt  
attention. \*\*\*

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SNELL CYCLE FITTINGS COMPANY,  
TOLEDO, OHIO.

## BOSTON MOTOR VEHICLE CONTEST

### Interesting Competition of Electric, Gas and Steam Vehicles—Surprising Hill Climbing Feats

This contest took place at Charles River Park, Boston, Nov. 9, 1898, under management of the Massachusetts Charitable Mechanic Association, and marks an era in the history of mechanical translation, as it is the first public event in which light steam carriages, suitable for the transportation of passengers, were shown. Motorcycle constructors have been aware of the power and flexibility of steam motors from the first, but it has

ment of motorcycles, one of the conditions of exhibition entry being that the mechanical wagons should be on show at the building in Huntington avenue, for the entire eight weeks of the continuance of the fair. This condition of continuous exhibition, while, perhaps, not an unreasonable demand on the part of the managers of the fair, was far from alluring to those experimenters who had only a single wagon in form to show, and who

No. 7. Haynes & Apperson, Kokomo, Ind., explosion motor.

No. 8. Heymann Vehicle Co., Melrose, Mass., explosion motor.

No. 9. Piper & Tinker, Waltham, Mass., steam motor.

No. 10. Pope Mfg. Co., Hartford, Conn., storage battery.

No. 11. Riker Electric Co., Brooklyn, N. Y., storage battery.

No. 12. Whitney Motorwagon Co., Boston, Mass., steam motor.

Of these announced contestants there appeared at Charles River Park Nov. 9, Nos. 2, 3 and 4, the three French gasoline engine driven machines, all noisy, all delivering vilely offensive odors in abundance, none carrying their passengers in any degree of comfort, all with very small wheels and insignificant in appearance, and all thoroughly efficient and reliable in performance, except for hill climbing. One of these machines is shown in Fig. 1.

No. 5, the Duryea, failed, for the first time in any public motorcycle event in



always been the fashion to speak of steam driven carriages as suitable only for heavy work, such as freight carrying, because the minds of the motorcycle builders held pictures of ordinary steam boilers and engines, such as the English engineers have applied to their cumbersome "lorries," and had no conception of such steam boilers and engines as are produced by the Boston group of steam carriage makers, and which enable these advanced exponents of the art of automobilism to show easily managed and odorless carriages, having no objectionable features whatever and weighing less, and costing less, than any other reasonably comfortable four-wheeled mechanically operated vehicles yet exhibited.

#### Eight Weeks' Exhibition Required.

The Massachusetts Charitable Mechanic Association holds a fair and exhibition annually which is always of much interest and largely attended, and this 1898 event was enriched by a special divertise-

were in many cases still engaged in perfecting the details of that one. As it proved, the speediest, lightest, cheapest, and cleanest automotor of unlimited range shown at Charles River Park, was there merely on exhibition, and was not a contestant for prize money because its builders and owners, the Stanley Brothers, of Newton, Mass., did not feel as if they could interrupt their experiments by placing their only completed vehicle on exhibition for two months.

#### Twelve Entries Received.

The following was the projected list of contestants:

No. 1. S. J. Anderson, Waltham, Mass., explosion motor.

No. 2. Leon Bollee, Paris, France, explosion motor.

No. 3. De Canville Co., Paris, France, explosion motor.

No. 4. De Dion et Bouton, Paris, France, explosion motor.

No. 5. Duryea Mfg. Co., Springfield, Mass., explosion motor.

No. 6. Eaton Electric, Boston, Mass., storage battery.

America, to put in an appearance. There was a Duryea wagon on the grounds, owned, it was said, in Holyoke, Mass., but it took no part in the contests. The absence of the Duryea is greatly to be regretted, as this vehicle is among the most successful of American exhibition contestants, and has been a frequent winner in the past.

No. 6, the Eaton Electric, was present, with the first vehicle produced by the Eaton company, shown in Fig. 2. This carriage was begun Sept. 9, 1898, and first placed on the road Oct. 31, 1898. It is a vehicle of fine appearance, and carries the batteries entirely separated from the wagon body, in a receptacle hung from the side-bars of the frame on independent half elliptic springs. A full description of this carriage will be given later. The Eaton electric was at the park for exhibition purposes only, and took no part in the contests.

No. 7, Haynes, Apperson & Co., Kokomo, Ind., was shown in a Boston built



SEE 1899

# NATIONALS

BEFORE  
MAKING  
CONTRACT



OUR TRAVELERS ARE OUT  
WITH THEM. *\*\*\*\*\**

NATIONAL CYCLE MFG. CO.,  
BAY CITY, MICH.

Mention The Cycle Age

OUR LINE FOR

# 1899

Eclipse **\$50**  
Eclipse, ('98 Model) **\$40**  
Waldorf **\$35**

FITTED WITH THE MORROW  
AUTOMATIC COASTER AND  
BRAKE. *\*\*\*\*\**

Send for Catalogue and  
Prices to the Trade.....

ECLIPSE BICYCLE CO.,  
ELMIRA, N. Y.

Mention The Cycle Age

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We Have the  
Same Agents...

Year after year. There  
must be a reason for this.  
It is not difficult to guess.  
Our BICYCLES always  
please.

THE KIRK MFG. CO.  
TOLEDO, OHIO.

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- Conroy Mfg. Co., 28 John St., New York.
- H. B. Shattuck & Son, Boston, Mass.
- Jas. Bailey Co., Portland, Me.
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- Mistrot Bros. & Co., Houston, Tex.
- Boutell Bros., Minneapolis, Minn.
- Powell & Clement Co., Cincinnati, Ohio.
- P. E. Allison, Louisville, Ky.

Mention The Cycle Age



A record of over  
40,000 MILES on a

# DIAMOND CHAIN

demonstrates that EXPERIENCE and  
GOOD MATERIAL count. Our '99  
line will be the MOST COMPLETE  
ever offered to the trade. Ready soon.

Don't forget that we have the  
ONLY SATISFACTORY BOLT LOCK.



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INDIANAPOLIS CHAIN & STAMPING CO.  
INDIANAPOLIS, IND.

R. B. McMULLEN & CO.,  
General U. S. Sales Agents,  
309 Broadway, New York,  
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NEW YORK DEPOT:  
J. S. Leng's Son & Co.,  
4 Fletcher St.  
Mention The Cycle Age

vehicle, in charge of Mr. O. H. Perry; it was said to weigh 1300 lbs., and to have three forward speeds and one backing speed. The explosion engines were said to be 4 h. p., and it was said that 5 gallons of gasoline would drive the wagon 100 miles, and that the cooling water tank held 10 gallons and required to be refilled three times per day, when on the road. Mr. Perry has prudent views as to the disclosure of his mechanical details, which, so far as could be seen, appeared to consist of all the sprockets and chains and friction clutches the wagon body would hold, hence no particular description can be given. Fig. 3 gives a good idea of the external appearance of this Boston Haynes and Apperson carriage.

No. 9, the Heymann, and No. 10, the Piper and Tinker, did not appear.

#### Pope Carriage Damaged in Shipping.

No. 10, the Pope Mfg. Co., Hartford, showed an elegant carriage, which, however, took no part in the contests. It was said to be the intention of the Pope company to show its new explosion engine driven delivery tricycle on this occasion, but that some connection of the gasoline tank had been injured in transportation, so that the machine could not be brought out. The Pope carriage is shown in Fig. 4.

No. 11, the Riker Electric, showed two fine vehicles, a luxurious two-passenger carriage, which should by rights have been in the hands of its London purchaser on that day, and a tricycle arranged to carry two or three passengers in comical ease; this Riker electric tricycle is shown in Fig. 5.

No. 12, the Whitney Steam Motor Wagon Company, of Boston, showed two of their steam engine driven carriages, as very recently fully illustrated and described in these columns. Mr. Whitney informs me that neither of these wagons was fitted with his best burner, and his burning of gasoline, the fuel with which steam is generated in his boilers, was not so perfect as to be odorless. In fact, the Whitney wagons shown at Charles River Park were as undelightful in smell as the French carriages, or the Haynes and Apperson wagon.

The 9th of this November was in Boston as fine and warm as could have been expected in early September, the weather being really delightful, and the affair was extremely well managed, all of the events transpiring promptly, and the only real blemishes being caused by the competition of tricycles and four-wheelers for showing the facility of handling and manageability, which was wholly unfair to the larger vehicles.

The course at Charles River Park is an asphalt cycle track, 3 laps to the mile, which the electric carriage exhibitors considered unfit for a speed trial of their heavy wagons.

#### Protest Against French Tricycles.

The first function was a grand parade on the course, with the Riker electric in the lead. The electric carriages, presenting a noble appearance, and the Whitney steam carriages, in forms closely approximating ordinary American road vehicles, were in strong contrast to the diminutive and low-seated French 4-wheeler, and the French tricycles, which were made decidedly insignificant in appearance by the comparison. It must not be understood that the French machines were insignificant in performance, however. Quite to the contrary, they managed to capture about all the money in sight, although they would not have had the \$500 first money for speed, had the Stanley wagon been a contestant instead of a mere exhibitor by courtesy, nor should the French tricycle have had the first prize for manageability, because there can be no comparison of manageability between

a 4-wheeler and a tricycle, or between a tricycle and a bicycle on this point. The fewer the wheels, the more readily the vehicle can be made to avoid obstacles, and the admission of the tricycles to the manageability contest on even terms with the 4-wheelers, was urgently protested by Mr. Riker at the outset.

#### The Speed Races.

The first contest was a 2-mile pursuit race between two Whitney steam wagons, No. 12 driven by Whitney, and No. 15 driven by Scott, which was won by Whitney in 1:04 2-5.

The second contest event was a 2-mile time run by the Whitney steam wagon No. 12, Whitney driver, made in 5:40 2-5; it must be borne in mind that this run was on a 3-lap cycle track, with turns altogether too short to suit any 4-wheeled vehicle. Whitney says he has often made a straight-away mile inside of two minutes; his 1000-lb. wagon is altogether too heavy for top speed on a 3-lap cycle track.

The third contest was a 2-mile pursuit race between the Haynes and Apperson wagon and the De Dion 4-wheeler, won by Haynes and Apperson in 7:42 4-5.

#### Brake Tests.

The fourth event was for brake efficiency between Riker and Whitney, won by Riker, much to his own surprise, as his wagon was almost double the weight of the Whitney carriage. Distance from brake line to stop, 8 ft. 7 ins. Speed at time of applying brake was about 5 or 6 miles, apparently.

The fifth contest was another brake competition between Haynes and Apperson and De Cauville, won by Haynes and Apperson.

It may be noted here that none of these brake contests seemed particularly decisive, as there was no means of obtaining a uniform speed at the time of brake application, which is an evident necessity for comparisons based on distance run after the brake is on.

The sixth exhibition was a pursuit race between Whitney in his steam wagon, and the De Dion; this was a final and was for some time in doubt. Whitney lapped the De Dion at one time, but could not obtain the pistol shot, and the De Dion finally drew away and won in 5:01 2-5 for the two miles. This victory of the De Dion was something of a surprise to those who knew what the Whitney wagon could do on a straightaway run, and might not have gone as it did had Whitney been less confident of victory.

#### Hill Climbing Contest.

The hill climbing was extremely interesting. The track was made of plank laid crosswise of the course, and was 85 feet long, with the first 10 ft. level, the next 10 ft. at an angle of 5 degrees, the next 10 ft. 15 degrees, and so on, the 85 feet of track ending at a cross bar stop high in the air, the final angle being 35 degrees. This makes a constantly increasing up hill angle of track, which is vastly difficult. Some seemingly powerful cycle riders tried it with a flying start, but could not go much above half way up. The De Dion, which won the time event, could not do nearly so well as half way. Riker made a very good showing with his heavy carriage, and so did the Haynes and Apperson, which gave evidence all the way through of being well powered. Whitney, with a hundred pounds of steam, did no better than Riker with his electric, which was hardly expected to show so well in hill climbing, because of its great weight. These wagons ran up beyond their brake control, and had to be caught by men standing on the incline, and steadied down to where they could take care of themselves.

Stanley had appeared with his 400-lb. steam wagon, which has larger engines

than the Whitney wagons, weighing two or three times as much, and also, I fancy, had more steam pressure, not less probably than 140 lbs. to the inch, while Whitney had only about 125, I think, at most. Stanley and Whitney had practically the same boiler, and both used a chain reduction to the compensating gear box, so that, with one exception, there was little difference in the motive power or transmission elements of the two vehicles; the one difference between the two, was, however, at a vital point, Stanley having a perfect burner under his boiler, while Whitney's was by no means so good, nor was it equal to other burners which he has applied to boilers. Whitney received a peremptory notice to place his wagon on exhibition, and was forced to send it to the Mechanics' fair as it stood, or stay out. Undoubtedly Whitney should have been prepared for this, and should have had at least one of his wagons in the best form he could produce, but it is only fair, in my opinion, to state that neither of the Whitney wagons at Charles River Park showed the best combustion that Whitney has produced in a steam carriage.

#### Stanley's Mile in 2:11.

An exhibition mile run by Stanley was announced, arousing great interest, as the Stanley wagon had won many friends by its perfect absence of odor, and the ease and celerity of its movements, and its almost perfect silence.

Amidst great cheering Stanley finished the mile, 3 laps be it remembered, in 2:11. At the sharp end turns the carriage went high up on the bank, but I think Stanley drove for all his engines could do. His 2:11 time was better than was to have been expected. At Stanley's top speed the connecting rods and cranks were invisible, and the noise of the exhaust was an agreeable hum, almost a musical note, there being 3348 puffs per minute. The exhaust steam spread out in a thin grey veil, and did not extend, I think, to exceed six feet in the rear of the wagon.

After this run came the manageability trials.

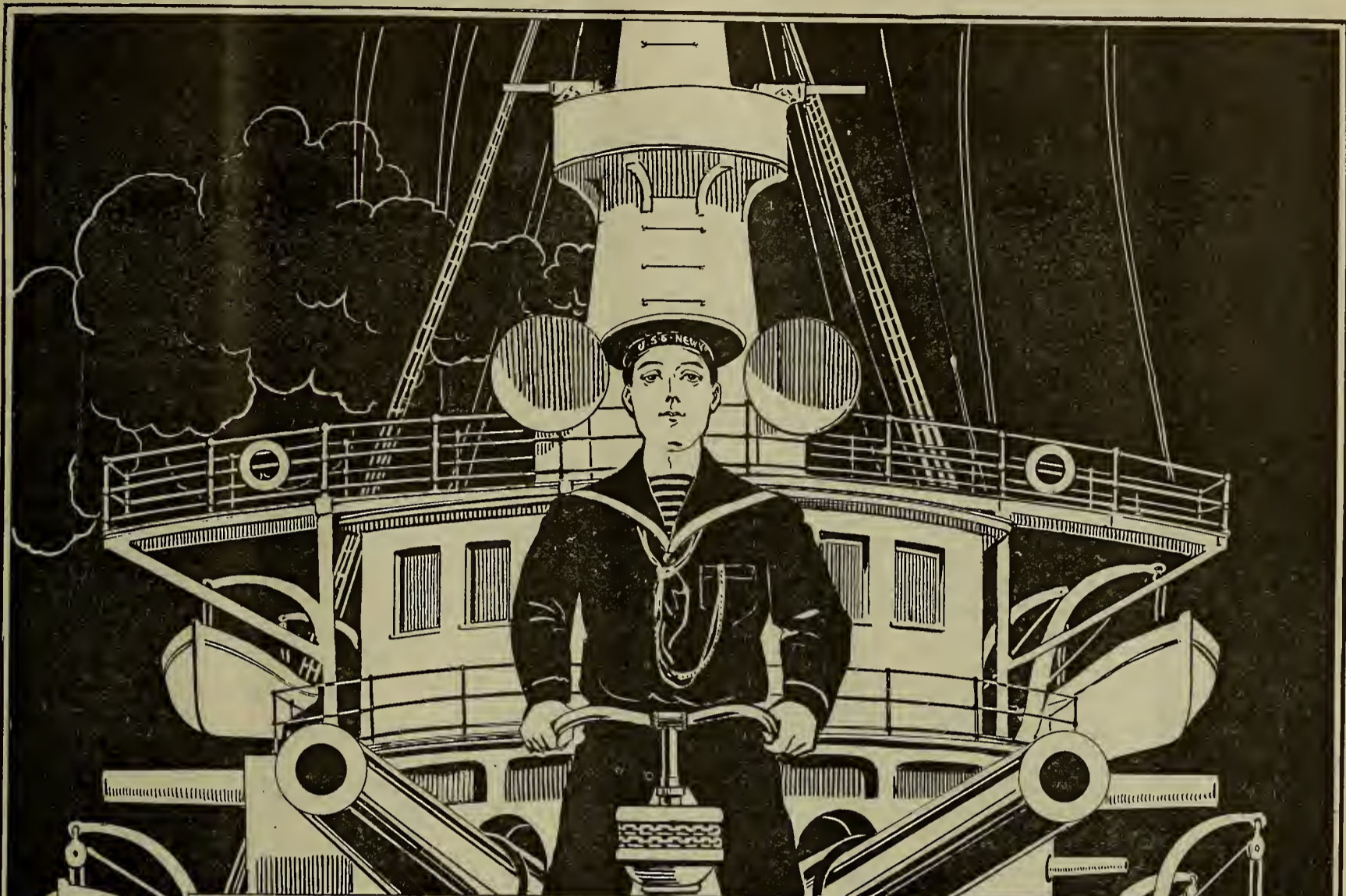
#### Steam Wagon Mounts Steep Grade.

Then Stanley took the hill, running up to the top, and bumping the cross bar at the end from a standing start at the bottom of the incline, no headway run on the level being made. Stanley probably had 150 lbs. boiler pressure for this hill effort. Thirty-five degrees is a very precarious foothold angle, and it looked for an instant as if Stanley was going to come down with a rush, but after some hurried scrambling the wagon was seen to be under control.

Whitney took a turn at the hill with 125 lbs. of steam this time, and went very near to the cross-bar; his wagon was the easier to control on the return, as Whitney's engines reverse, while Stanley's do not, but it was all the "catchers" could do to check the Whitney carriage on the 35 degree slope, at first. Stanley said before he started up the hill that he could easily run over it, if there was a practicable incline down on the other side. The designers of the hill did not for an instant fancy that any wagon could come near the top of it.

There were about 2000 spectators present, many of them deeply interested in automobile translation, the weather was perfect, the management was prompt and faultless, and the steam wagons were a new and surprising feature, and a feature, by the way, which seemed to be held at its real probable value rather by the untechnical observers than by the motorcycle engineers present.—HUGH DOLNAR.

A large trade is carried on in exporting worn-out tires to Germany for the manufacture of rubber toys for children.



## A Reliable Pilot

The victory of a nation is in the hands of the man at the helm. He guides the great "war dogs" into a successful, victorious position—a position that every maker, jobber and dealer is striving to attain for his bicycles.

### The Claus Handle Bar

✂ ✂ ✂ ✂ will pilot many a wheel to victory—business victory—in 1899.

Everybody wants it.

It will be the guide by which people will recognize a high grade bicycle. And it's a reliable guide—a wheel cannot be high grade, all over, without the Claus Bar.

People will ask the dealer to furnish the Claus because we are telling them of its merits.

Everybody wants an adjustable bar. Almost everybody wants an adjustable bar that can be adjusted without a wrench. The Claus adjustment requires no wrench—only a finger and thumb.

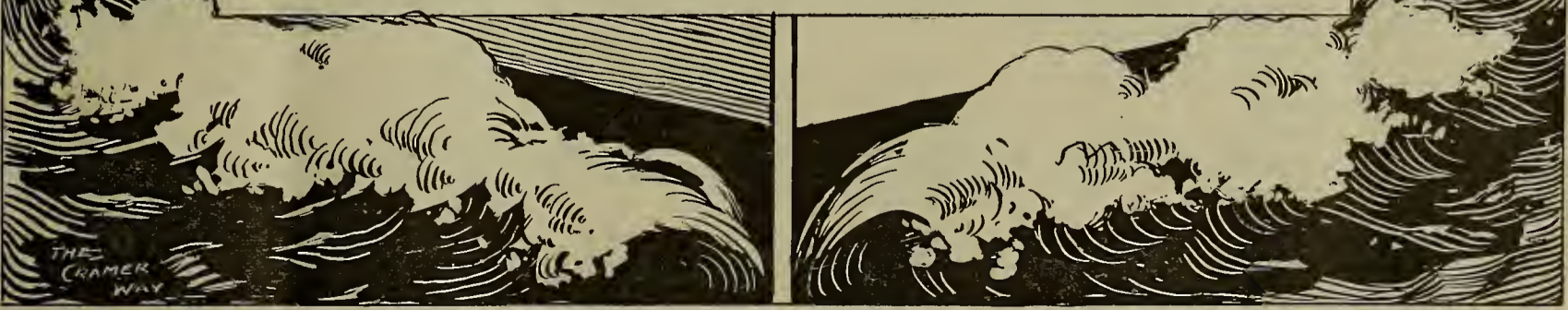
Physicians advise proper lung expansion when cycling. Every adjustable bar but the Claus contracts the chest at all but one or two positions—the Claus retains its proper, healthy width at all positions.

The Claus guarantee never expires—a guarantee that shows the faith we place in the durability, strength and quality of our bar.

These are not mere arguments—they're facts—plain, simple, truthful, unvarnished facts. Facts that ought to guide every bicycle manufacturer, jobber and dealer in his handle-bar purchases.

Think a bit, then send us your orders. At any rate write for our money-in-your-pocket prices.

**The Claus Handle Bar Mfg. Co., Milwaukee, Wis., U.S.A.**



## MOTOCYCLE BUILDING NOT EASY DIFFICULTIES ARE UNDERRATED

### Lay Public Inclined to Think It a Simple Matter to Combine Motor and Carriage Body.

A few days ago a man who has built machinery of various kinds since he grew to manhood, came to the Cycle Age office and wanted information in regard to makers of gasoline motors. He wanted a motor "right away," so much so that he insisted upon getting it from a Chicago manufacturer; for he was going to fit it to a vehicle with which a customer intended to "go prospecting." This customer is a miner and intends to cover the distance from Joplin, Mo., to the Pacific coast, with many digressions, per motor vehicle. The desired vehicle should be capable of carrying him at least 100 miles without new fuel supply. The Cycle Age editor was unable to inform the visitor of any Chicago concern which kept such motors in stock and expressed his doubts in regard to the feasibility of the scheme of producing a practical motor vehicle by the rough and ready means proposed. Several concerns ranging in location from Oakland, Cal., to Boston, which make motors for vehicles were recommended to his attention. But no; Peoria, Ill.; Kokomo, Ind.; Lansing, Mich., to say nothing of Pittsburg and New York, were too far away. He wanted a motor bought from stock. Any little changes which might be necessary, he would attend to. Difficulties! why, no; they were only imaginary. Motor vehicle builders simply charged an enormous price, he thought, for something that any machinist could build and put into a carriage. He, for one, was not going to be fooled by these pretensions. He finally concluded to go to a maker of gas engines on Canal street, Chicago, and have one made. The projected carriage was to be ready within two months, but no drawings had been prepared nor any account taken of any problems whatever except that of causing the axle of a wagon to revolve by connecting it with the piston of a gas engine, in "any known and suitable manner."

#### Threatens Danger to the Industry.

The greatest danger to the motorcycle industry is revealed in that disposition to underrate the practical importance of its peculiar problems of which the inquirer furnished an example. There are undoubtedly thousands like him and many of them will succeed in attracting a little capital and will turn out useless vehicles that will prejudice considerable portions of the public against vehicles made by more competent parties. In no other investment except perhaps mining is small capital likely to be lost so completely as in the motor vehicle industry, if the impression is allowed to prevail that the problem of connecting a motor with a wagon in a practical manner is a simple one, or that the selection of motor construction is within the grasp of anybody with a general understanding of engines or gas engines.

#### The Cycle Makers' Field.

On this subject, and the application to bicycle shops especially, the editor of The Cyclist has the following to say:

Motor making is "no catch"—that is to say, there is a very great deal more in it than merely manufacturing a certain number of pieces of metal and putting them together in the form of a motor. A very considerable amount of special knowledge and experience is required to turn out a satisfactory article—how much only those who have actually tried, and perhaps failed,

know. There is an old saying that "A child may lead a horse to water, but the king himself cannot make him drink," and so it is in a comparative sense with motors. Any worker in metals can manufacture a motor, but it requires an expert to make it go satisfactorily. As a matter of fact, we know of firms today who have spent as much as £4,000 or £5,000 in experiments, and having utterly failed in the task, have given it up as a bad job. This more particularly applies to the manufacture of new motors, for inventors are many and various, and all enthusiastically believe that if their ideas could only be put into practice, all existing motors would be superseded, so we would warn manufacturers against being readily induced to experiment in the direction of new motors. If they make a motor at all, let them adopt one which has been tried and proved not to be wanting in actual use upon the road.

The cycle maker, however, will for the most part be better advised not to touch motor making at all, but to purchase this important part of the machine from firms already in the business. It is true he will have to pay more for it than if he were making it (satisfactorily) himself, and he may even have to pay something in the shape of royalty for such a thing as a license, but, as we have briefly indicated above, it will be quite worth his while to do this, and he will be money in pocket in the long run. To manufacture motors will require much machinery of a class which he does not as a rule possess, and this alone will doubtless be a factor in assisting him to a decision. Then as to the type of vehicle to be made. No cycle maker, without very materially increasing his plant by the laying down of a totally different class of tool from that which his works usually possess, can readily manufacture cars of the heavier type. This is purely heavy engineering work as apart from cycle making, and, therefore, the situation narrows itself down to this:

That the cycle maker will find that the best way in which he can enter the motor industry is to confine his attention to the construction of motor cycles, or the lighter form of cycle-built cars, in which tubular framework, cycle wheels, and ball bearings are the principal construction features. In doing this he will be well advised to make the best arrangements he can for the use of the best and most fully-proved motor obtainable, and then to devote his attention to the design and construction of a suitable cycle-built carriage to go with it; and in the making of motor cycles, if he decides to adopt that type which is nearest of all to his manufactures, viz., the motor tricycle, or even the motor bicycle (which latter we do not altogether recommend), he must not overlook the fact that it is not sufficient to buy a motor and make a tricycle, and put the two together, but in making a tricycle practically every part will have to be specially made. It will not be sufficient to merely take one of his standard pattern three-wheelers and fit a purchased motor to it. Such a course would quickly end in failure, for the strains which the motor cycle is called upon to bear are very different, and very much more severe than anything which the man-propelled machine ever meets with, consequently, even in this, the easiest branch of the industry for him to take hold of, special experiment and special construction throughout are called for, and from this it will be apparent that to enter the motor business will require a certain expenditure of both time and money. Just how much will depend upon the class of machine adopted, and the skill and ability of the cycle maker; and he must not expect to reap a fortune all at once.

#### Motor Vehicles for Mail Service.

Recent advices state that the Postoffice Department in England has under consideration the project of supplying electric and other motor vehicles to be used in the postal service of London. The engineering department is now considering propositions from various manufacturers with that end in view.

#### Motor Show in Berlin.

An international motorcycle show will be held in Berlin next May. All kinds of automobiles will be admitted and also all motors, machinery and accessories for motor vehicles.

Mr. Jeffery of Gormully & Jeffery has lately been visiting manufacturers of motor vehicles and this has given rise to the rumor that his company will shortly embark in this new branch of manufacture.

## MOTOR CAB SERVICE OF PARIS PLANS FOR RAPID EXTENSION

### One Thousand Vehicles to Be Ready for Use When Exposition Opens—Teaching Drivers.

Paris, France, Nov. 4.—The fifteen electric cabs which the General Cab Company of this city has ready for service are at present exclusively used in converting cabmen into "chauffeurs," but within a month there will be twenty of these vehicles on the stands, and by the time the exhibition of 1900 opens, the company expects to have one thousand vehicles plying for hire at the ordinary fares. There are three models which the company intends to adopt, the closed coupe, to seat four persons; the open victoria, also to carry four passengers, and a landau that can be used either closed or open. The mechanism in each case is the same, the battery being placed beneath the body of the vehicle and the driver sitting in front as on the ordinary cab.

The batteries will be charged at the electric works of the company at Clichy. The process takes seven hours, but as the batteries are removable, the only inconvenience is the necessity of returning to the stores to take on fresh batteries.

#### Training School for Drivers.

The movement is so far serious that the company has established a training school for drivers, selected from the cabmen. They are instructed under the supervision of Mr. Gourdon, manager of this department, and, according to a representative of the Temps, the process is as amusing as it is quaint. The practice ground is covered with dummy figures of old gentlemen, "bonnes" and children, nurses with perambulators, dogs, etc. The apprentices are started off among a crowd of these dummies, and from the observations of 'he Temps appear to be taught how near they can drive to the various manikins without knocking them over. It is only to be hoped that they will be taught to show a little more respect for pedestrians than does the Paris Jehu.

## ENGLISH BICYCLE MOTOR

### Birmingham Company Preparing to Market One That Can be Fitted to Any Roadster.

The Wolseley Sheep Shearing company of England is preparing to place a motor for bicycles on the market, says Cycle Referee. The motor is extremely compact and easily fixed in the frame of any existing roadster bicycle without interfering with the pedaling movements of the legs. The weight will hardly exceed fifteen pounds, while the price will be about \$5 per pound. If the expectations of the makers are fully realized, says the Referee, the effect of this introduction will be felt throughout the whole English trade. Not only will manufacturers be able to fit the motor to their existing patterns, but assemblers will be able to do the same thing.

The attachment of a motor to an unstable vehicle like the bicycle has never seemed practicable to American manufacturers, but the English company's experiment will at least afford an opportunity for making observations in regard to the public's willingness to take the chances of a fall with a piece of moving machinery, and possibly a more general application of motors to tricycles will be the eventual result.



# The Wonderful Sager Gear

## The Ideal Chainless Mechanism

### WORLD'S RECORDS

Made at Woodside Park, Philadelphia, by Major Taylor, on an ORIENT wheel fitted with Sager Gear.

November	4.	.....Kilometer.....	:57 <sup>3</sup> / <sub>5</sub>	Seconds
"	5.....	1-4 Mile.....	:22 <sup>2</sup> / <sub>5</sub>	"
"	4.....	1-3 Mile.....	:29 <sup>4</sup> / <sub>5</sub>	"
"	5.....	2 Miles.....	3:13 <sup>3</sup> / <sub>5</sub>	"
"	12.....	1 Mile.....	1:32	"
"	12.....	1-3 Mile.....	:28 <sup>1</sup> / <sub>2</sub>	"
"	12.....	1-2 Mile.....	:45 <sup>4</sup> / <sub>5</sub>	"

Above records made with temperature at freezing point and under other unfavorable conditions.

Superiority of chainless wheels equipped with Sager Gear fully established.

No purring under the feet. Absolute smoothness. Will out-wear the rest of the bicycle. Runs easier than the chain. Gears encased in dust proof cover.

Sold to manufacturers under contract that machines fitted with this gear shall not be retailed at less than \$75.

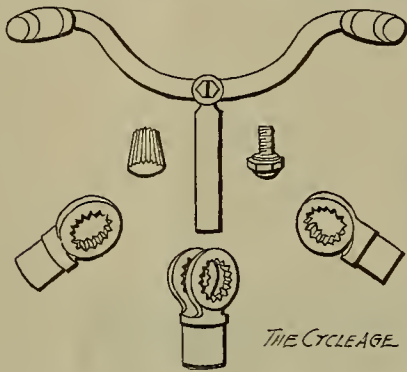
## SAGER GEAR COMPANY

ROCHESTER, N. Y.

# INFORMATION FOR BUYERS

## FREDRICK ADJUSTABLE BAR.

The new bar shown in the accompanying drawing is being introduced by Fredrick Mfg. Co., 220 Broadway, New York. The stem and head are integral and are made in a single drop forging for the sake of strength. The knuckles are also drop forged. The circular extensions of the head and ends of the knuckles are machined with teeth internally to fit a tapered ratchet which is inserted after the parts are assembled. A short screw bolt working in a counter-sunk socket at the rear of the head draws this plug firmly into its socket and locks the bars



rigidly in their adjusted position. By this construction there is unlimited range of adjustment, from the highest upturned to the lowest drop position. Grips remain at a constant angle to the machine at all times. All joints are flush and no bolt heads protrude. An invisible internal expander will be furnished by the makers when it is desired. The makers assert that the adjustment is not only extremely simple but is strong and positive, and impossible to get out of gear or work loose. Changes in adjustment can be made very quickly and easily by the use of wrench or screwdriver. The Fredrick bar is symmetric and neat in appearance and the makers state that it is unexcelled in quality and finish.

## BUESCHER PUMP COUPLER.

This little device, made and marketed by Buescher Mfg. Co. of Elkhart, Ind., is extremely simple, but saves all the trouble and loss of time incident to screwing the usual hand pump connection on to the valve before inflating the tires and afterwards unscrewing it, which so frequently results in loosening the valve in the stem. It consists merely of a metal cup, inclosed within finger bars, and a cone-shaped rubber cap seated in the metal cup, a hole being provided in the center of the rubber cap for the passage of air from the pump to the valve. This rubber seat is held against the valve



and makes an air-tight connection. The invention is protected by the company's patent of July 14, 1896. Its sale will be pushed energetically this season.

## THE ANDRAE LINE INCREASED.

The 1899 Andrae line, made by Julius Andrae & Sons Co., of Milwaukee, will be larger than ever, the increase being due to the addition of several low-priced machines, which will enable agents to meet all demands as to price, and still handle the Andrae line exclusively. The '99 line consists of thirteen models, including a triplet, three tandems, a chainless, a 30-inch wheel model, track racer, road racer, and six models of light roadsters for men and women. The Andrae triplet and tandems (racer, double diamond and combination), are built on the same lines as the '98 models, with the exception of some minor changes. The triplet will list at \$150 and the tandems at \$100 each. The Andrae chainless will list at \$75, as will also the Andrae track racer and road racer. The two racing models are built very light, without sacrificing the rigidity of the models of 1898. The regular light roadsters for men and women will list at \$50, \$40, and \$30; the 30-inch wheel model is built on the same lines and with the same specifications as the light roadster, and lists at \$55. The company's large new factory, which is now running with a full force of work-

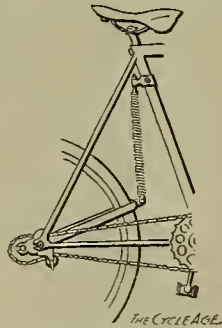
men, increases the capacity of former years by fifty per cent. The factory is equipped throughout with modern machinery. A complete electric light and power system has also been installed. The eastern business of the company is handled through their New York branch, at 95 Reade street, with Chas. L. Wilson in charge.

## REMINGTON CYCLES FOR NEXT SEASON.

Remington Arms Co. of Ilion, N. Y., is bringing out a Remington model for '99 which possesses a number of new features that will, it is anticipated, "make competitors shudder." This machine, which will be the Remington standard roadster, will retail at \$50. The makers have adopted Dunlop detachable tires, but will supply Kangaroo single-tube tires when demanded. A traveling force sufficiently large to visit every town of 3,000 population and more during the months of January, February and March has already been engaged. Stock will be distributed from Boston, Ilion, Chicago, and San Francisco.

## WILSON'S UNIVERSAL BICYCLE SPRING.

This is a device intended to secure that easy motion of the saddle when riding on rough roads or crossing tracks, etc., that has been the object sought by all constructors of spring frame bicycles. In this the jolting and vibration is absorbed by a long coil spring attached at one end to a clamp fastened to the seat mast just below the saddle and at the other to the end of an auxiliary pair of forks fulcrumed in the fork end lugs two or three inches from its own rear extremities in which the axle of the driving wheel is supported. An idle wheel is pivoted on a depending arm of the auxiliary forks to support the lower ply of



the chain in its usual position. The entire mechanism is attachable to any standard cycle frame on the market without alteration, weighs only two pounds, and the spring is adjustable to suit riders of different weights. The manufacturers are Bridgeport Cycle Spring Co., 257 Main street, Bridgeport, Conn., who, describing the operation of the attachment, state that, mechanically speaking, the bicycle frame becomes a lever of the second order fulcrumed on the axle of the front wheel, supporting 75 to 80 per cent of the superimposed load on the axle of the rear wheel, with a spring resistance interposed between the frame and rear axle; the spring having sufficient resiliency to absorb the average vibration due to the unevenness of the roadway, and cushion every shock, no matter how severe.

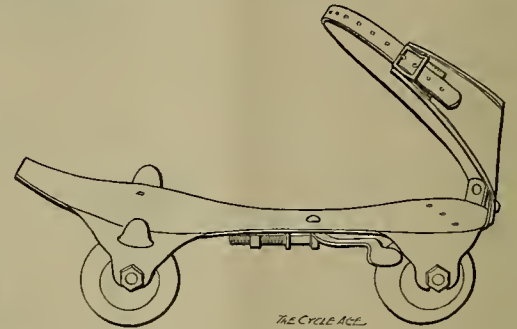
## COMPRESSED CORK GRIPS.

These are made in all sizes and with every style of tip—composition, embossed and plain nickel—and with or without paper lining, by Codling Mfg. Co., of Bristol, Conn., which guarantees that its compressed cork grips are of the best quality. The trade and public are so well acquainted with these grips that the good qualities of compressed cork for bicycle handles need no exploiting. What jobbers and manufacturers are interested in is the capacity of the Codling plant to turn out 5,000 pair daily and the consequent ability of the company to fill all orders promptly.

## BARTLETT'S NEW CYCLE SKATE.

The two-roller skate here illustrated is the invention of J. F. Bartlett, 102 Reaper block, Chicago, who has studied and experimented for the past two years to produce rollers that would stand the excessive side stresses and wear which quickly ruined many of the rubber wheels fitted to the early cycle skates. The rollers of the Bartlett skate are made of rubber composition molded under about 125 pounds' pressure upon a polygonal axle having radial arms to prevent the rubber working loose and turning on the axis. These

rollers are about three-quarters of an inch thick and run upon ball bearings of turned steel. They have rounded treads to provide for inclination of the skate, as the axles are fastened rigidly in the brackets and do not turn as do the trucks of four-roller skates. The skater in describing curves raises the foot upon only one roller. The rubber in the wheels prevents side slip. Patents granted and pending cover the construction of these rollers. The body of the skate is of entirely new design and construction. It is pressed from a single piece of sheet steel, the brackets for the rollers being simply lateral extensions of the foot plate bent



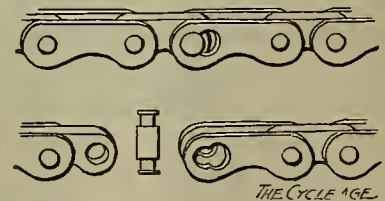
downwardly and inwardly to the proper position. The usual "club skate" clamping and adjusting device for attaching to the sole of the shoe is provided. This construction is so cheap and withal so simple that the Bartlett skate seems unusually well adapted for rink purposes. The inventor has up to the present produced only one pair of the perfected models, and as he lacks the facilities for manufacturing them on a commercial scale, desires to interest some bicycle manufacturer or capitalist in them. Dies and machinery for their production, he states, will cost upwards of half a thousand dollars.

## BURGESS LEAVES STEBBINS COMPANY.

M. D. Stebbins Mfg. Co. of Springfield, Mass., makers of the Chilion wood frame bicycles, announce that H. L. Burgess is no longer connected with the company, having left to enter upon a new field of labor, and at a meeting of the directors H. D. Stebbins was elected to the office of treasurer thus vacated, and in the future will discharge the duties of both secretary and treasurer. The executive officer will be W. M. Kidder, with title of manager. It will be the policy of the company henceforth to promote the interests of its agents in common with its own, both by maintaining a high standard of quality in its machines and by liberality in its dealings.

## FOOL-PROOF CHAIN CONNECTION.

A chain locking link and bolt arrangement which is so simple that the most unmechanical of riders can manipulate it without difficulty or danger of destroying its utility,



is being brought out for the season of 1899 by Indiana Chain Co. of Indianapolis. The usual threaded bolt is supplanted by an ordinary pin having annular shoulders at either end, and the two sideplates have keyhole slots whose enlarged ends permit these shoulders to pass. To make the connection the pin is inserted through these sideplates and the link and the slack in the chain is then taken up, which seats the pin ends in the reduced ends of the keyhole slots and makes a safe connection. No tools are necessary in coupling or uncoupling this device.

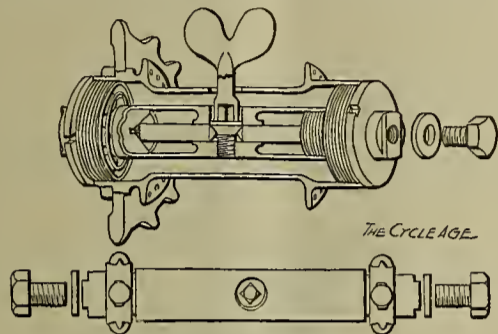
## SELLING AGENTS FOR WEBB EXPANDERS.

Herman Boker & Co., 101 Duane street, New York, have been appointed sole eastern selling agents, and Guiterman, Rosenfeld & Co., 35 South William street, New York, sole export selling agents for the Webb expander, manufactured by Sanford & Pollow Co., 235 Lake street, Chicago. This compact device for locking handle bars and seat posts, which was illustrated in the October 6 issue of Cycle Age, is made in six sizes, as follows:

11-16 in. inside and 7/8 in. outside diameter for 1 in. tubing of 16 gauge; 3/4 in. inside and 15-16 in. outside diameter for 1 in. tubing of 22 gauge; 13-16 in. inside and 1 in. outside diameter for 1 1/4 in. tubing of 16 and 22 gauge respectively; 7/8 in. inside and 11-16 in. outside diameter for 1 1/2 in. tubing of 22 gauge; 15-16 in. inside and 1 3-16 in. outside diameter for 1 1/4 in. tubing of 22 gauge; and 1 in. inside and 13-16 in. outside diameter for 1 1/4 in. tubing of 22 gauge.

**THE COLLMER HUBS.**

The hubs made by Collmer Bros. of South Bend, Ind., are disk adjusting hubs of such simple construction that, in the words of the makers, "a blind man can take them apart and put them together, and he can't help but do it right." It is claimed to be



impossible to put the hub together wrong. A removable barrel or axle is screw threaded internally at its ends to receive the screw threaded ends of the cones. Two hardened steel pins abut against the centers of these cones and at their inner ends contact with a conical headed screw in the center of the barrel. Ball retainers hold the balls in place on the cones, and after this internal barrel, together with cones and balls, has been inserted in the outer barrel, the cups are screwed into the ends of the latter. The outer ends of the cones are squared off on two sides to fit in the forks end slots and prevent turning. Screw bolts enter the ends of the cones and hold the hub in the frame, from which it can be easily removed without disturbing the adjustment of the bearings. To adjust the bearings in case of wear, a key is inserted through a hole in the center of the hub and the conical headed

screw is loosened to unlock the axle from the cones, then, leaving the key in place, the wheel is turned backward or forward, causing the tubular axle to turn on the cones and force them further apart or draw them closer together, they being threaded right and left. The proper adjustment secured, the key is turned to lock them by means of the spreading pins. The Collmer hubs are turned from solid bar steel, no stampings or castings being used. James E. Plew, 1446 Wabash avenue, Chicago, is sales agent for them.

**ANTI FRICTION FOR CHAINS.**

Useful Supply Co. of Williamsport, Pa., is in the market with a lubricating compound called Anti-Friction, which it packs in handy form in 2-oz. tin boxes and in collapsible tubes. That in the boxes is intended for use on chains and is of the consistency of vaseline, while that in the tubes is more liquid in form and can be squeezed into the cups of ball bearings. It is translucent, of Brewster green color and has the agreeable odor of almonds.

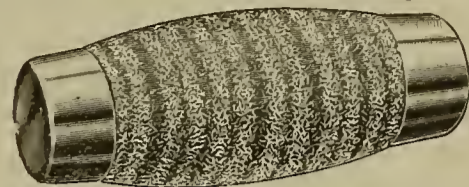
**BLISS CO.'S PICTORIAL CATALOGUE.**

E. W. Bliss Co., Borough of Brooklyn, has issued a large catalogue of heavy plate paper showing a score of full page half tone illustrations of the exterior of its factories and of various departments inside, and also many fine wood cuts of the large line of machine tools made by this company and extensively used in the cycle industry. It is a most attractive book, and will be found valuable by any one contemplating the installation of new metal working machinery.

**JARVIS TAKES A PARTNER.**

W. B. Jarvis, of Grand Rapids, Mich., who placed on the market last season a leather grip which was adopted by a number of the leading manufacturers, including H. A. Lozier & Co., and which was handled by a number of the leading jobbers, including A. G. Spalding & Bros., has taken as a partner in this branch of his business W. Smalley Daniels, for a number of years with the Plymouth Cycle Co., and later with the Hamilton-Kenwood Co., and the new firm is now better prepared than ever to supply the manufacturing and jobbing trade with leather grips. The new firm has secured as superintendent of the factory C. E. Peterlein, who is responsible for many recent improve-

ments in bicycle grips, including the wood lining or bushing, the single-piece cork grip and the J. & D. leather grip. Among other good contracts recently secured by Mr. Jarvis is one to supply the entire Lozier product with his leather grip. Both members of the firm are young men and enjoy a wide acquaintance among the manufacturing and



jobbing trade. Samples of their Leather grips will be sent to manufacturers and jobbers, and electros for catalogues will be supplied upon request.

**CEMENT AT WHOLESALE ONLY.**

American Trading Co., 100 William street, New York, correcting an error in last week's issue of this paper regarding the marketing of Hard Red tire cement, states that it is not seeking to sell to retailers at all, and would have to refer such applicants to jobbers.

A. G. Spalding & Bros. of New York and Chicago, have bought out the Spalding-Haywood Arms Co. of Denver, Colo., and will use the store as a branch distributing house for Spalding bicycles and sporting and athletic goods. Retailers of the far west will draw their supplies from the Denver house at the same prices as from New York or Chicago. Bryan Haywood will remain as manager of the Denver branch.

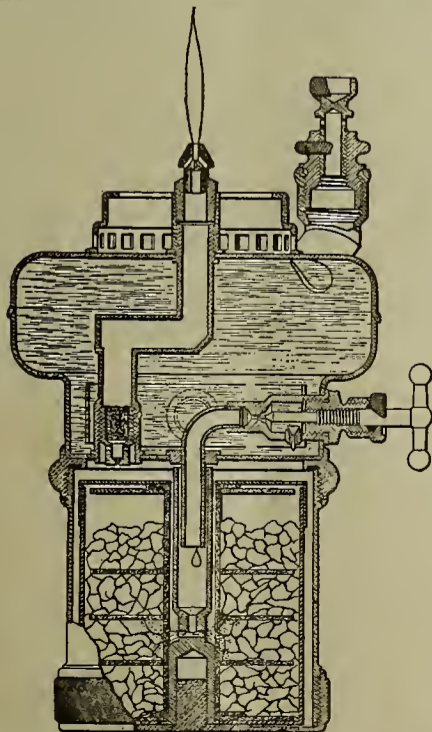
Chas. F. Stokes of Highlandville, Mass., writes that a number of inquiries as to prices and terms for the Excelsior hubs described in Cycle Age for October 27, have been addressed to Chas. F. Stokes & Sons Co., at Highlandville instead of to Chas. F. Stokes & Sons, 56 Fifth avenue, Chicago. The hub business is done in Chicago and correspondence in regard to hubs should be sent to the Chicago address.

Stewart Bros. Co., manufacturers of high class hubs in Chicago during the past three

...THE...  
**BUNDY**

LAMP

BURNS ACETYLENE GAS.  
BRIGHT AS THE SUN.  
THE ONLY PERFECT  
BICYCLE LAMP



**INFRINGERS**

**TAKE NOTICE!**

We absolutely control the Patent Rights for using an ABSORBANT in the treatment of carbide with water and shall take steps to protect them. Parties continuing to use this in connection with Bicycle or any Acetylene Gas Lamps will be prosecuted.



**JOBBERS  
RETAILERS  
RIDERS**

Look before you leap. You cannot afford to take any chance when THE BUNDY LAMP is within your reach. Our lamp is the acme of simplicity, style and strength. Satisfaction guaranteed. Write for description. We want our lamp in your catalogue. Electros free.

**THE FRANK E. BUNDY LAMP CO.**

Mention The Cycle Age

ELMIRA, N. Y., U. S. A.

years, have removed from 197 South Canal street to 250 West Lake street. The new location is in a large manufacturing block, where they will have ample room to grow as the business expands. Their capacity at the present time is 3,000 pair per week.

O. P. Bernhart, for the past two or three years connected with Kirk Mfg. Co., of Toledo, and at present in charge of the local retail store, will soon go on the road for the makers of the Viking bicycles and in the early spring will assume charge of the Viking retail store in Toledo.

Eaton Mfg. Co. of Eaton, Ind., has purchased the business of Old Fort Mfg. Co. of Fort Wayne, Ind., and will continue to make the goods formerly made by the Old Fort company. The plant in Fort Wayne is being put in proper condition to take care of trade with promptness and method.

Relay Mfg. Co. has announced its prices for '99, which will be as follows: Racer, \$60; Flyer, \$50; Special, \$40; Vox, \$30. Their 30-inch wheel patterns, with  $3\frac{3}{4}$  drop of hanger, will list at \$55. Their '99 advance catalogue will be sent to the trade in a few days.

O. C. Hutchinson, who for the past eighteen months has been in charge of the bicycle sales department for the Bean-Chamberlin Mfg. Co., of Hudson, Mich., has accepted a similar position with the Monarch Cycle Mfg. Co. of Chicago.

Andersen & Fuller of Christiania, Norway, are agents for bicycle parts for the whole of Scandinavia and Finland, where they travel regularly, and invite correspondence from manufacturers in this country.

A. Chaney, cycle dealer of Terre Haute, Ind., will go on the road as traveling salesman for the Grand Rapids Cycle Mfg. Co., and will push the Clipper chainless, as a leader.

#### TRADE NOTES.

V. E. Ripper, proprietor of Ripper Cycle Co. of Buffalo, N. Y., manufacturers of the Electric City and Ripper bicycles, has leased the factory and salesroom of Iroquois Cycle Co. of the same city, and will continue the manufacture of the Mohawk and Cayuga bicycles, which was given up some time ago by the Iroquois Cycle Co. The latter concern, is not connected with Iroquois Cycle Works of Chicago, which makes the Iroquois bicycles.

W. H. Burt of the Burt Cycle House, Wichita, Kas., has arranged with Manson Cycle Co. of Chicago to manage the southwestern business of that concern and make his Wichita store the distributing depot for Kansas, Texas, Oklahoma, Colorado and New Mexico. Mr. Burt is also enlarging his business by the addition of sewing machines, pianos, organs and vehicles of all kinds.

J. E. Sellers, formerly in business at 1009 Grand avenue, Kansas City, Mo., under the style of J. E. Sellers Cycle & Supply Co., has opened a new store under the same name at 1221 McGee street, same city, and the old business and location is retained by U. M. Sellers Cycle Co.

A few samples of an improved double cylinder bicycle pump are being made at C. F. Pennock's factory in Chittanooga, N. Y., and if the pump is the success it is expected to be, they will probably be manufactured there on a commercial scale.

E. H. Allen, the pioneer exclusive bicycle dealer of Waterbury, Conn., and the foremost Spalding agent in Connecticut, has just moved into a handsomely equipped and decorated store and has added sporting goods to his line.

A. S. Ewing, conducting a manufacturing establishment in Chillicothe, O., will add a new department to his factory and begin the manufacture of bicycles the coming winter. G. A. Vincent will have charge of this department.

Defiance Wheel Co. has been incorporated with \$10,000 capital to manufacture bicycles and other articles at Defiance, O. The incorporators are A. H. Wood, John Spangler, E. P. Hooker, D. D. Lovridge and E. T. Clark.

Coe Mfg. Co. of 50 Warren street, New York, has arranged with Hartley & Graham of New York City, for the latter firm to control the export trade for the entire Coe line during the coming season.

The American Cycle Co. of Chicago is about to move to Akron, O., and will occupy the works of the old J. F. Seiberling

Mower & Reaper Co., which have been idle for several years. The assignee of the latter company has made an application to the court asking for authority to lease the buildings. The company will equip the plant with the best machinery, and expects to employ several hundred men.

Hine-Watt Mfg. Co. of Chicago has been incorporated with capital stock of \$50,000 to manufacture hardware and bicycle sundries. Incorporators are, Lucius A. Hine, Sern P. Watt, Jos. T. Burnham, Jr., and Ernest W. Hicks.

Marion Black, successor to Black & Peltier, bicycle dealers, of Ft. Wayne, Ind., has consolidated with the Meyers Cycle Co. and formed the new firm, Meyers & Black.

American Tin Plate Co. of Richmond, Ind., emphatically denies the press statements that it is about to erect a new factory and engage in the manufacture of bicycles.

Hicks Motorcycle Co. of Chicago has been incorporated by John A. Drake, Belle W. Barry, and Frank W. Howser, with \$2,500 capital, to manufacture motor vehicles.

The Colorado Cycle Supply Co. of Denver has removed to 1645 California street in that city, with a view to providing increased facilities and space for sidelines.

Wesley P. Churchill Co. of Cambridge, Mass., has been incorporated with \$10,000 capital stock to manufacture bicycles and motor carriages.

F. E. Bundy Mfg. Co. of Elmira, N. Y., has been incorporated as The Frank E. Bundy Lamp Co., with capital stock of \$10,000.

The property of State of Maine Wood Rim Co. of West Paris, Me., is in possession of trustees under first mortgage bonds.

Fobes Bros. & Niles, incorporated, of Seattle, Wash., dealing in bicycles, have arranged to dissolve corporation.

H. Mark, of Moorehead, Minn., dealing in hardware and bicycles, will go out of business January 1.

Hitchcock Lamp Co. of Watertown, N. Y., has changed its name to Jefferson Brass Works.

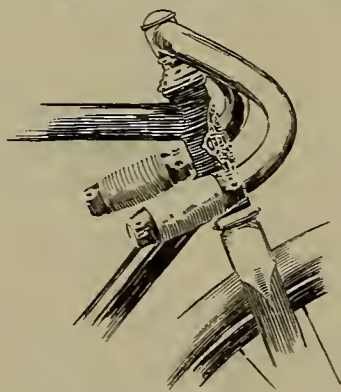
Frontenac Cycle Co. of Philadelphia, Pa., has been succeeded by Magee & Young.

Henry T. Bragg, manufacturer of bicycles in New York City, has assigned.

#### FEATHERSTONE & CO.'S MODELS.

Eight Comprise the '99 Line—List From \$50 to \$25—Distinctive New Features.

The new models which A. Featherstone & Co. of Chicago are preparing to place in the hands of agents are now ready for inspection and will be shown to the trade as rapidly as the company's force of travelling men can cover the territory. They are all to be known as "Featherstone" models and are designated A, B, C, D, E, F, G and H, ranging in price from \$50 to \$25. Among the most conspicuous new features of the line is the regular equipment with



Featherstone detachable tires of the G. & J. pattern with option of Hartford single tube tires, and in the cheaper models a price reduction if tires of lower grade are chosen. A new reversible handlebar of the company's own pattern and manufacture gives the front part of the best models a very attractive and individual appearance. The expander device for fastening the stem is covered from view with a cap as shown in the accompanying illustration. The seat post fastening is of equally neat design, and the crank shaft mechanism is entirely new in construction, readily taken apart and set

up. It is of the "divided" pattern, the junction of the two shaft sections being effected by a "square taper" fit which is locked and unlocked by means of a key. The connection is secured by a screwthreaded locking plug, which is operated by the same key from the left hand side of the machine. The plug fills the bore of the left crank boss and crank shaft section and the mechanism is so arranged that the taper junction cannot be undone by any means, except by the key, thereby securing workmanlike operation by even the most careless rider and permanent satisfaction to riders, dealers and manufacturer. Wheel rims are eyeleted for passage of the spokes. One of the models is equipped with 30-inch wheels, and the company has taken especial care to make the short head and the fork stem doubly strong, and to make the ball cups of especially tough material and accurate workmanship. In the following are given some of the principal points covered by the specifications:

Model A.—  
Weight: 26½ pounds. Frame: Shelby seamless steel tubing; depth, 23 inches; main tubes, 1¼ inches; upper rear fork tubes, ¾-inch; lower rear fork tubes, ⅝-inch "D"



tubing, tapered; head, 4¼x1½ inches; drop, 3½ inches; narrow tread; large barrel crank hanger; flush joints throughout; nickel plated covers of rear fork ends. Steering fork: Drop forged, arched crown; 1-inch seamless fork sides; crown and fork ends nicked. Wheels: 30-inch; wood rims, enameled to match color of frame; striped; large patent hubs; swaged tangent nicked spokes, tied at intersection; 32 spokes to front, 36 spokes to rear wheel; 1½-inch Featherstone (G. & J.) detachable tires. Handlebar: Ram's horn pattern; medium drop; reversible; 1-inch, tapered to ¾-inch; seamless. Bearings: Tool steel, oil tempered and removable; equipped with combination oiling and ball retaining device, conducting oil direct to bearings. Pedals: Combination rat trap and rubber; convertible; Featherstone make. Cranks: Semi-oval; drop forged; 7-inch. Chain: 3-16-inch; B block; polished; one-piece chain adjuster, front screw. Gear: 80 inches; clover leaf pattern front sprocket 24 teeth; rear sprocket 9 teeth—both detachable and reversible. Finish: Enameled in black, maroon and olive green, artistically striped; all bright parts nicked. Options: 25-inch frame. Gear, 72 and 93 1-3. T seat post. 6½-inch cranks. 1-½-inch Hartford single tube tires. Handlebar, seamless; steel; 1-inch, tapered to ¾-inch; reversible; medium drop or upturned, and reversible racing, special design.

Model B, Racer.—Weight: 22 pounds. Frame: Depth, 21 inches. Wheels: 28-inch; wood rims, enameled in royal blue, striped. Handlebar: Racing low drop; reversible; special design; 1-inch, tapered to ¾-inch; seamless. Gear: 91 inches; clover leaf pattern front sprocket 26 teeth; rear sprocket 8 teeth; both detachable and reversible. Finish: Enameled in royal blue, artistically striped; all bright parts nicked. Options: On gear, crank length, tires, saddles and handlebar.

Model C, Roadster.—Weight: 25 pounds. Frame: Depth, 23 inches; head, 6¼x1½ inches; drop, 2¼ inches; flush joints throughout.

Model D, Women's.—Weight 26 pounds. Frame: Depth, 22 inches; with options of 19 inches and 24 inches. Handlebars: Reversible upturned, equipped with brake; 1-inch, tapered to ¾-inch; seamless. Pedals: Screw into cranks; made from cold rolled sheet steel and steel drop forgings; moulded rubbers. Gear: 67 1-5 inches; with options 68 4-9 and 74 2-3. Guards: Enameled wood chain guard and rear mud guard only; finely striped; laced with cord to match finish.

Models E and F are men's and women's roadsters, weighing 26 and 27 pounds. Models G and H are juvenile machines for boys and girls.

Imports of bicycles to Italy in 1897 numbered 1,994, of which 810 were American made, 538 English, 337 French and 309 German. In the same year Italy exported 1,036 machines, to Egypt, Switzerland, Japan, Austria and Brazil. In 1896 Italy did not export 50 bicycles.

**QUALITY AND PRICE.**

Columbia bicycles have been for many years the standard of the world, unequalled, unapproached. Although the price has been so greatly reduced, the quality is and always will be the best that human ingenuity can make. How often you hear the remark: "As good as a Columbia," or, "I would have purchased a Columbia, but I got this at a discount." The price is now within the reach of every one who wants the best. No matter how much higher a bicycle is listed, it cannot be sold for more than the price of a Columbia. They are always sold at the list price, and everybody knows that the one price is always the lowest. The great bulk of the people prefer to purchase in stores where goods are sold at one price and where all are treated alike. When any article is listed above its value, it is sold at a cut price and at different prices to different customers, so that no one knows whether he buys at the bottom price or not.

The Pope Company believe, with these new prices, that they give the most for the money that has ever been offered, and yet have not sacrificed quality. Columbia, when applied to a bicycle, means, and always will mean, the best that can be made. The Pope Company challenge the world to produce better bicycles and do not believe that their equals exist.

Hartford bicycles stand next to Columbias, are equal to nearly any other bicycles and superior to most of them. If you cannot have the Columbia trade mark, have the Hartford; both are guaranteed.

The bevel-gear chainless is one of the greatest improvements in bicycle construction, and they advise everyone who can afford to pay \$75, not to purchase any other until he has tried the chainless and satisfied himself of its merits. You never hear any one who has ridden the Columbia chainless say anything against it. Those who criticise are the manufacturers who do not make them and the people who have never ridden them. Their testimony, of course, is of no value. The valuable testimony comes from the one who has had experience with it. Ask any rider who has ridden a Columbia chainless one hundred miles, and see whether he will give it up or not.

The wise buyer will see the Columbia and Hartford line before investing his money in a bicycle.

**Charles Francis Adams' Opinion of the Columbia Bevel-Gear Chainless Bicycle.**

ADAMS BUILDING, 23 COURT ST.,  
BOSTON, October 29, 1898

MY DEAR COLONEL POPE:  
I got back from Europe from my bicycling trip in Holland, up the Rhine and in England nearly a month ago. I have been proposing to myself to write to you on the performance of the wheel you recommended me to buy, but absence from home and pressure of business have prevented my so doing.

I now wish to say that my wheel fulfilled all you promised in regard to it. I found it an admirable machine. I rode in all 800 miles, a large proportion of it over paved roads; and I am a very clumsy and heavy rider. The wheel gave me no trouble whatever, and I did not find it necessary even to oil it. My only disaster was a punctured tire due to picking up a tack in the roadway in Holland. This was soon repaired. Otherwise the wheel stood a very severe wear-and-tear with a success that surprised me.

I also found it a much better machine for hill-climbing than any I had ever had before. In fact its purchase by me on your recommendation proved in every way satisfactory, and the excellence of the machine added immensely to the pleasure and sense of security of my trip. I ceased to be continually anxious lest some disaster should happen to my wheel.

Under these circumstances, I wish to put in your hands this recognition of the wisdom of your advice to me.

I remain, etc.,  
(Signed) CHARLES F. ADAMS.

COL. A. A. POPE,  
223 Columbus Avenue, Boston.

**Be You Rider or Dealer**

**Don't Fail to See Our 1899 Models.**

On Nov. 15th we expect to express to all our Branch Stores sample models of 1899 Columbias, Hartfords and Vedettes.....

We invite every rider in the various cities in which our Branch Stores are located to call and examine our line. We want every Dealer to go to see our Branch House Manager in his territory, and have a talk with him about our policy and prices and look over the new Models. They are the handsomest and best machines we have ever built and we do not believe their equals exist.

At the new prices the dealer who secures the Columbia Agency cannot fail to do the bulk of the bicycle business in his territory, if he makes proper use of his opportunities.

**PRICES**

Columbia Chainless,	-	\$75.00
Columbia Chain,	- \$50.00	40.00
Columbia Tandems,	-	75.00
Hartford,	- - -	35.00
Vedette,	- - -	25.00

**BRANCH HOUSE DISTRIBUTING POINTS:**

BOSTON, MASS., 223 Columbus Ave. Maine, New Hampshire, Eastern Massachusetts to the Worcester county line.	lem, Mercer (except Princeton). State of Delaware, Eastern Maryland, eastern peninsula of Virginia.	NEW ORLEANS, LA., 1757 St. Charles Ave. Louisiana, Texas, Mississippi.
NEW YORK CITY, 12 Warren St. Following counties in New York state: Kings, Queens, New York, Orange, Putnam, Richmond, Rockland, Suffolk, West Chester.	PITTSBURG, PA., 435 Wood St. Following counties in Pennsylvania: Allegheny, Washington, Beaver.	ST. LOUIS, MO., 817 Pine St. Missouri, Kansas, Arkansas, Oklahoma, Indian Territory, Southern Illinois.
Following counties in New Jersey: Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Union, Sussex, Warren, Hunterdon, Somerset.	BUFFALO, N. Y., 609 Main St. Following counties in New York state: Erie, Chautauqua, Niagara, Cattaraugus. Following counties in Pennsylvania: Erie, Crawford, Warren, McKean.	CHICAGO, ILL., 105 Wabash Ave. Iowa, Indiana, Wisconsin, Minnesota, North and South Dakota, Nebraska, Northern Illinois, western half of northern peninsula of Michigan.
PHILADELPHIA, PA., (Hart Cycle Co.) 816 Arch St. Following counties in Pennsylvania: Chester, Lancaster, Lebanon, Dauphin, Schuylkill, Berks, Lehigh, Carbon, Northampton, Bucks, Montgomery Delaware.	ROCHESTER, N. Y., 32 East Ave. Following counties in New York state: Monroe, Orleans, Genesee, Wyoming, Livingston, Wayne, Allegany, Steuben, Ontario, Yates.	PROVIDENCE, R. I., 15 Snow St. Rhode Island.
Following counties in New Jersey: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean, Sa-	DETROIT, MICH., 272 Woodward Ave. State of Michigan, except the western half of the northern peninsula.	PORTLAND, ORE., 134 Sixth St. Washington, Oregon, Idaho, and Montana.
		SAN FRANCISCO, CAL., 344 Post St. California, Nevada and Arizona.
		DENVER, COL., (Gano Cycle Co.) 1614 Stout St. Wyoming, Utah, Colorado, New Mexico, El Paso, Texas.

All points in the United States not specified above will be supplied as heretofore from the Home Office of the

**POPE MFG. CO., Hartford, Conn.**

Mention The Cycle Age

# THE PASTIME AND SPORT

### Michael Sails for Europe.

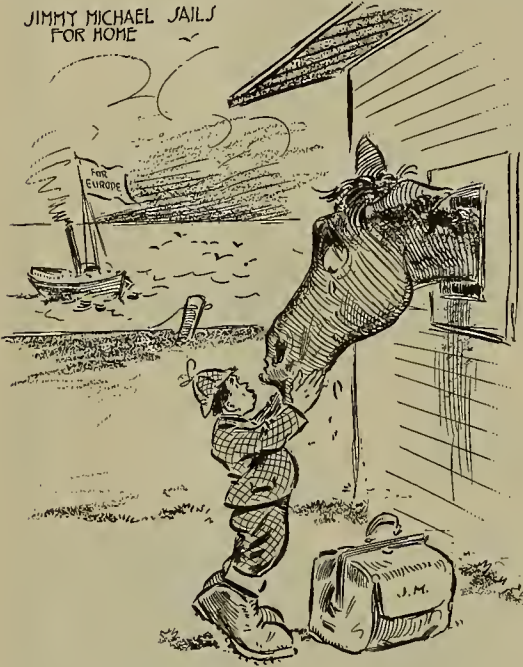
New York City, Nov. 14.—Jimmy Michael and his new mentor and confidential friend sailed on a French line steamer last Saturday for a brief pleasure tour abroad. Michael expects to make a short stay in Paris and then go to visit his family at Aberaman, Wales. He will stay abroad but a little while and may return in time to give some exhibitions behind motor pace during the week of the six-day race, which begins at Madison Square Garden on Monday, December 5. Jimmy still has the jockey bee in his

Boston Meet Club is making special efforts to boom Montreal, as it is proposed to run the L. A. W. championships immediately following. Montreal city council will give a good grant for entertaining visitors. It is proposed to bring from Europe several of the fastest men that can be obtained, and to get some pacing machines from France. The Queen's Park Track, where the races will be held, is well lighted for night races, and it is proposed to put on special attractions for each night. The hotels and railroads are taking the matter up. Special excursion

### Belated Amateur Meet.

New York City, Nov. 14.—A well attended amateur race meet was run off on election day at the Parkville Driving Park, one of the few available tracks in Greater New York which are not under L. A. W. suspension. The main feature of the meet was an hour paced race between Charles Earl, of Brooklyn, and Adolph Michael, of Jersey City. The K. C. W. man had quints and far better pace than the Jersey man, who was confined to triplets. Earl won by about two miles, doing 27 miles, 1560 yards, in the

JIMMY MICHAEL SAILS FOR HOME



WALTERS WINS 50 MILE RACE IN PARIS



"MAJAH" PLACES MILE FIGURES AT 1:32 FLAT



FIRST MOTORCYCLE RACE MEET IS RUN IN FRANCE



CHARLEY MURPHY GIVES ALCYONER THE HORSE LAUGH



KENNEDY SAILS FOR HOME WITH FOREIGN CRACKS

bonnet and is thinking more of making his debut in the saddle than of kicking the pedals next year. There is even a chance that he may ride horses at New Orleans or in California the coming winter.

### Arranging for International Meet.

Montreal, Nov. 14.—The World's Meet Committee is hard at work getting into line for the championships in 1899. It has been decided to make the evening of November 28 a cyclists' night, when all the bicycle clubs will unite in general festivities. Lord Minto, the new Governor General, will be asked to accept the patronage of the meet. Mayor Prefontaine accepted the honorary presidency and is very enthusiastic over the meet. The

rates will be given from Pacific coast points and already cyclists' parties are being formed on the coast to attend the international meet in a body.

### Elliott Elected by Big Plurality.

Springfield, Mass., Nov. 14.—Sterling Elliott received 3,222 votes out of 3,956 at the annual election of the Massachusetts division L. A. W. Dr. A. A. Bryson, of Fall River, was elected vice-consul and Aaron Wolfson, of Dorchester, secretary-treasurer. Wolfson had but eight majority over Arthur K. Peck, who ran on an independent nomination, the vote standing: Wolfson, 1,724; Peck, 1,716. The election committee claims that it recounted the votes and that there can be no doubt concerning Wolfson's election.

hour, the amateur record being 29 miles, 846 yards, held by John Nelson, of Chicago. An interesting contest was at half-mile heats between Charley Murphy and the unguided pacing horse, Neil Alcyoner, which the professional cyclist won in straight heats. Collett and Hausman had a pretty fight at the finish of the two-mile handicap. Summaries:

- Quad pursuit race, three miles limit: Tollner, Hurly, Lott and Doyle, first; Malcher, Bechman, Haviland and Donnelly, second. Time, 7:10.
- One-mile amateur championship of Brooklyn, final heat: W. P. Kutchen, first; A. G. Relyea, second; F. Moller, third. Time, 2:22 2-5.
- Cycler vs. horse, half-mile heats: C. M. Murphy, cyclist, first; Neil Alcyoner, pacing horse, second. Won in straight heats, times 1:12 4-5 and 1:07.
- Two-mile handicap: E. C. Hausman,



scratch, first; G. H. Collett, scratch, second; J. F. Rogers, 125 yards, third. Time, 4:47 2-5. One-hour paced race: Charles T. Earl, first; Adolph Michael, second. Distance, 27m., 1,560 yds.

### FRENCH MOTORCYCLE RACES

**Two-Days' Meet at Lille Draws Select Attendance—Femine Motorcyclists Participate.**

The first big motor bicycle race meet ever held took place at Lille, France, on October 31 and November 1. There was a fair attendance of the most select persons of the city. The final of the 2,000-meter amateur championship was won by Lamon, with Madame Accou, who is an expert motorcyclist, second, and Pallet, third. Time, 4:19. The professional championship was run in three heats and a final, and was won by Courbe in 5:47, with Marcellin second and E. Accou, third. A tandem motorcycle match at six kilometers, between "mixed" teams—male and female riders—was won by Dutrieux and his sister, Mlle. Dutrieux, defeating Courbe and Mme. Accou in two straight heats, covering the distance in 6:56 4-5 and 7:08 1-5, respectively. In a 50-kilometer match Marcellin defeated Osmont by a quarter of a mile in 1:06:07 4-5.

On the second day a 4,000 meter motorcycle race was run in three heats and a consolation to qualify. Courbe won the final in 7:42 2-5 by five inches from A. Accou, second, and S. Accou, third. On the first turn Dutrieux and S. Accou collided and damaged both machines, but Accou secured another machine and finished third.

### WALTERS THE VICTOR

**Wins Fifty-Mile Paced Race from Bouhours, Bourotte and Simart—Armstrong Bakes Himself.**

Paris, Nov. 4.—The fifty-mile race, with pacemakers, at the Parc des Princes Velodrome last Sunday, resulted in favor of the English competitor, Walters, who easily defeated Bouhours by 500 meters, while Simart and Bourotte were respectively six and eight laps behind. Armstrong, the other British representative, led to the thirteenth kilometer at a killing pace, but nine kilometers later had to drop back, being thoroughly exhausted. He did yeoman service, however, for his fellow countryman, as long before the finish the Frenchmen were "baked" and Walters won just as he pleased, his time for the whole distance being 1:37:11 2-5. Walters, Armstrong and Bouhours were paced by two electric tandems, while Simart and Bourotte were paced by petroleum tandems. The scratch contest, in heats of 1,000 meters, went to Carmant, who defeated Nieuport, Bourotte and Boulay. Despite the fine weather there was but a moderate attendance, and the general opinion of those present was that long distance contests are a mistake so late in the season.

### Abandonment Sentiment Growing.

As the time approaches for the National assembly the likelihood of the prevailing sentiment being in favor of the relinquishment of the control of racing by the League increases, and the chances of racing officials, handicappers and others pecuniarily and politically interested in the retention of race control being able to persuade the L. A. W. to hold on and make a fight diminishes. Chief Consul Belding and Vice-Consul Fullerton, of the New York division, are among the many who believe that the L. A. W. will be better off unhampered by race government, and they may head a unanimous delegation from the Empire state to vote for the abandonment of racing control, unless Potter can rally the delegation

to the support of his friend Mott and chooses to perpetuate race control that he may continue to have handicapperships and other racing offices at command for purposes of political reward and punishment. With Belding, of New York, Elliott, of Massachusetts, and Collins, of Pennsylvania, open advocates of racing abandonment, there is a powerful nucleus for anti-racing sentiment at the National assembly.

### MILE IN 1:32 FLAT

**Taylor Secures the World's Record Under Adverse Conditions—Half and Third Also Broken.**

Philadelphia, Nov. 14.—Last Saturday, at the end of a windy, rainy week, Major Taylor was enabled to wrest from Edouard Taylore, the coveted mile record. The weather was cold and raw, ice having formed at the track during the night, but when, shortly after 3 o'clock, the brisk northwest wind partially died down, Taylor's manager decided to make the first attempt at the mile. The preliminary warm-up over, the dusky flyer was sent away behind the Crooks quint. The first third was done in :29 1-5. A marvelous pick-up by the Sager quint team, followed by a somewhat slower third, landed the major at the two-thirds pole in 1:00 3-5. When the Callahan team came in to make the pick-up they started too soon and Taylor had to sprint past the Sager quint and close a five-yard gap to catch the Callahan quint going at full speed. With Manager Ward yelling offers of extra pay, they carried the Major the last third in :29 2-5, and as his front tire crossed the tape all the official watches recorded 1:32 flat, three-fifths of a second under the world's best previous time.

After a very brief rest the black wonder went for the half-mile record behind the quint mounted by Crooks, Fisher, Echberg, Cleeland and Newhouse, who carried him all the way because the Callahan team failed to pick him up on the bank. The time for the half was :45 4-5, breaking the record of :48, allowed to Willie Windle by the League, although Johnny Johnson claims :44 1-5, made at Nashville in October of '96. Not satisfied with this time, Taylor went for the half again behind Callahan and Sager teams. There was some confusion in the pacing, causing Major to swing wide, but he cut one-fifth of a second from his previous time, putting the figures at :45 3-5.

Today the coming American champion officially added the third-mile record to his slate, by tying his best previous time of :29 4-5, made in his first third in the successful mile record ride Saturday. This breaks the record of :30 3-5 made by E. Taylore at Willow Grove, August 6 last.

Next week Taylor will try to put the mile figures at 1:30 flat, and may go for the five-mile record also. The machine he is riding is an Orient, fitted with the Sager roller-pin gear.

Some idea of the expense of securing world's records may be had from the statement that the weekly salary list of Taylor and his assistants totals close to \$800, besides which the Major and his pacemakers come in for bonuses for each world's record captured—the colored wonder pocketed \$500 extra for the mile and \$100 extra for each of the others; so that his stay in this city has cost his employers up to date but little short of \$3,500.

In the early part of the week Taylor had to suspend his efforts owing to the fact that the tires on his quintuplets were coming loose, and he had to telegraph to Boston for the only expert who can attach these large tires to big pacing machines so that they will not creep and cut off the valve. The explanation offered for this loosening is that the heat developed

within the tires by the rapid motion under nearly half a ton weight, softens the cement, which is then thrown off in fine threads by the centrifugal force, and the tires, thus freed, slip along the rims.

### JACQUELIN WINS IN ITALY

**Defeats Protin at Turin by Inches at the Tape—Banker Third in Tandem Race.**

The final of the Grand Prize race run on the third day of the Turin meet, October 30, was one of the finest races ever given on the Umberta track in Italy. In the first semi-final, Meyers won after a splendid fight by inches from Jacquelin, Eros and Bixio finishing in third and fourth places, respectively. In the second semi-final Singrosso defeated Protin by half a wheel, and Broca and Momo secured third and fourth places.

Protin (Belgian), Meyers (Dutch), Jacquelin (French), and Singrossi (Italian), started in the final, changing pace at every lap until the bell, when the order was: Meyers, Jacquelin, Singrossi, Protin. Entering the last turn, Protin began his sprint, but Jacquelin followed, and coming down the home stretch gradually, worked up in front. Less than ten yards from the tape the plucky Belgian was still ahead, but in a last tremendous effort Jacquelin passed Protin and won by a small margin. Meyers was third and Singrossi last.

The tandem race was won by Ferrari-Bixio, with Eros-Cesotte second and Banker-Grogna third. Tomaselli won the consolation race from Yaap Eden and Magli.

### Will Wait Till He is Champion.

Taylor, when interrogated at Woodside park concerning the European trip which it has been reported he will take next season, said: "Unless it be as champion of America, I shall never race on the other side. I realize now that I abandoned all my championship prospects when I left the outlaw circuit just before the Cape Girardeau meet. But I couldn't stand the treatment there; however, there's no use crying over spilled milk. When I joined the outlaws it was in good faith, and with the firm belief that could I but win the championship from such an aggregation of first-raters, no one could question my title. Had I remained with the L. A. W. and raced here and at Baltimore and New Haven I would surely have gained the top of the ladder; but just as everybody is now laughing at the notion of Tom Butler being the national champion, so they would have laughed had I won the title against mediocre men—and I couldn't stand that. While I have a number of claims on the '98 championship they do not make me the champion. With one exception I have beaten every white racing man oftener than he has beaten me, and my percentage in the championship and in general competition is better than that of any other one man."

### NEWS IN BRIEF.

The new chief-consul of the New York division L. A. W., M. M. Belding, will strive to boom his division membership and regain the leadership now seemingly lost to Pennsylvania. Local organizations are to be established in each town and district where membership warrants it, and these will be kept in close touch with the division "cabinet," which will comprise the heads of all departments of state work, who will meet frequently to discuss plans with the chief-consul.

New York City, Nov. 12.—A cable was received today at the offices of the American Cycle Racing Association, notifying them that James C. Kennedy sailed from Southampton on the St. Paul for this country, having signed five riders for the New York six-day race out of many foreign cracks



# Barnes Bicycles

THE pathway of the retailer is generally a hubby one, but the THINKING, FAR-SIGHTED dealer has the easiest time of it and makes the most money simply because he selects a line of wheels which require no talk to convince people of their superiority, and which having been ridden prove to be even better than they look.

The Barnes line for 1899 is LONG on looks, and still LONGER on reliability. It is the catch of the year for any agent.

All you can lose is a two-cent stamp by registering your application with us for the agency, then if the samples are not up to our talk, don't close. The White Flyer line has usually made a hit. For next year it promises to make several hits.

THE BARNES CYCLE COMPANY, - Syracuse, N. Y.

Mention The Cycle Age

# STERLING CYCLES

*Built Like a Watch*

*Sterling Quality  
Maintained...*

## Announcement!

*1899 Models Now  
Ready.....*

Road Models,	- - - -	\$50.00
Racer,	- - - -	65.00
Chainless,	- - - -	75.00
Diamond Tandem,	- - - -	75.00
Convertible Tandem,	- - - -	85.00

WE ARE  
PREPARED  
TO  
TALK  
AGENCY

TIRES

Palmer \* Kangaroo \* Goodrich \* Dunlop

SADDLES

Christy, Wheeler, Hollenbeck, Garford, Plew

*Sterling Cycle Works,*

*Kenosha, Wis.*

Mention The Cycle Age

who were anxious to be included in the number. Besides the quintet of long distance men, Mr. Kennedy arranged with several of the foreign short distance men to come to this country. It is probable that the short races at Madison Square garden this winter will be as cosmopolitan in aspect as the six-day affair. On the St. Paul with Kennedy are Frederick, Joyeux, and Teddy Hale. Stephane and O'Halloran will sail on a later steamer.

"The first meeting of the A. R. C. U. was held in Bald's room in a hotel at Philadelphia. All were invited to be present," said Owen Kimple, after his return home from the circuit. "Bald was made chairman. The discussion got warm, and all of us took part. Cooper, who had not spoken to Bald for several years, dugested around on the edge of a bed, where he was sitting, and finally could contain himself no longer. He blurted out: 'Now, Eddie, it's this way, and we all know it.' Bald looked at him coldly, turned red, and started to say something about addressing the chair respectfully; then he changed his mind and said pleasantly: 'Yes, Tom, that's so.' The hatred of years was wiped out, and the two rivals have been on good terms ever since."

The "bicycle hazard" in life insurance appears to have been largely overrated, judging from recent reports of several insurance companies. One reports having paid accident losses aggregating \$100,000 during the years 1893 to 1896, inclusive, to claimants injured while using the horse, and \$250,000 to persons injured by fire-arms, while during the same period only \$60,000 was paid to injured cyclists. An expert insurance man also states that bicycle accidents seldom disable a man for more than a few weeks, while in case of horse accidents the full weekly indemnity usually has to be paid during a long period.

A Peoria, Ill., wheeman voiced a feeling entertained by most old-time cyclists, when he said recently: "A great change has come over the sport. The wheel has become a common article of everyday use, and the days of clubs, runs and special wheel literature are about over. The low prices are bringing out a new lot of riders every year, while some of the old ones get tired and drop out. In a short time the bicycle will settle down to its real place as a comfort and convenience. People will use it because it saves them time and strength, and not because it is the prevailing fad."

McDuffee's manager, C. R. Culver, writes from Atlanta, Ga., where his charge is training and racing, that McDuffee does not intend to go for paced records in Jacksonville or any other place this winter. He is seeking a match race with any rider in the world for a suitable purse, and if he cannot arrange one within the next three or four weeks, will go to Italy about December 15, a good proposition having been received from parties there.

The official programme for the Olympian games to be held during the international exposition at Paris in 1900 has just been published. Among the committee having the arrangement of the sports in charge is W. M. Sloane, of New York. The bicycle events include an unpaced scratch race of 2,000 meters, tandem scratch race of 3,000 meters, and a paced race of 100 kilometers in which motor pacing will not be allowed.

A comparison between Elkes' hour record made at Willow Grove, August 6, behind human pacing, and Huret's trial, behind petroleum tandems with wind shields, made at Paris early in October, shows that the Saratoga lad covered the equivalent of 55 kilometers, 331 meters, as against the Frenchman's 52 kilometers, 333 meters, a difference of 2 miles and about 300 yards.

Brazil has at present nine bicycle tracks and three more are under construction. The last are all cement, and of the nine others four are cement, two cinder, two macadam and one brick. At two of the tracks, races are held at night by electric light, while some of the others are lighted by coal and acetylene gas. Big meets are held on Sundays and holidays.

Peoria Bicycle Club of Peoria, Ill., is divided against itself on the question of League membership and whether the \$300 yearly L. A. W. dues of its members shall be paid into the League treasury by the club or by individual members. Most of the club members wish to remain in the League, but object to the heavy tax on the club funds.

The Thanksgiving night races at Madison Square Garden have been abandoned, owing to the impossibility of putting in the track in the short time allowed by the other Garden engagements. The first indoor meet will therefore not be held until December 3, the Saturday evening preceding the start of the long grind.

The riders' syndicate of Paris, which holds a somewhat similar relation to the racing af-

fairs in France that the A. R. C. U. does in this country, cleared more than \$900 on its recent big race meet in Paris. The expenses, including \$1,500 for prize medals, aggregated \$1,399, while the receipts were \$2,310.

A state bicycle path is being built from the south line of Michigan to Straits of Mackinac. Funds for the purpose are secured from cyclists by the chain letter system and contributions are being received from all parts of the country by the State Bicycle Path Association at the rate of \$100 per day in sums of from ten cents to one dollar. Work has been begun in the vicinity of St. Johns and is progressing nicely.

According to the New York Evening Journal, there is a scheme on foot to form a new body for the purpose of controlling amateur cycle racing. The projectors are as silent as the proverbial bivalve, it is said, because they are awaiting the action of the National assembly. It is more probable that the Journal has overstrained its ears to catch the rumor and now finds nothing to substantiate its statement.

Tom Cooper is credited with having become more wealthy by his racing career than any other cyclist in the world. He was the principal owner of a paying concern in Detroit which recently sold to an English syndicate for \$12,000, and he now holds stock in a telephone company that pays him 187 per cent dividend. In 1893 he was clerking in a drygoods store for \$5 a week.

Fred Schinneer is hard at work in Chicago climbing the stairs of the Masonic temple many times a day from bottom to top, and running backwards for miles to strengthen the muscles of his legs. This is his unique method of training for the coming six-day grind in New York.

Smith N. Fowler of Chicago is arranging a winter cycle racing trip for a few chosen first class men to Bermuda Islands for several months, Florida for a month, and probably Cuba. The start will be delayed until the middle of January, when the Madison Square Garden races are over.

Pennsylvania will probably put a candidate in the field for the League presidential race in the person of T. J. Keenan, now first vice-president of the League. If he cannot make it, a combination on Kireker, of New Jersey, will be the logical outcome.

The draft of the constitution and by-laws of the new racing association has been completed and will be submitted at a convention of track owners and race promoting clubs, to be held in New York during the six-day race meet.

The season's winnings of German riders are given as follows in a foreign exchange: Arend, \$4,431; Verheyen, \$1,731; Breiting, \$1,067; Koecher, \$1,056; Mundner, \$1,049; J. Fisher, \$1,003, and August Lehr, \$316.

Pennsylvania now leads in L. A. W. membership, having passed New York last week. Secretary Bassett's last official report shows the Keystone State to have 115 more League members than the Empire State.

Heydon and Thackwaite of England placed the world's hour amateur tandem figures at 29 miles, 1,110 yards at the Crystal Palace on November 1, lowering the former record by 332 yards.

Tom Eck takes exception to some of the personal statements made against him by Chairman Mott in one of his recent bulletins, and there are hints of another libel suit.

Nat Butler will enter middle distance racing Thanksgiving day, when he meets Harry Elkes at Troy, N. Y., in a match race on an eleven-lap indoor track for a purse of \$1,000.

Sager, who steers one of Taylor's quints, will try for all unpaced records from ten to fifty miles at Woodside Park track, during the present week.

Collett and Hausman, the fast Connecticut amateurs, contemplate opening a retail cycle store this winter.

## MISCELLANEOUS.

Advertisements under this head 5 cents per word first insertion, 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received.

### WANTED

**WANTED**—Pacific Coast traveler desires position with bicycle house placing agencies this winter. Address LOGAN CYCLE Co., Hollister Cal. 1

**WANTED**—Position; twelve years with bicycle firm who are going out of business. Address. M. A. C., care Cycle Age.

**WANTED**—To furnish some reliable jobber with bicycle cements, enamel, polish, chain graphite and lubricating oil for next season. Send in your contracts. LOUIS E. DETTMAN CYCLE Co., Marinette, Wis.

**WANTED**—Position with reliable sundry and bicycle fittings house; indoor or on road; twelve years' experience; competent to take full charge of business; thoroughly acquainted with and control large amount of trade; now employed but wish to make a change. Address CYCLE, care Cycle Age.

**WANTED**—Salesman to carry a special bicycle saddle on commission as a side line. This saddle will be extensively advertised and is an easy seller. WM. B. RILEY & Co., 324 Market St., Philadelphia, Pa.

### Mail us your Subscription.

**WANTED**—Manufacturers' agent to handle a good line in Chicago and vicinity; prices such that large trade can be sold; address with references, S. E. G., 35 Warren St., New York City.

**WANTED**—Position as foreman of assembling room; ten years' experience; best references. Address, ASSEMBLING, care Cycle Age.

**WANTED**—Agents throughout the United States and Europe to sell the Best Double Roller Chain on the market; large commission; every chain warranted. THE ETNA HARDWARE Co., Unionville, Connecticut. \*

**WANTED**—Old bicycle tires and scrap rubber. How much have you? THE TREMONT RUBBER COMPANY, New York City.

### FOR SALE

**FOR SALE**—Punnett Companion, A1 condition, for sale cheap or will exchange for '99 wheels. L., care Cycle Age.

**FOR SALE**—One Fox Machine Co's gas brazer complete, at a bargain. THE CARLISLE MFG. Co., cor. Clinton and Jackson Sts., Chicago, Ill.

**CHAINLESS BICYCLE**, straight gear, easily changed, light weight, low cost, hill climber. Will either sell patent, place on royalty or arrange with capitalist to manufacture. Perfect working model, thoroughly tested. Photograph at Cycle Age office. Address R. F. BARTEL, Bayonne, New Jersey.

### Mail us your Subscription.

**1899 REFEREE BICYCLES**—We are making special prices for early quantity deliveries; capacity 100 daily. REFEREE CYCLE Co., Office 309 56 Fifth Ave., Chicago.

**FOR SALE**—Bicycle Chain Plant; in use two seasons; capacity, 200 chains per day; Gas Generators, Sprocket Miller, Hub Machinery, Wheel Truing Stands and other bicycle machinery; owners retiring from business. For particulars and prices, address THE MOORE CYCLE FITTINGS Co., Harrison (Newark), N. J.\*

### Mail us your Subscription.

## COMPLETE CHAINS, 19c.

In lots of 100 and upwards.....  
Less number..... 22 cents

**CHICAGO HOUSE WRECKING CO.,**  
35th and Iron Streets, - Chicago, Ill., U.S.A.

## The New Christy Racing Saddle

A slight swerve may mean the loss of a race. The long pommel gives just the support needed to keep the wheel steady in a spurt. Eddie Bald, Jimmy Michael and Earl Kiser use it, and they cannot afford to have anything but the best.

ONCE A CHRISTY RIDER ALWAYS A CHRISTY ADVOCATE.

**A. G. SPALDING & BROS., - New York and Chicago**

# THE CYCLE AGE

## AND TRADE REVIEW

VOL. XXII—No. 4.

CHICAGO, NOVEMBER 24, 1898.

NEW SERIES No. 53.

### OUR CANADIAN TRADE GROWS LARGER RECIPROCITY NEEDED

Comparative Statistics Show That for Five Years Past England Has Been Losing Ground.

The course of the general trade of the United States with Canada has for some years been one of expansion. Variations in its amount have occurred, owing to tariff changes and the lower or higher capacity of the Canadian people to purchase foreign goods, but these variations have been only temporary in their effect when they restricted the imports into Canada of goods from the United States. It is more convenient for Canadians to purchase in the United States than from any other country; but to obtain their custom to the fullest extent, they must be allowed to enter their products into our markets without excessive duty. By a larger reciprocity the United States would be greatly the gainer.

#### Shrinkage in Cycle Imports.

That our cycle, parts and sundry makers have not of late obtained their share of the benefits arising from this general expansion of trade between the two countries is not strange when pause is made to consider the growing condition of the bicycle industry in the Dominion, the activity of its makers and the striking similarity between the products of their factories and ours. The Canadian agents, however, are yet firm friends of our makers, a statement fully supported by the figures contained in the following table, which presents the volume of cycle exports to Canada for the eight months ending with August, 1896, 1897, and 1898, in comparison:

1896	\$492,123
1897	672,036
1898	541,674

#### England Losing Her Hold.

A comparison of the statistics of imports of manufactured goods from the United States into Canada, from 1893 to the close of the last fiscal year, ending June 30, 1898, with the statistics of imports from Great Britain into Canada for the same period, shows with striking clearness the fact that the United States has been gradually but steadily capturing more and more of this trade, while Great Britain during the same period has been losing its hold. It is the opinion of importers of such goods from the United States as come more or less into competition with those from Great Britain, that the discrimination in favor of British goods of a 25 per cent reduction in duty will have only a trifling effect, if any at all, upon the volume of imports from the United States.

Canadian consumers of the leading articles made of iron or steel, or a com-

bination of them, and of other metallic goods, show such a decided preference for those goods made in the United States that they will not take British goods, even if the preferential duty cause them to be proportionately lower in price. At the same time, they consider it would be well for United States manufacturers to avoid presuming upon the advantage they have acquired, by indifference to the quality of the goods they send to Canada, by less careful packing, or by neglecting to keep in close and constant touch with importers, whose ideas as to local tastes and requirements should be carefully studied and as far as possible met.

#### Danger Lurks in the Tariff.

Although the present tariff in favor of British goods is not sufficient to change the current of trade, to any marked extent, from the United States to Great Britain, a much greater reduction of the duty on British goods might have some effect in that direction, especially if British manufacturers awoke to the necessity of catering more skillfully to the needs of the Canadian consumers. The possibility of such changed conditions arising needs to be considered by United States manufacturers, who will show wisdom in preparing to meet a more active competition from British-made goods, that may arise in the future. The more thoroughly we satisfy the Canadian importers in quality, price, terms, and other details, the more assured will be the prospect of our keeping and advancing our hold on the Canadian market.

#### Postage Rates May be Changed.

Canada is about to make an important change in her postage rates. After December 25 there will be three rates of postage on letters, viz., 2 cents for Great Britain and her colonies, 3 cents for Canada and the United States, and 5 cents for foreign countries. If the experiment proves satisfactory, the postmaster-general, it is understood, will then reduce letter postage in Canada and to the United States to 2 cents.

#### Old Bicycles Returned to England.

It is stated upon good authority that 3,000 English bicycles of 1897 pattern are on the way back from Australia, where they had been lying in bond.

### TO FIGHT "JUNK DEALERS" CASE CYCLE RETAILERS ASK HELP

Tradesmen Organize to Carry Tax Case Against Second-Hand Dealers to Higher Court.

Washington, Nov. 21.—The bicycle dealers who were recently arrested on the charge of conducting a second-hand business without the formality of having paid the license tax of \$40, have issued a circular to the merchants in various lines of trade who would be affected by such tax, inviting their cooperation in fighting the case. The circular says, in part: "It is the intention of those interested to fight this case in the Court of Appeals, but we do not intend to fight it ourselves and pay the costs of this case and let all others get the benefit. Our plan now is to take up a subscription of a small amount from each one and cover the costs in the Court of Appeals, and it will be only a small amount each one will have to stand; otherwise, we will let the case go by default, and we presume you would rather help out in this manner than be compelled to pay the tax of \$40 per year. We have every assurance from our attorneys that the decision of the police court will be reversed in the upper court."

#### Other Trades Affected.

The circular also sets forth the decision of the police court to the effect that all bicycle dealers who take old machines in part payment for new machines are liable to the tax, and concludes with the following extract from the Cycle Age of November 10: "The prosecuting attorney stated that should the Court of Appeals uphold the decision, it will mean an annual increase of about \$100,000 in the revenues of the district. A decision against the dealers, he said, will mean that all business men who take second-hand goods in part payment for new, and then dispose of the old goods, will be liable to a license tax of \$40. Dealers in bicycles, typewriters and harness will be among those who will be most affected."

#### Organize to Seek Aid.

Pursuant to a call, a meeting of the merchants who are likely to be affected if the decision of the lower court is sustained, was held Tuesday evening and temporary organization effected. Representatives of various trades were present and much interest was manifested. The following officers were elected: J. D. Lasley, chairman; John Woerner, Jr., secretary, and J. G. Taylor, treasurer. A finance committee, consisting of one member from each of the following trades, bicycles, stoves, carriages, harness, barbers' supplies, typewriters, sewing machines, pianos and organs, was elected, and the members were instructed to urge the dif-

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ferent dealers in their respective trades to lend their aid in behalf of the movement.

The case of J. D. Lasley was thoroughly reviewed and it was unanimously agreed to carry the case to the higher court. Great stress is laid upon the fact that while dealers occasionally take in second-hand bicycles in part payment for new, yet this is only an incident to their general business, and in view of the fact that courts in other jurisdictions have held that such dealers are not liable to a tax as second-hand dealers, it is felt that the Court of Appeals must recognize the precedents established by other courts in similar cases.

Another meeting has been called and the case will then be put in shape to present to the higher court.

### MAIL FRAUD SUPPRESSED

Toledoan is Arrested for Using the Mails to Dispose of Toys Advertised as Bicycles.

Toledo, Nov. 21.—D. Frank Dreher, a well-known citizen of Toledo, has been bound over to the federal grand jury under \$500 bail, on complaint of the United States postoffice authorities, charged with using the mails in the furtherance of a scheme to defraud.

For a long time the "Monarch Cycle Company" has been receiving great quantities of mail. Lately there have been complaints to the postoffice authorities about the "Monarch" company, and the result was that Dreher was arrested in the act of taking letters from the "Monarch" postoffice box.

Dreher is accused of having sent thousands of circulars about the country in which the merits of the "Monarch high-grade cycle" were expatiated upon, the regular price of the machine being named as \$40, but offering in consideration of \$3.90 to send a fine model, providing the purchaser would give his word to "use his influence to sell three high-grade wheels at the regular price of \$40 each."

Just how many remittances of \$3.90 were received in response has not been learned, but some of the senders complained to Uncle Sam, for instead of receiving a rideable bicycle for the money invested they got nothing but miniature models, or mere toys.

When arraigned before United States Commissioner Brough, Dreher waived examination and he was bound over to the grand jury.

### Gains of English Makers.

In the following table, showing the profits or losses made by English cycle, parts and material houses during the past year, there is abundant evidence that the industry is still full of vitality. The figures are obtained from published company reports, which are made compulsory by law.

	Loss.	Profit.
Diamond Cycle Components Co. ....	\$ 8,000	
Ormonde Cycle Co. ....	39,000	
Alldays & Onions (bicycles)....	50,000	
Eadie Chain Co. ....	16,000	
Enfield Cycle Co. ....	47,000	
(a) Brooks & Co. (saddles)....	150,000	
Wearwell Cycle Co. ....	25,000	
(b) Eadie Mfg. Co. ....	47,000	
Simple Gear Case Syndicate....	8,000	
(c) New Premier Cycle Co. ....	248,000	
(d) Beau Ideal Cycle Co. ....	10 pc. div.	
(e) New Rapid Cycle Co. ....	\$70,000	
Cycle Mfrs. Tube Co. ....	38,000	
(f) Tubeless Tire Co. ....	93,000	

(a) The sum of \$75,000 was passed to reserve.

(b) The capital stock of this concern is \$700,000.

(c) A dividend of 5 per cent was declared, and \$100,000 was passed to reserve, making the reserve fund \$500,000.

(d) This concern is capitalized at \$150,000. A dividend of 6 per cent was also paid on preferred stock.

(e) This firm is capitalized at \$750,000. Its directors reported a complete collapse of the company's foreign trade.

(f) Of this loss \$50,000 is traceable to defective construction.

## THE DULL SEASON ELIMINATED

### EFFECT OF GROWING EXPORTS

#### Rapid Development of Our Foreign Trade Keeps Factories Busy the Year Around.

It has become one of the traditions of the bicycle trade that the late summer and fall months of each year constitute a "dull season" during which most of the factories are either shut down or manufacturing operations are practically suspended until productive activity reawakens about this time of year. But through the rapid development of our export trade this accepted belief, once true, has become one of the greatest fallacies of the industry. The demands of foreign countries now keep the wheels of the bicycle industry in almost constant motion from one year's end to the other, so that even the temporary shut-down of a week or a fortnight in mid-summer for repairs and inventory, though essential, becomes an unwelcome interruption.

#### Markets Always Open.

With the markets of the entire world open to our manufacturers and exporters, shipments can be made to some part of the globe during every month of the year, since in Australia, South Africa, South America and other countries in the southern temperate zone the riding season opens just when ours closes, and in tropical countries trade is open all the year around. Moreover, the purchases of American parts and materials by European countries, which have been growing at a most gratifying rate during the past year, provide the manufactories here with a branch of work that can be done during the once "dull months."

#### Recent Large Foreign Shipments.

Just now the export demand is very active. In the November 10 issue of Cycle Age mention was made of a shipment of 1,000 Snell bicycles to Malmo, Sweden, by the Snell Cycle Fittings company of Toledo. On November 12 the Stover Bicycle company of Freeport, Ill., shipped 600 Phoenix bicycles to Stockholm, Sweden. The Geneva Wheel company of Geneva, O., recently sent a shipment of 100 machines to the same place, and the Acme Cycle company of Elkhart, Ind., has just filled an order for 300 Acme bicycles for Stockholm and another order for Cape Town, South Africa.

The Peoria Rubber & Mfg. Co. of Peoria, Ill., has begun work upon large export orders, turning out 100 machines daily. Among a number of orders placed on November 11 by a New York export firm for a diversified list of articles to be shipped to London at an early date were orders for 650 first-class bicycles, and 900 hand pumps. A fortnight ago the W. R. Rollins Mfg. Co. of Harvard, Ill., made a large shipment of bicycles to London, and the Dudley Cycle Works of Menominee, Mich., filled an order for nipple grips for a dealer in Cape Town.

#### Hard Order to Fill.

An order was received last week by a New York export firm from Stockholm for 10,000 bicycles, but the conditions attached were almost impossible to fulfill. The price limit was a very low one, yet the importers wanted a year's guarantee with each machine, and the order called for deliveries at the rate of 1,500 per month.

A consignment of bicycle rims was shipped by a Winona, Minn., factory to Germany on November 12, and another order is being filled for the same country.

The Australian and the South African markets for cycles have been expanding rapidly of late and with the reduced

prices of American first-class bicycles there is good prospect of a large export trade with those countries during the coming season unless the prevailing prices of English machines are materially lowered.

About forty bicycles were imported into Chiengmai, Siam, during 1897, chiefly of American, German, and French manufacture, the American machine being the most popular, owing to its cheapness and durability.

### MEET TO FIX PRICES

New York Jobbers of Sundries Endeavoring to Fix Schedule for Retail Trade.

Representatives of all the leading jobbers of bicycle accessories and fittings in New York City met recently to establish a schedule of prices for selling this character of merchandise over the counter to the small city trade. Of twenty-seven jobbing houses, representatives of twenty-three were present. Two committees were appointed. One of the committees was charged with formulating and submitting a schedule of uniform prices for the class of local trade referred to, and consists of representatives of the following concerns: Hartley & Graham, John S. Leng's Son & Co., R. H. Ingersoll & Bro., J. Frank, Miller & Schnauffer, Schoverling, Daly & Gales, with C. Murray Rice ex-officio member. The other committee was appointed to confer with organizations of like nature, relative to sustaining the schedule of prices when established.

A meeting was held last Monday for the purpose of hearing the reports of the committees appointed at the first meeting. The price committee reported its inability to agree on prices for standard sundries and the committee was discharged.

A committee of ten was appointed to call on the jobbers in the district and find out if they would bind themselves to abide by a scale of prices to be adopted, with a penalty of \$250 for violation of the agreement by a principal and \$25 if by an employe. This committee has power to call another meeting if it should develop that a sufficient number of pledges are obtained to the agreement.

### Suppressing Coupon Trading System.

Washington, Nov. 21.—The prosecuting attorney of this city has sworn out warrants against the Merchandise Investment Co., and Harry King, manager of a large department store, charging them with conducting gift enterprises in violation of the law. The investment company is said to operate a coupon book system similar to one with which dealers in cycle sundries have been approached in different cities during the past year. The plan worked by the department store is said to be precisely similar to the trading stamp system used by the National Trading Stamp Co., which was forced out of business last year. Among the articles proposed to be given away were bicycles of a well known make. Both cases will be tried shortly.

### Cycling Popular in Berlin.

The Berlin police department has issued 67,500 cycling permits during the past three years, and adding the estimated number of unauthorized riders, and the 30,000 cyclists of the suburban districts, the total number of cyclists in Berlin and its environs is placed at 110,000. The population of the German metropolis and its environs is 2,000,000 in round numbers, which gives 55 cyclists to each 1,000 of population.

Bicycles to the value of \$1,500 were recently shipped to South Africa by a Canadian maker.

**ORGANIZE ONLY, INFORMALLY****PARTS MAKERS' PLANS BROADEN****Representatives Meet in New York and Elect President and Secretary—Committees Appointed.**

New York City, Nov. 21.—The nucleus of what may eventually become a more formal organization was developed at a meeting of parts manufacturers held here last Thursday. The suggestion as to the lack of formality in the organization refers only to the fact that while the Cycle Parts Manufacturers' Association was formed, with R. H. Ramsey, of the Ramsey Swinging Pedal Co., as president, and I. H. Dreyfuss, of the Stockton Mfg. Co., as secretary, no constitution was adopted, and no agreement to sign any compact was reached. The promoters and organizers deemed it expedient that no constitution be adopted and no agreement signed for the present, until the objects of the association are more satisfactorily and completely determined upon and embodied in some more formal declaration of conduct. The fact is, Dr. Stockton's scheme has outgrown its original purport and now looks to a combination of the separate branches of the partsmaking trade, with each branch, to a certain extent, looking after its own particular interests.

**Government by Committees.**

In general it is proposed to have the classification of goods and the scale of prices, as well as the general government of the association, in the hands of an executive committee, consisting of the president ex-officio and the chairman of the committees on hubs, pedals, balls and chains—the present factors included in the association.

In view of this change in general scope and membership, it was found impracticable to put through the agreement reported and outlined in the Cycle Age at the time. In fact there was no very general assent to signing such a formal agreement.

**The Resolution Approved.**

The following resolution, which outlines the general plan proposed and approved by the promoters, though not formally adopted in so many words, was reported by the committee:

MOVED, That it is the sense of the bicycle manufacturers here assembled, that to secure some plan of uniform co-operation in the marketing of our various productions of bicycle parts is desirable, and to that end it is further moved that we proceed to perfect a permanent organization by electing a president and secretary; and that the rule governing this association shall read as follows "All prices offered must receive the unanimous vote of those present to be adopted," be maintained in the organization.

THAT: Manufacturers who hear of prices or terms being deviated from shall submit to the secretary such information as they have, and the secretary shall immediately take up the matter with the accused, ascertain the facts of the case and communicate them to the party making complaint; that manufacturers against whom complaints are made will furnish the secretary with such information as they may be able to give, and that, in case complaints cannot be settled by correspondence, the secretary is authorized to visit the party accused and investigate the facts by a personal interview and examination of such books and records as may be necessary.

With a view of meeting competition of manufacturers who are not members of this organization, and preventing the cutting of prices at points where it is at times wholly unnecessary, it is mutually agreed: That no member of this association shall deviate from the prices and terms agreed upon without first obtaining permission from the secretary; that such request give the competitor making lower price, name of party to whom competitor made price, and all information as to why change in association price is requested, and if, in the judgment of the secretary, it appears desirable to grant such permission, he shall

immediately wire his consent to member making request, and shall at the same time notify every member by wire, giving each permission to name the same price to the same party, and to this party only.

The following concerns were represented: Julius Heinemann & Co., Chicago; Modan Mfg. Co., Cleveland; Columbia Machine Works, Brooklyn; Ramsey Swinging Pedal Co., Philadelphia; Bridgeport Gun Implement Co., Bridgeport; Syracuse Arms Co., Syracuse; Cleveland Machine Screw Co., Cleveland; Stockton Mfg. Co., Newark; Hollingshead & Wirtz, New York; White Sewing Machine Co., Cleveland; Snow Chain Co., Syracuse.

In all thirty-one concerns were either actually represented or had promised personally or by correspondence to come into an association formed for the purposes and in the line of the resolution quoted above.

**President Appoints Committees.**

After some debate as to whether the committees should be appointed or elected, the following were appointed by the president, after consultation with those present:

Hubs—Hunter Arms Co., Fulton, N. Y.; Weston-Mott Mfg. Co., Utica, N. Y.; Stockton Mfg. Co., Newark, N. J.

Pedals—Syracuse Arms Co., Syracuse, N. Y.; Bridgeport Gun Implement Co., Bridgeport, Conn.; White Sewing Machine Co., Cleveland, O.

Balls—Cleveland Machine Screw Co., Cleveland, O.; Grant Ball Co., Cleveland, O.; Steel Ball Co., Chicago.

Chains—Indianapolis Chain & Stamping Co., Indianapolis, Ind.; Lefever Arms Co., Syracuse, N. Y.; James Duckworth & Co., Springfield, Mass.

These committees will request samples in their respective lines, and enter at once upon the classification of goods and the fixing of a minimum price scale. The latter is subject to the unanimous approval of the members. Secretary Dreyfuss thought that the executive and sub-committees would be far enough advanced with this work for a general meeting of the association within four or five weeks. It is expected that the executive committee will at that time be ready to report a fuller and more definite plan of organization and procedure.

In view of the possibility of makers who are not members of the association selling goods below the fixed scale of prices, it was suggested that those association members in direct competition with them stifle this by cutting under their prices, and that the association reimburse such members for the loss entailed by them in meeting such competition.

**Manager Charged with Embezzlement.**

Washington, Nov. 21.—J. F. Broadbent, formerly manager of the Cleveland Cycle Co., of this city, are arrested in Baltimore last Thursday on a warrant sworn out by J. D. Arnold, proprietor of the store, who charged him with embezzling \$200. Investigation by an expert accountant disclosed false statements in the books of the company, with the result that a total defalcation of \$1,300 is now charged against the late manager. Broadbent was discharged from the management of the Cleveland Cycle Co. last August, but not on account of any suspicion of irregularity in his accounts. Some weeks later, however, when persons to whom bills for overdue accounts were sent came to the store and presented receipted bills, an examination of the books was made, with the above result. Broadbent was considered one of the most popular men in the local trade.

Bicycles are being introduced into the postal service in the City of Mexico, the postal authorities having lately purchased thirty-six machines for the purpose.

**SWEDISH MARKET OVERLOADED****GERMANS MAKE STRANGE ERROR****Expecting Duties to be Increased July 1, They Make Large Shipments in June—Retail Trade.**

Soderhann, Sweden, Nov. 17.—The Swedish market has been much disturbed the past summer, because of a curious mistake of the German manufacturers and exporters, who supposed that the new tariff law, passed early in May, greatly increasing the duty on bicycles and parts, would go into effect July 1. Under this impression the Swedish market was swamped in June by the dumping of great quantities of German and Belgian machines; but the new tariff does not become operative until January 1.

Late in September a traveling man for a well known German manufacturer arrived in Stockholm, with \$10,000 worth of bicycles, which he readily disposed of. Subsequently he received another shipment of \$15,000 worth, which he also sold; and now he has returned home to bring a third lot before the duty is increased. These large movements of goods have relieved many German makers of their stocks, and given them an opportunity to keep their factories running, but the reaction will come next season, when shipments will be meager because of the Swedish market being flooded this fall and winter.

Parties who have been handling American goods have not been idle, either, but are laying in as large stocks as capital and circumstances will permit.

**Looking Forward to Christmas Trade.**

The selling season is well over now, but the approach of Christmas lends some life to the retail trade, for the holiday trade is not to be despised. Only the wealthy class buy bicycles for Christmas gifts, but as a consequence the machines that are sold are of the better grades. Last Christmas three diamond and two drop frame bicycles were given and received by members of the royal family, and of course the upper society members follow the example.

The cycle trade of Sweden is handled by the native factories through regularly appointed agents, and by three or four large importing firms and several smaller ones through sub-agents who are exclusive dealers in bicycles and cycle sundries, and through hardware, furniture, shoe, grocery and crockery stores. There is but one department store in the country. It is situated in Stockholm, and is the sole agent for Columbia and Hartford cycles, whose sale it has pushed most energetically, having placed neat signboards on the outside walls of every railway station of any importance in the entire country. Prices were maintained even better by this house than by many of the smaller dealers, who advertised machines at reduced prices late in the season.

**English Cycle Makers Founder.**

The Raleigh Cycle Company, one of the largest and oldest cycle making concerns in England, has gone into the hands of a receiver. For some time it has been an open secret among the British trade that the company has been in financial difficulties. A plan for reorganization will be submitted to the stockholders. The banks forced the concern to the wall.

Receiver Isaac N. Dann, for the New Haven Chair company, insolvent makers of bicycles in New Haven, Conn., has filed his report and been discharged. There are funds enough on hand to pay 3 per cent dividend on \$85,127.99 liabilities.

# Jobbing Bicycles

—...FOR 1899 Trade

\*\*\*NO OLD STOCK. EVERY MODEL NEW.  
TALKING POINTS THAT HELP YOU SELL.

For the requirements of 1899 trade we shall build three distinct lines of complete bicycles, embodying all features of value known in up to date construction. \* \* \* \* \*

## We Are Ready Now

to show you our samples and to figure on your supply, either in complete or stripped bicycles. SNELI, Hubs, Handlebars, Forgings, Pedals, etc., are standard. Our long experience and immense facilities enable us to give you the best of service and guarantee you quality at the right prices. Your inquiries will receive our prompt attention. \* \* \* \* \*

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SNELL CYCLE FITTINGS COMPANY,  
TOLEDO, OHIO.

# THE CYCLE AGE

## AND TRADE REVIEW

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

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### TANDEM TRADE AND MAKING

The impression has gained currency that tandem riding is strongly on the decline; and most bicycle manufacturers stand ready to assert that the impression is based on uncontrovertible facts, because they know that their own sales of tandems have failed to show an increase at all commensurate with the increased sales of single bicycles.

From information at hand, it may be considered quite certain that the records of bicycle manufacturers tell the truth in this matter, and that the number of people who have bought tandems made by the standard manufacturers is reduced this year in proportion to the number of those who have bought single bicycles made by the same manufacturers. But nothing is easier than to draw too-sweeping inferences from this fact in regard to the popularity of tandem riding. The statistics, while true so far as they go, are misleading because they do not tell the whole truth. They are especially misleading if the results of this year's trading in tandems are taken as an indication of what next year's trading must be.

One of the two important factors which have been ignored is the extensive tandem-building which has been going on among the most advanced class of repairmen. For this branch of manufacture no statistics exist except such as may be obtained from the makers of tandem tube connections and fittings, and from tire makers. These are not easily obtained, and would be difficult to justify when collected. It is almost beyond doubt, however, that the number of tandems which have been placed in the hands of riders through this form of production is very considerable. Tandems are used very largely by riders who are perfectly conversant with trade and price developments for a number of years past, and who have definite, if not always intelligent, ideas of what they want in the way of construction. It has been very natural for this class to affiliate with the repairman-builder and give him their orders for tandems built in accordance with their views. The reluctance shown by dealers in the beginning of the past season against buying more stock than they knew they could dispose of, also strengthened the business of building tandems to order considerably, because tandems are more risky stock to carry than singles, and, on the other hand, the rider with the definite ideas wants to see a greater variety of patterns of tandems than of singles before he can make up his mind that he has found what he wants. In the absence of a large variety of stock patterns to select from, he finds himself most easily suited by telling the local builder what he wants, and having it done. The somewhat imaginary satisfaction of having a two-seated machine "built to his own specifications" also appeals strongly to his vanity, and, in accordance with the rule that "self-made is well-made," it is the very satisfactory observation of the local builder that he has small trouble in obtaining good pay for repairs on tandems which have been constructed "to order," while the dealer who handles tandems in stock has a peck of trouble whenever something goes wrong with the goods he has sold.

There are still other reasons why tandem-assembling has fallen largely into the hands of local builders. Aside from the reluctance of dealers to handle the stock in sufficient variety, the large manufacturers have not, as a rule, been particularly desirous of stimulating this branch of the industry, on account of the

difficulty in reconciling good and durable construction with the popular demands. The riders have never been willing to accept the weights which are really necessary for making a tandem construction durable. The tandem frame has been a spring frame to all intents and purposes. The length of its truss work, coupled with the diameter and gauge of tubing which the demand for light machines made imperative, produced a yielding frame, which was easy to ride over smooth and level ground; but which was unsuited for long withstanding the severe strains of hill-climbing or racing. The most expensive material and workmanship were absolutely required for securing even comparative freedom from repair troubles, and the decline of prices made it particularly onerous to use such material and workmanship while other more profitable production was going on. Manufacturers have been well aware that a considerable addition of metal would be necessary to make the manufacture of tandems satisfactory; but the public has not subscribed to this amended creed, and hence the manufacture has languished. The great variety of new tandem patterns which are continually being proposed by English makers testifies to their appreciation of the problems involved in this clash of requirements. We are somewhat behind in earnest attempts at solving these problems, and meanwhile they have been left to those tender mercies which the rider is more willing to extend to a local builder than to a manufacturer of national standing.

Considering these and other forces which have caused tandem-making to drift gradually, though probably only temporarily, away from the established manufacturing concerns, it is easy to credit the local builders with sufficient trade in the tandem line to offset the inference that manufacturers have drawn from their own experience in regard to the popularity of tandem riding. At all events, the question can hardly be considered as closed, when arrangements for next year's trade are under debate.

While the success or failure of the tandem trade is eventually a question of cycle mechanics—complicated, perhaps, by the possible advent of cheap motor vehicles—the results which manufacturers have noted this year have indubitably also been largely influenced by other things. The effects of the prevailing low scale of prices for single machines are in this respect of high interest. It is first to be observed that the decline in the demand for tandems is in very few instances an absolute numerical reduction of sales, but only a proportionate reduction. It was not that the public loved tandems less this year, but that they loved single machines more. The lower prices drew forth a new and large class of customers for single machines—a class composed of people who had formerly considered cycling as beyond their means. The existence and aggregate importance of this class constituted a feature of trade which was distinctly recognized by dealers last spring. These recruits to the ranks of cyclists could not have been expected to buy tandems, but their numbers swelled the sales of single machines which are on the records of manufacturers and thereby dwarfed the sales of tandems by comparison, but by comparison only. Whether this class of purchasers will afford a new crop of tandem purchasers in due course of time remains an open question. Probably it will not furnish as large a percentage of tandem riders as the earlier stock of cyclists, but its numerical strength would seem to promise at least so much for the tandem market as to make it worth the while of those manufacturers who desire to cultivate the tandem trade to take the chance under consideration. This, their first, year they could not under any circumstances have been expected to buy anything but single machines. If they should prove all-around customers in the future to only a limited extent, a somewhat greater production of tandems than this year's business at first blush would seem to justify, comes within the range of possibilities to which the prudent manufacturer should give a little thought.

It is another question how long the large manufacturer can afford to permit the making of tandems to drift away from him, and whether the time has not arrived for displaying a similar energy in producing new tandem patterns as that displayed by English concerns.

\* \* \* \* \*

In the selection of sidelines conscious effort should be made to obtain articles of value as novelties. Novelties attract attention. They form a continual invitation for customers to stop

and look, to come in and inquire, and finally to buy. There is, however, a class of cycle tradesmen who seem to fear novelties, and who prefer to keep as sidelines only those classes of goods which have been known for years. One of the chief differences between stores in the city and in the country lies in this very point. Usually storekeepers in the cities are constantly on the lookout for something new, and frequently replenish their stocks with fresh and attractive goods, and thus maintain a display which, from its novelty, offers a strong temptation to the buyer. It is necessary to present new goods in order to attract custom; and, if care is taken in their selection, there is little danger of having dead stock accumulate. The enterprising dealer is watchful, and secures novelties as soon as they are issued. By this means his store becomes known as headquarters for the latest styles, and he reaps advantages which his energy deserves. Of course, judgment must be used in selecting novelties as well as staple goods, and this requires an intimate knowledge of the wishes of customers, for experience shows that the buyer cannot depend entirely upon his own taste. It does not pay a tradesman to wait until his competitor is well stocked with novel sidelines before making any effort to give novelty to his own stock. A little well directed energy, and a proper regard for the desires of customers, will go far toward making success.

\* \* \* \* \*

No amount of fine sophistry on the part of Mr. Frank Sanger or his emissaries can convince the bulk of bicycle makers that the projected show in New York City is entitled to support at their hands. It is now one month since, in violation of the wishes of a majority of all kinds of makers concerned with cycle manufacture, this enterprising showman tossed his castor in the ring and declared his willingness to meet and defeat all who opposed him in his long cherished desire to again conduct a cycle exhibition, and in that time he has only been successful in bagging nineteen concerns. It is true that of these nineteen a few occupy positions in the trade which preclude the possibility of supposing that they have ever been won over by any false arguments, for all have had experience in cycle shows conducted upon a national scale. It would seem, from opinions privately expressed by manufacturers who have been solicited to take part in the New York exhibition, that Mr. Sanger is utterly unable to point out the special need for shows. Indeed, it is with difficulty that an audience can be obtained for the purpose of arguing the necessity for safeguarding Mr. Sanger and his associates against any possible money loss in the enterprise. The gross revenue to be derived from the sale of spaces, though rentals are considerably reduced, amply bears out the belief that Mr. Sanger's interest in the cycle trade is not of such an unselfish character as to lead him to risk a copper piece in advance of the hour when the doors of the exhibition will be thrown open to the public. The manufacturers find themselves confronted with a situation in business which is unparalleled in the history of the trade for early buying by agents and apparent desire to steadily progress to rapid deliveries. Traveling salesmen are everywhere. New models are being exhibited to the trade, and by the arrival of the time when the Madison Square Garden exhibition is scheduled to open there will not be a hamlet in this wide country, however remote, that will not have been visited by missionaries from the factories. Naturally, then, the question arises—What is the purpose of the New York exhibition? Is it to be local or national in character? If the former, then what is the necessity for soliciting western and middle state manufacturers to contribute money for the support of an exhibition which will only aid their New York agents? If the trade of the New York agents is in need of stimulation, assuredly they should not ask the manufacturer to bear all the burden entailed in reviving their fortunes. If the show is to be on a national scale, it is idle to give it more than passing consideration for, as has already been pointed out, the functions which have usually been reserved for such an exhibition cannot this year be put in evidence, owing to the unprecedented heavy buying by agents. Now comes the rub; why did Mr. Sanger select the month of January for the holding of a cycle show? It is stated upon reliable authority that no other date was available at the Madison Square Garden. If this be true, it is easy to conclude why Mr. Sanger did not warmly embrace the proposi-

tion to change the nature of the exhibition and endeavor to make it of local service to the agents at a time in the spring when they could entertain the hope of getting special benefits from meeting customers in mass. Whatever motives may be actuating Mr. Sanger, or the trade, it is manifest that the project is meeting with very little encouragement. One saddle company, four bicycle makers with strong eastern connections, two tire concerns, and a dozen establishments variously engaged in the manufacture of electric batteries, sporting goods, badges and cycle sundries, make up the company which at the present hour is lending encouragement to the exhibition. Spaces have been reserved by one large bicycle making concern, also strongly entrenched in the east, a lamp company of national reputation and a few others, and these are being used as bait to lure others

\* \* \* \* \*

The loss which the retailer suffers from not having goods in stock when they are called for is far greater than that which falls to the portion of the maker, for while the latter may console himself with the knowledge that the former will only be impatient till his shipment arrives, and is reasonably sure of his customer, the agent has no such comforting thought and no such sense of security. It would be misfortune if, from this plain presentation of an axiomatic statement, the dealer should be led to suppose that the manufacturer is eager for a return of the days when early orders streamed into his factory and so inflamed his imagination that he failed to discern the distinction between a customer with a marked propensity for gambling in futures and one who merely desired to guard against the accident of delay in delivery. Just a twelvemonth ago the agent awoke in surprise to find that he had for a long period of years been the too credulous dupe of designing salesmen who, with more cunning than wisdom, prevailed upon him to believe that there was singular luck in store for those who flung prudence to the winds and ordered their stock of goods in advance of timid competitors. The change of heart and habit which dated from that time has brought in its wake a wholesome realization of the responsibilities, which the dealer owes to himself, his competitors and his supply houses, in fact, the entire trade. And, as luck would have it, he was supported in this suddenly acquired desire to practice the teachings of wisdom by the very people who, of all others, stood most in need of a similar course of schooling, to wit, the sellers of parts and material. The junction of these two forces, and these alone, is responsible for the remarkably conservative tone of wholesale and retail markets throughout the season just ended. Still, in view of the altered conditions which now attend the retailing of cycle goods—the lowered list prices and consequent possibility of making a greater number of cash sales, and the increase in the purchasing power of the people at large owing to the improved conditions of business—it is not beyond the limits of good judgment to advise even the humblest agent to bestir himself and not wait until through over-caution he is cheated of profits on early sales, to which he might lay claims if his courage was equal to his desire for gain and he had at least samples of new goods to exhibit to prospective customers. It is as sure as the provoking uncertainty of the meanest of men's hopes will permit that the approaching retail season will lend powerful encouragement to the agent, for all the indications that are worth consulting and translating into business significance lend color to the high hopes which are dominating the manufacturers and impelling them to be early afield. The new goods may not be faultless, but they certainly will represent a structural advance; trade discounts will compare favorably with those obtainable last season; the people are prosperous, and there are fewer misgivings in the minds of the most astute observers in the bicycle and all other lines of trade than at any time within many years.





# We are Prepared to talk '99 business with a few large jobbers.....

MARCH-DAVIS CYCLE MFG. CO.

47 WARREN ST., NEW YORK.

Mention The Cycle Age

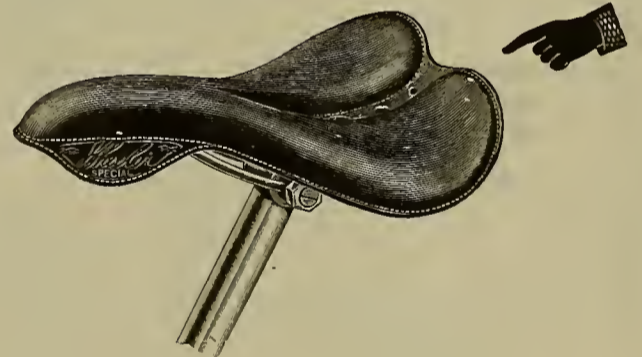
44TH AND NORTH AVES., CHICAGO, ILL.

## The Morrow Automatic Coaster and Brake

### Just a Few Words...

THE constant pumping motion of the legs, when not actually required for propulsion, is wholly relieved by the automatic coasting attachment, and one is enabled at the same time to shift his position in the saddle and rest. This is an important consideration especially when out on a long run. And then the pleasure of coasting has about it a peculiar charm, especially when one is conscious that his wheel is under perfect control. On the level, a little rapid foot work and then a rest breaks the tedium of a continuous pull at the pedals.

Wise Buyers will secure the agency for some of the following wheels as they all have it: Spalding, Pierce, Acme, Stearns, Orient, Iver Johnson, White, Reading-Standard, Eclipse, Thomas and other American bicycles, besides Humber, Rover, Triumph, Rudge-Whitworth and other English makes.



## WHEELER SADDLES

HAVE ALWAYS BEEN MADE WITH THAT  
CURVE IN THE BACK.

OUR LINE FOR '99 COMPRISES BUT FOUR DISTINCT MODELS:

- "EXTRA" Woman's . . . Broad, Soft and Easy. ❀❀
- "EXTRA" Men's . . . Hygienic and Durable. ❀❀
- "SPECIAL" Roadster . . . An ornament to any wheel.
- "CORK-TOP" Racer . . . Light and Graceful. ❀❀❀

These saddles are made and finished in the careful and stylish manner that has always characterized Wheeler Saddles.

Send for samples of the most popular saddle on the market.

## THE WHEELER SADDLE CO.

1427-1457 Woodward Ave., DETROIT, MICH.

Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT.  
New York Distributing Agents: HARTLEY & GRAHAM.

## TO DISSOLVE THE BOARD

### Nineteen Out of 193 Stockholders Vote to Disband—Members Recently Admitted to be Rebated

New York City, Nov. 21.—Only by the performance of a miracle can the National Cycle Board of Trade be saved from dissolution. Last Thursday 19 out of 193 stockholders met here in response to a cheery call for a meeting which, to borrow the language of this communication, would be largely occupied "in considering the future work of the Board," but such is the elasticity of our language, and such the mutability of human wishes, that the work of the meeting was solely confined to the counting of noses and the unopposed passage of this resolution:

Resolved, That in the opinion of the stockholders of the National Board of Trade of Cycle Manufacturers it is desirable that such corporation should be forthwith dissolved.

#### Quorum Secured With Difficulty.

It was with difficulty that a quorum was secured at the meeting. Those in attendance, with their actual stockholdings, were as follows:

C. S. Dikeman . . . . .	5
Kirk Brown . . . . .	5
A. L. Moore . . . . .	5
R. S. Crawford . . . . .	25
Geo. H. Day . . . . .	12
A. L. Garford . . . . .	5
Jos. McKee . . . . .	5
J. C. Pierrez . . . . .	1
W. A. Harradon . . . . .	2
F. P. Prial . . . . .	10
J. R. Miller . . . . .	5
A. G. Thompson . . . . .	5
W. I. Bunker . . . . .	5
Eugene Ward . . . . .	5
C. W. Cushman . . . . .	5
G. W. Cole . . . . .	1
A. M. Scheffey . . . . .	5
W. T. White . . . . .	5
A. R. Peck . . . . .	5

Shares actually represented . . . . .116

#### Only Nineteen Votes to Spare.

These stockholders held proxies for 351 shares, making a total of 467—a majority of 19.

Proxies for 351 shares were held as follows:

Proxy Holder.	Stockholder.	No. of Shares.
A. L. Garford...	L. M. Wainwright.....	12
	Geo. B. Packer.....	2
	A. C. Hord.....	1
	F. Cathuten . . . . .	5
	C. E. Goodspeed.....	13
	W. F. Remppis.....	5
	H. S. Follansbee.....	5
	J. L. Yost.....	12
	S. S. Kuntz.....	5
	R. M. Keating.....	13
	L. E. Hoffman.....	1
	G. B. Colton.....	1
	L. T. Wilmarth.....	5
	G. H. Faxon.....	5
	J. A. Hunt.....	5
	H. C. Williams.....	5
		95
C. S. Dikeman..	R. P. Gormully.....	25
	Eugene Arnstein . . . . .	1
	H. G. Rouse.....	3
	F. E. Peacock.....	1
	Lee Sturges . . . . .	5
	A. W. Gump . . . . .	5
	Geo. O. Spencer.....	1
	H. O. Smith.....	1
	C. F. Smith.....	12
	R. L. Coleman.....	25
	N. M. Beach.....	5
	J. A. Carter.....	5
	M. Fichtenberg . . . . .	5
	Arthur Faulkner . . . . .	1
		95
R. S. Crawford.	W. H. Bentley.....	5
	Rufus Wright . . . . .	5
	J. H. Williams.....	1
		11

J. W. Curtis....	A. G. Spalding.....	25
	T. C. Page.....	13
		38
Kirk Brown ....	L. H. Manson.....	1
	A. L. Kelley.....	1
	H. S. Edgerly.....	5
	F. T. Fowler.....	12
	Walter Measure . . . . .	25
	C. J. Butler.....	1
	C. L. Pepper.....	2
	Geo. T. Hodgman.....	5
	C. B. Rockwell.....	5
		57
A. L. Moore....	J. D. Climo.....	5
	W. S. Thomas.....	2
	G. F. Fries.....	1
	E. E. Kirk.....	1
		9
Geo. H. Day....	Geo. Pope . . . . .	12
	A. A. Pope.....	25
	F. C. Billings.....	2
	C. H. Ingersoll.....	1
	A. Kennedy Child.....	5
	J. C. State.....	1
		46

The capital stock of the corporation is \$10,000, divided into one thousand \$10 shares. The number of shares issued stands at 895.

#### Stockholders Must Meet Again.

The etiquette of the law requires the directors to take cognizance of the action of the stockholders, and on this account the directors must meet and advance the ceremony of dissolving the corporation. Moreover, the stockholders must also meet again and by a two-thirds vote of all the stock approve the recommendation of the directors. In this work at least 75 days will be consumed.

Meanwhile instructions have been given to Secretary Hammann to reduce operating expenses, stop publication of the Bulletin, wind up the collection department and sell the office furniture and fixtures.

#### Recently Elected Members in Luck.

Immediately after the adjournment of the stockholders' meeting the directors, in special session, passed this important resolution:

Resolved, That the treasurer be authorized, and he is hereby directed, in the event of the corporation being dissolved within five months from date, to repay the stockholders admitted to membership in the board on August 18, 1898, the amounts respectively paid by them for stock in such corporation.

Those who were elected to membership on August 18 are as follows:

Abbott, W. J., Duquesne Mfg. Co.
Arnstein, Eugene.
Bailey, R. M., Fairbanks-Boston Rim Co.
Benjamin, C. A., Olive Wheel Co.
Blaurock, J. A., American Tire Co.
Brownridge, W. T., Rex Cycle Co.
Bunker, W. I., Bunker Saddle Co.
Butler, C. J., Peoria Rubber & Mfg. Co.
Carey, F. W., Thames Chain & Stamping Co.
Caswell, D. W., Adams & Westlake Co.
Centlivre, Louis, L. A. Centlivre Mfg. Co.
Chapman, F. B., Columbus Bicycle Co.
Clark, Geo. C., Wheeler Saddle Co.
Dunbar, J. Frank, Newton Rubber Works.
Fanning, F. W., Fanning Cycle Mfg. Co.
Faulkner, Arthur, Trinity Cycle Mfg. Co.
Finkenstaedt, F. C., National Cycle Mfg. Co.
Fletcher, Edw. C., Indianapolis Chain and Stamping Co.
Frost, W. H., Frost Gear Case. Co.
Gates, Wm. H., Baldwin Cycle Chain Co.
Goodrich, Paul N., Ideal Plating Co.
Greenburg, Geo. G., S. D. Childs & Co.
Griggs, R. F., Matthews & Willard Mfg. Co.
Huffman, F. T., Davis Sewing Machine Co.
Ingersoll, C. H., Robert H. Ingersoll & Bro.
Kelly, Arthur L., Mechanical Fabric Co.

Kirkpatrick, T. J., Kirkpatrick Saddle Co.
Lester, D. W., Veeder Mfg. Co.
Lonn, E. Julius, John Lonn & Sons Co.
Manson, Louis A., Manson Cycle Co.
Meiselbach, A. D., A. D. Meiselbach Co.
Myercord, Geo. R., The Myercord Co.
O'Connell, W. J., Arnold, Schwinn & Co.
Oliver, John G., Bardons & Oliver.
Patee, Fred, Patee Bicycle Co.
Peacock, E. P., Peacock Chain Co.
Post, D. J., Cycle Supply Co.
Rastetter, Wm. C., Louis Rastetter & Son.
Redfield, Wm. C., J. H. Williams & Co.
Richmond, F. B., American Specialty Co.
Roundtree, H. H., Turner Brass Works.
Sidway, H. M., Sidway Mfg. Co.
Sidwell, Arthur, Sidwell Pedal Co.
Silverman, J., Artemis Plating Works.
Smith, H. O., Indianapolis Rubber Co.
Smith, John F., Stover Bicycle Mfg. Co.
Smyth, Hill C., Keating, Smyth & Southard Co.
Spencer, George G.
Spraker, D. C., Kokomo Rubber Co.
State, John C., Ames & Frost Co.
Thomas, W. S., Thomas Mfg. Co.
Van Arsdale, Henry, Beebe Mfg. Co.
Warren, John M., J. J. Warren Co.
Webster, G. W., Chicago Handle Bar Co.
Welles, R. H., Badger Brass Mfg. Co.
Wilmot, Frank A., Wilmot & Hobbs Mfg. Co.
Wood, F. W., Indiana Chain Co.
Wood, H. D., Wood Mfg. Co.

## BICYCLE TRADE IN PARA

### Board of Police Selects American Machines and Discards all other Foreign Goods.

The one marked development in the city and region of Para within the past six months has been in the bicycle trade. The American machine was there brought into notice in the following peculiar manner:

It appears that for some time past the adoption of a bicycle by the entire police force has been rapidly gaining favor, and in consequence thereof a recent special session of the police board was called with a view to putting the question to a test vote. After mature reflection the board decided to recommend the adoption of the bicycle. A committee was appointed, consisting of three experts, with instructions to carefully canvass the Para market with a view to securing the most substantial and generally superior machine for the least money. The committee advised, in the strongest terms, a bicycle made in the United States, adding that it clearly outclassed any other in the market. The machines were forthwith adopted. The gratifying result was that the public, appreciating the test, have had their faith in our bicycles greatly increased.

The freight rate from Para to New York is 25 cents per cubic foot, or about 17 per cent less than from Para to Europe.

The majority of merchants in Para require from ninety to one hundred and fifty days' credit; some, of course, only ask for half of such time. Germans stand ready to meet all requirements and competition. Our salesmen must expect to encounter sharp competition.

There is a broad and steady expansion of trade throughout the states of Para and the Amazonas. The city of Para, situated only about 100 miles from the mouth of the Amazon river, is the key to an enormous stretch of wealthy country. Over one hundred and fifty steamers are employed on the Amazon and its tributaries (about one-third of these vessels belonging to a British company), and the number will be increased materially before the end of the year. The internal communication afforded by the Amazon and its branches is so complete that railroads and means of transportation are not needed except to connect parts of rivers obstructed by rapids. Commerce at Para has developed enormously within the past few years.

#### Sidelines Keep Trade Active.

Buffalo, Nov. 21.—Those dealers who adopted the sideline idea this season or previously, particularly those who are handling football and golf articles and

amateur photographic apparatus and supplies, are doing a good business now, while those who procrastinated or neglected the opportunity, have entered upon their usual winter idleness. Side-lines have not been generally adopted, perhaps because of a fear to venture. At the close of the selling season, when suggestions were made of various side-lines that could be adopted whereby the dull season could be tided over, most of the local dealers were enthusiastic and seemed eager to get in line and adopt one or another of the many ideas advanced, but up to this time not more than two or three have actually laid in such stock.

**SUITING TASTES OF BUYERS**

**Low Prices 'Should be Quoted with Extreme Care in Order not to Offend Customers.**

Unseemly haste to get rid of a slightly out-of-date machine, whether used or unused, is liable not only to defeat the particular object sought, but to lose the sale of a more modern mount. Making a special low price for the purpose of disposing of some old model should be done with extreme care, and always with due respect for the personal preferences of the purchaser.

Customers desirous of purchasing bicycles generally have, before buying, determined approximately the amounts they are able and willing to invest. Therefore, it may be easier to sell them medium grade, up-to-date machines—if their tastes run in that direction—regular list price \$35 for full price, than to sell them slightly out of date \$100 list mounts for \$35. And should \$50, \$60 or \$75 be the amount of their prospective purchase, and they should be offered the said \$100 models for \$35, they would probably reject the offer with indignation, and select from among the higher priced ones.

If, for instance, a woman of taste desires a bicycle, it is manifestly unwise to offer a reduced price on an old machine. Therefore, in some instances, nothing is gained by marking down the prices of bicycles; while such a practice is simply lowering the character of the machines in the fickle estimation of buyers, to no purpose. The most likely propositions of sale are those made with reference to suiting the tastes and financial abilities of the purchasers, so far as these can be discerned or learned and met by the retailer.

**Trade Circulars Useless in Japan.**

In Japan, where two-thirds of the bicycles in use are of American manufacture and the other third British, circulars and price lists from ambitious exporting houses are getting so common that they threaten to defeat the very end they are intended to serve. The hotel reading rooms and private offices are stocked with mail matter from all parts. In the United States, circulars and price lists alone may produce some result; but they will avail but little, 9,000 or 10,000 miles away from home, unless followed up by salesmen. One firm might deluge the market with trade literature for years, and another could send an energetic man along and pick up all the business. It might be well to pave the way by advertising, but in order to insure sales the man must be upon the ground. He must be intelligent and persistent, and his firm should bear in mind that this market is not worked any more easily than are the overworked markets at home.

**Sidewalk Cycle Racks Must Go.**

The sidewalk cycle rack is in such ill favor with the city fathers of Rochester, N. Y., that an order has gone forth prohibiting its use. Perhaps by the time the civil magistrates have mulcted a few

teamsters for damages done to machines while propped up against the curbstone, the rack may be restored to favor.

**MEXICO IS FLOURISHING**

**Its Bicycle Dealers are Ordering Heavy Shipments from the United States.**

The demand for American bicycles, parts, and sundries in Mexico is by no means inconsiderable, and it will be well for makers to pay more heed to that market. Many of the chainless models have found their way into Mexico, which now boasts of a very respectable number of retail dealers and jobbers. It is a very different market compared to what it was reported to be by the venturesome salesman who blazed the way some years ago. Now scarcely a day passes without the exchange of correspondence between some of the large distributing houses and the wide-awake bicycle manufacturers, parts and supply houses in the United States, who have marked the surprising growth of the Mexican demand for their goods. For the eight months ending with August of the present year the Mexican imports of cycles and parts amounted to \$45,216.

There is, among foreign merchants there, a strong feeling against Americans, who, they believe, are menacing their long-established interests in that country. The continual growth of American business in Mexico, the great railways managed by Americans, the growth of financial interests in the hands of Americans, etc., fill them with dread. Mexico has been a place where the German and Frenchman and the Spaniard could make fortunes on the basis of trading for large profits. The American idea of quick sales and small profits is not to their fancy. All the European merchants carry American goods.

Mexico is flourishing. One hears of many great projects about to be realized. There is remarkable activity in real estate, and certainly Guadalajara and Pueblo are object lessons in progress. The long peace President Diaz has given the country has transformed the Mexicans into investors. The number of large individual bank accounts has grown beyond the power of bank managers to recall the names of their owners. Wealth is increasing in an extraordinary manner. Much money is being made in agriculture, both in the tableland region and down in the hot country. The number of men who are worth \$50,000 is very large; those who have from \$10,000 to \$200,000 are beyond all reckoning, and fortunes of \$1,000,000 to \$5,000,000 are becoming common. The country is prospering, and everybody is for Diaz and peace; there are no longer any parties worth the name, and politics is dead. Mexico has passed definitely from the revolutionary epoch to that of peaceful progress. The man who would be most hated in the country would be he who should try to raise a row.

The Mexican congress has received a bill regulating special privileges to new companies, and provides for granting franchises to new manufacturing and other industries for from five to ten years, according to the importance of business and the capital invested. It is provided that companies organized under this law shall be relieved from federal taxation during the life of the privilege, and that the material required in new industries shall be imported free of duty. The old law made \$250,000 the minimum amount of capital required to enjoy the immunities, but the new law reduces the amount to \$100,000.

**German Imports and Exports.**

The German export trade in cycles and cycle parts is developing at a steady

rate. The returns relating to the eight months ending with August last show that during that period the exports amounted to no less than 1,253 tons, as compared with only 561 tons in the first eight months of 1897. There has also been an increase this year in the imports of foreign cycles and parts into Germany. For the eight months ending with August last they amounted to 693 tons, as against only 425 tons in the corresponding period of 1897.

**AMERICAN AND ENGLISH EXPORTS**

**Two Weeks' Reports Contrasted—Our Shipments Almost Double Those of Mother Country.**

Exports of bicycles and bicycle material from the port of New York for the two weeks ending November 15 are recorded as follows:

	Bi-cycles.	Ma-terial.
Belgium . . . . .	168	\$ 1,729
Holland . . . . .	2,096	2,304
Denmark . . . . .	7,924	15,813
Norway and Sweden . . . . .	3,768	8,510
France . . . . .	1,370	121
Italy . . . . .	210	569
Russia and Finland . . . . .	240	322
Portugal . . . . .	746	6
Germany . . . . .	4,011	16,474
United Kingdom . . . . .	21,353	6,496
Austria-Hungary . . . . .	235	....
Mexico . . . . .	339	....
Central America . . . . .	866	38
West Indies . . . . .	1,291	337
Brazil . . . . .	866	280
Argentina . . . . .	1,730	3,337
Other South Amer. countries . . . . .	5,006	1,871
Asiatic Turkey . . . . .	....	25
East Indies . . . . .	13,954	497
China . . . . .	2,925	36
Africa . . . . .	15,326	784
Australia . . . . .	1,644	953
New Zealand . . . . .	14,642	39
Totals . . . . .	\$100,710	\$60,541

Exports from England for the two weeks ending November 4 were as follows, the figures for bicycles and materials being combined:

South Australia . . . . .	\$ 3,995
Egypt . . . . .	100
British Guiana . . . . .	1,150
British India . . . . .	18,375
France . . . . .	295
Queensland . . . . .	2,020
South Africa . . . . .	19,000
New Zealand . . . . .	4,795
Ceylon . . . . .	1,880
South Africa . . . . .	4,970
Netherlands . . . . .	1,980
Italy . . . . .	725
Gibraltar . . . . .	40
Germany . . . . .	725
Tasmania . . . . .	400
Hong Kong . . . . .	120
British West Indies . . . . .	85
Portugal . . . . .	200
Mauritius . . . . .	100
Victoria, Australia . . . . .	18,735
Belgium . . . . .	645
Straits Settlements . . . . .	1,380
West Australia . . . . .	2,060
Burmah . . . . .	195
Russia . . . . .	345
New South Wales, Australia . . . . .	2,200
Canary Islands . . . . .	200
Japan . . . . .	440
United States . . . . .	180
China . . . . .	75
Total . . . . .	\$88,410

**American Bicycles in Africa.**

The imports of bicycle and parts into all parts of South Africa, with the exception of Lourenco Marquez, in Portuguese territory, for the six months ending June 30, 1898, were to the value of \$592,200, of which the United States furnished \$82,531. The United Kingdom stands first, the United States second, and Germany third in imports. The governmental returns on the exports of bicycles and parts from the United States to South Africa for the eight months ending with August—1896, 1897 and 1898 compared—are as follows:

1896 . . . . .	\$ 16,893
1897 . . . . .	91,282
1898 . . . . .	117,447

At a recent meeting of the cycle agents and dealers of the City of Mexico the formation of a cycle trade association was decided upon.

## TEMPERED IRON CASTINGS

### White Cast Iron Machined, Welded, Drawn, Hammered and Hardened After Annealing Under Pressure

The word "iron-steel" has been frequently mentioned of late as denoting one of the many new forms of iron alloys which have come into existence as a result of the extensive experimenting continually going on in steel making plants. To the steel working establishments in general the full meaning of the term has, however, not been known. In fact, the idea that such a term as iron-steel might be appropriately used has been scoffed at as being contradictory of the accepted definition of steel. It must be either iron or steel, according to its chemical composition and molecular structure, it was commonly said; but this was only a question of phraseology and technical stringency in expression, and the term iron-steel was used not technically, but rather to indicate that a process had been discovered which seemed to efface the distinguishing line between iron and steel so far as the process of manufacture and the quality of the product were concerned.

#### A Sensational Patent.

A full line of facts has not come to hand as yet, but a patent which was issued on the 15th of this month to Samuel Hufty, of Camden, N. J., and Joseph K. Caldwell, of Philadelphia, throws considerable light on the work which is being done for producing iron to which many of the qualities of steel may be imparted by a simple process of annealing or heating under pressure.

#### Molecular Rearrangements.

The fundamental thought of the invention is that it is possible to change the molecular structure of an iron alloy at a temperature much below the melting point, and that it is also possible to restrain the transition of carbon from the amorphous to the graphitic condition by pressure, and cause it to assume new molecular relations to moderately heated iron molecules while in that condition. By carrying this thought into practice under certain conditions the inventors produce an iron casting which is highly tenacious, soft, malleable, and easily machined, is capable of being readily forged and welded, and is susceptible of hardening or tempering in either oil or water, thus being applicable not only for all purposes for which castings of iron are generally used, but also for many purposes for which steel castings or even steel forgings are now employed.

It will be seen at once that these results are of a highly sensational nature and that the invention bids fair to be epoch-making in the steel industry if all the claims are fully substantiated.

#### Composition of the Iron.

In the following account of the method and the theories involved in it, the phraseology of the inventors is largely employed:

The castings in the first instance may be composed of any ordinary white cast-iron suitable for the production of malleable-iron castings, although it is preferable that the iron should contain some free carbon and a considerable percentage of silicon, an iron which, after melting, contains about the following proportions of combined carbon, graphite, manganese, silicon, sulfur and phosphorus being suggested as the preferable one from which to make the original castings: combined carbon, 2.75; graphite, 0.50; manganese, 0.150; silicon, 0.750;

sulfur, 0.020; phosphorus, .015. The castings are placed in a furnace in which they can be raised to and maintained at a high temperature, and for this purpose any form of furnace can be used in which the flow of air and of the products of combustion is susceptible of regulation.

#### Restraining the Carbon.

In white cast-iron the aggregation of the combined iron and carbon molecules is extremely close, as indicated by the density of the iron, and in the treatment of such iron the inventors subject it to a temperature at which the two solids, iron and carbon, become soluble in each other, this temperature being much below the point of liquefaction, but being continued for a considerable time. The compound molecular aggregates being dissociated into simpler molecular forms, and these again into their atomic constituents, the atoms rearrange themselves into new molecular aggregates, the final arrangement being the permanent separation of the greater portion of the combined iron and carbon, while the pressure under which the dissociation takes place prevents the free carbon from passing into higher complex molecular aggregates—that is to say, the pressure compels the carbon to remain in its simplest form of atomic aggregation and restricts the physical dimensions of the carbon molecules, which are in an amorphous condition and hence distinguished from the graphite of cast-iron. This amorphous condition is evidenced by the fact, demonstrated by analytical tests, that the carbon in their castings has a specific gravity of about one and eight-tenths, a calorific power of about eight thousand heat-units, and a specific heat of about twenty-four hundred ten-thousandths, and therefore answers the conditions which are recognized as distinguishing amorphous carbon. Some variations are recorded in regard to these figures, depending upon the varying character of the iron before treatment, but in all cases the carbon, as to the properties named, resembles amorphous carbon and is as to said properties materially and demonstrably different from the graphite of cast-iron, whether the latter be ordinary or malleable cast-iron. The separation of the carbon in this peculiar manner is due to the temperature and pressure under which the separation takes place, the pressure within the solid at the temperature of treatment being many times greater than that at which the dissociation of the combined iron and carbon molecular aggregates takes place in molten iron, and the change taking place during a rise of temperature or during a long continued stationary one substantially stationary temperature, while in ordinary gray cast-iron the changes take place during a fall of temperature and in a short space of time.

#### Chemical Results of Process.

In producing iron castings in accordance with the invention the carbon passes from a combined into an amorphous graphitic state little by little, the action proceeding gradually throughout the mass during the continuance of the treatment. The molecular changes take place without any marked deformation of the physical shape of the castings, although small changes in physical form

generally occur and are apparent in altered density of the body.

In preparing iron castings the inventors find it sufficient in most cases to raise their temperature to about fifteen hundred degrees Fahrenheit and to continue the treatment for about two hours, although a higher temperature and a longer treatment may be required where the original white-iron castings are of a particularly dense character.

The chemical difference between the original white-iron casting and the same kind of casting after treatment is shown by analyses to be very considerable, the proportions being changed from figures approaching those above given as desirable for the white iron, as follows: Combined carbon from 2.96 to 0.73; graphite from 0.48 to 2.71; manganese from 0.136 to 0.104; silicon from 0.903 to 0.837; sulfur from 0.208 to 0.172, and phosphorus from 0.084 to 0.080.

#### Classified as Iron-Steel.

Speaking about the classification and utility of the treated castings, the inventors say that while they may be considered a special form of gray cast-iron in which the graphite is in an allotropic but not identical form with that in gray iron, they possess so many unique physical qualities that they are considered a new commercial product standing midway between iron and steel and uniting in themselves the best characteristics of both. They have none of the characteristics of white cast-iron, but in their stead the specific gravity and softness of gray iron, together with the malleability and susceptibility to forging and welding which are characteristic of soft steel, the strength and tenacity of a steel casting, and the hardening and tempering properties of high-carbon steel, this hardening and tempering quality, which marks the difference between castings by the new process and ordinary iron or steel castings, being a peculiar characteristic, which renders the former suitable for a large number of purposes for which expensive high-carbon steels are now employed.

#### Capabilities of the Product.

As indicative of the possibilities of the process it is mentioned that the casting referred to in the analysis above given was softer than soft steel, presented a soft and mossy fracture in which the graphite was quite apparent, could be plated out while cold to double its original size, was drawn out into a file-tang, made a sound weld at full yellow heat, hardened in both oil and water, and could be made to take temper by color, while its tensile strength was increased from about sixteen thousand pounds to the square inch in the original white-iron casting to about fifty-seven thousand pounds to the square inch in the treated casting.

The existence of carbon in the treated iron in the free or graphitic state greatly adds to its durability for all purposes where friction plays a part, and hence renders the castings of special value for the manufacture of gear-wheels or other parts of machinery subjected to excessive friction.

#### Strategy of Tire Makers.

At the English cycle shows, which are now in progress, the tire and accessory makers, following a custom which years of practice have accustomed the trade to tolerate but not approve, are paying smart prices for the questionable privilege of fitting bicycles with their goods and making conspicuous announcement of such equipment. The value of the practice is challenged for the reason that the public, through the assistance of the daily papers, is already acquainted with the purpose of the strategy and entertains grave doubts touching the probabil-



TRADE MARK



# To World Agents



For 1899 Arnold, Schwinn & Co. will make the DUNLOP DETACHABLE TIRE their regular equipment upon the World Bicycle, at no additional wholesale or retail charge.



## The American Dunlop Tire Co.

134 Lake Street, Chicago, Ill.

Belleville, (North Newark) N. J.



TRADE MARK



Mention The Cycle Age

“They are after you, Mr. Bicycle Manufacturer.”

WHO?

Our Travelers!

They are *looking for all manufacturers who are looking for the best* in our line. We *don't make cheap tubing* for use in cycle construction and *don't believe* any bicycle manufacturer who makes a *good wheel* and *stands behind* it will consider seriously the use of *inferior tubing* for one minute.

# “SHELBY”

is made from the *highest grade Swedish Charcoal Steel* that can be obtained. “SHELBY” has the *capacity and equipment* to meet *all demands*. “SHELBY” has the reputation of *making tubing* of the *highest standard*. Catalogues and further information on application to our offices.

## SHELBY STEEL TUBE COMPANY,

General Sales Offices: CLEVELAND, OHIO, U. S. A.

Branch Offices and Warerooms:

144 Chambers St.,  
NEW YORK, N. Y.

135 Lake St.,  
CHICAGO, ILL.

29 Constitution Hill,  
BIRMINGHAM, ENG.

Mention The Cycle Age

ity of the bicycle maker ever furnishing the advertised equipment with his machines. One live house is paying \$3 for every pair of its goods shown on new models, provided no other lines are exhibited. When the bicycle maker fits his machines with more than one form of tire, but still uses that one on three-fourths of his exhibits, he is paid \$2 a pair. Bicycle makers fitting half of their models on exhibition with one tire are entitled to \$1.50 per pair.

### REPAIRING STOLEN BICYCLES

Lawful Owners May Recover Property Without Paying for Repairs Ordered by Thieves.

Recently a stranger left a bicycle in the hands of a Massachusetts repairman, with an order for a general overhauling and a new pair of tires. A resident of a neighboring town proved beyond a doubt that the machine was his, it having been stolen the day before. The owner demanded his bicycle, refused to pay for the work which had already been done upon it, and curtly informed the repairman that he could look for payment to the man who had ordered the job. The repairman threatened to go on with the overhauling, fit new tires to the machine, and hold it until the rightful payment was made. Though, in this case, a compromise between the disputants was finally effected, a point is raised as to the legal right of the repairman to hold the bicycle—as stolen property—pending the payment for the repairs ordered by the thief.

It is a well recognized principle that the owner of stolen property, such as a bicycle, may take means to recover it wherever found, even though the possessor has innocently paid value for or put out work upon it. The owner of the bicycle would be entitled to its return, if he demanded it under these conditions, without paying for the repairs which had been made without his personal order, request or knowledge. In speaking of the lien of the artisan, in which something of the same principle is embodied, the law says: "In order to charge a chattel with this lien, the labor for which the lien is claimed must have been done at the request of the owner, or under circumstances from which his assent might be reasonably implied."

While this is the general law, it would appear that, in a particular case like the one quoted, if the bicycle actually needed the repairs made upon it, and was properly repaired, and the charges were reasonable, the owner of the machine, in demanding it without paying for the repairs, would be using a wise general rule of law for the purpose of obtaining the benefit of another person's labor without paying for it. A common sense of justice would prompt the average owner of a bicycle to pay cheerfully for work laid out upon a machine, especially by the man who should be the means of restoring his mount to him; though it is not to be doubted that there are those who would not only fail to remunerate a repairman for his services in the restoration of the machine, but seek to escape the payment of a just and reasonable bill on a slim legal technicality.

### Growing Popular in India.

Cycling in Calcutta is making extraordinary progress and the large number of local cyclists is expected to be greatly augmented during the forthcoming season, which is just opening now. At Howrah, too, cycling is advancing by leaps and bounds.

### War Revenue Decisions.

Washington, Nov. 21.—The following rulings made by the Commissioner of In-

ternal Revenue under the war revenue act are of interest to the trade:

Bills of lading for the export of goods, if made out in sets of two, each having equal value, and each being considered an original bill, both should be stamped.

Where a tax of 10 cents is paid on the bill of lading for goods exported, it is held that no stamp tax is required to be paid on copies of such bills of lading.

On inland bills of lading each duplicate requires a stamp of the value of one cent.

Bills of lading for exportation by railroad to British North America require a 10-cent stamp.

It is the duty of carriers to issue a bill of lading or receipt for goods accepted by them for shipment, and to affix the stamp, and a penalty is prescribed for failure to do so.

### DABSTERS IN CONSTRUCTION

Small Builders Sometimes Show Lamentable Ignorance or Carelessness—A Chicago Example.

Notwithstanding the fact that many of the smaller builders throughout the country are fairly good mechanics and turn out first class products from a standpoint of workmanship, there are still plenty of them who occasionally break loose into some inventive strain and turn out something which, while it may be constructed with the greatest care and in the best manner possible, is laughably absurd in construction or design. A recent example of such a thing is the arrangement shown in the accompanying

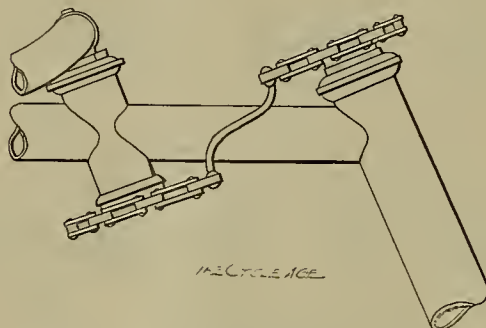


illustration. The device was put on a bicycle by a Chicago repairer who builds quite a number of first class machines. Whether the idea of the contrivance was originated by a customer or whether the builder himself is responsible for it is not known, but it is true that the maker had the completed machine in his show window.

For some unknown reason the machine was constructed too long to have the handle bars in the usual position and so in order to bring them back toward the rider a second steering head was placed on the top rail of the frame about six inches to the rear of the regular head. From the top of this head were supported the handle bars. On the bottom of the head was swung a sprocket, the mate to which was on the upper end of the front steering head stem. As the back sprocket was about three inches below the front one, the chain which ran around the two could not be continued as a unit and so short chains, one around each sprocket, were connected with light rods, tandem fashion. These rods were cranked to allow for the difference in planes between the two sprockets. Of course the steering connections will operate, but to think that two sprockets so close together and one about three inches below the other could be connected by chains and cranked connecting rods in a way that would furnish rigid and smoothly operating steering is absurd. A quick turn of the bars in order to get the machine out of a rut or around a suddenly discovered obstruction would cause the chains to jump the sprockets as there is nothing but the light rods to hold

them in their proper positions and the distance between them is so short in comparison to the distance between the two planes that there is no chance for the sprockets to adapt themselves to sudden emergencies.

### Operation of the Bankruptcy Act.

In spite of the failure of the Supreme Court to hand down the rules, forms and orders provided for by the Bankruptcy act, the courts throughout the country have accepted jurisdiction of involuntary petitions and are proceeding with all the preliminary steps, at least, as though the full code had been provided. In certain jurisdictions where the courts had refused to act upon voluntary petitions these tribunals have also declined to proceed with involuntary cases; but it is also true that in certain of these jurisdictions the courts, upon second thought, have appointed referees and referred both voluntary and involuntary petitions. No information has yet come to hand of a case in which the court has been able to grant hearings and take all necessary testimony for the adjudication of an involuntary petition filed against a debtor claiming to be solvent, but it is understood that such cases have already been acted upon, the alleged bankrupt proving his solvency and securing his discharge.

### Profits of German Makers.

A bicycle making concern in Dresden has just declared a profit of \$30,700, out of which the stockholders were paid a dividend of 9 per cent. This is by no means an exceptional case; on the contrary, a great many concerns have already paid larger dividends on their capital stock. The news is instructive, for it proves how little real foundation there is for the belief that German cycle makers are so industriously spreading that the customs tariff on cycle imports should be heavily increased. Nor have the German cycle fittings makers any just cause for complaint, on the score of profitable occupation, if one may judge from the success of one rather small establishment making parts which in the past season declared to government officials that it made a profit of \$80,000.

### Selling Bicycles in Brazil.

American bicycles have preference over all others in Brazil. Trade is best procured by having experienced commercial travelers, who can speak the Portuguese language, make trips about six months apart, and by paying strict attention to their orders and directions. Usually "something just as good or similar" will not please this people. The lack of a very small and apparently insignificant part of a machine renders the whole thing useless, and sometimes three to six months are necessary to replace it. These things should be kept constantly in mind, and the greatest care exercised to see that each shipment is complete in itself.

### Profitable Side Lines.

Cash registers and graphophones have been added to the side lines carried by the well known retail firm of Collister & Sayle, in Cleveland, O. Early this year the concern made a considerable purchase of golf clubs and met with such success in their sale that it soon became necessary to invest afresh. The profit on these goods was in percentage far above that usually obtainable from the handling of cycle sundries. Now the firm has secured territory for the sale of cash registers, and is hard at work inducing dealers to push these goods. The graphophones will be distributed in drug and cigar stores in Cleveland.

# Stearns Bicycles

**M**ESSRS. E. C. STEARNS & COMPANY desire to announce that their models for the season of 1899 are ready for inspection and that their full force of traveling salesmen are now engaged in covering the territory assigned them, comprising the entire United States and Canada.

Each 1899 Stearns bicycle is new, distinctive, elegantly finished and equipped. The complete list is as follows:

MODELS	WEIGHT	PRICE
Chainless.....	26½ pounds	\$75.00
Ladies' Chainless.....	27 pounds	75.00
Cushion Frame for men.....	23¾ pounds	65.00
Cushion Frame for women.....	25¾ pounds	65.00
Special, 30-inch wheels.....	21¾ pounds	65.00
Special, 28-inch wheels.....	21½ pounds	60.00
Ladies' Special.....	23½ pounds	60.00
Track Racer.....	20 pounds	60.00
Model E.....	24 pounds	50.00
Model F.....	24½ pounds	50.00
Combination Tandem.....	45 pounds	75.00
Diamond Tandem.....	43 pounds	75.00

## EQUIPMENT

### TIRES

Models E, F and Tandem, Hartford No. 80.  
Other Models, Palmer.  
Options, Kangaroo and Morgan & Wright.

### SADDLES

E, F and Tandems, Garford 156, 158 and 161.  
Other Models, the above with Sager Flexible,  
Christy and Stearns Rawhide.

## CHARACTERISTICS

Light Weights.

Narrow Tread.

2¾-inch Drop.

The works of E. C. Stearns & Company are operated continuously. They are never "closed down" except Sundays and holidays.

A large number of 1899 Stearns bicycles are completed and ready for shipment. During the season of 1899 all orders will be promptly filled.

The "advance" catalogue is now ready for distribution. It describes in detail the most attractive line of bicycles E. C. Stearns & Company have ever produced.

The trade on the Pacific Coast supplied from our branch store, E. C. Stearns & Company, 210 McAllister Street, San Francisco.

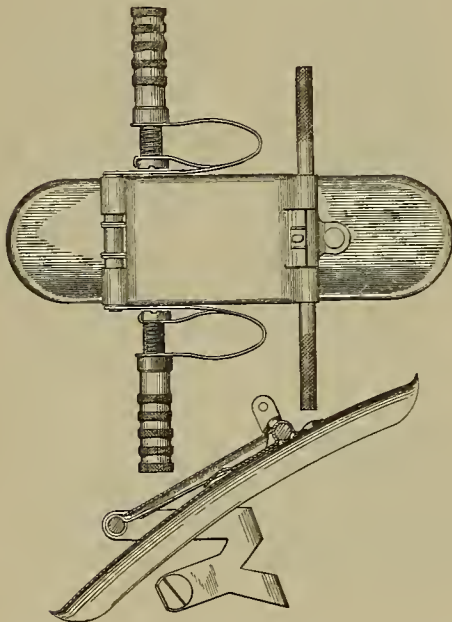
**E. C. STEARNS & COMPANY**  
SYRACUSE, N. Y.

The trade in the Dominion of Canada supplied from our Canadian factory, E. C. Stearns & Company, 67 Adelaide St. West, Toronto, Ontario.

## RECENT PATENTS

## Central Draft Oil Lamps—Rear "Boudard" Gear—The Searls Slotted Tee Post

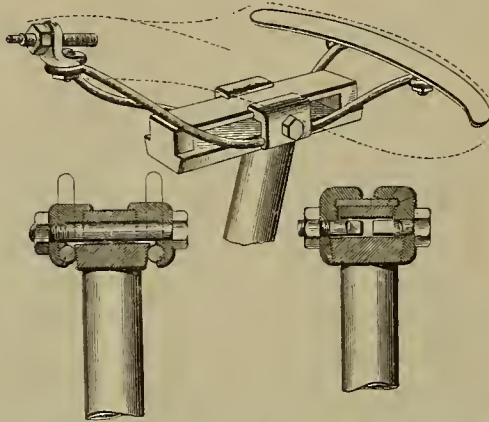
**Barr's Brake.**—The brake shoe is of considerable length and is trough-shaped. It is hinged to a supporting plate by a pintle rod which projects on both sides to form foot pieces. The supporting plate is hinged at its rear end by a pintle to the upwardly extending horns of clamps which are fastened to the front forks of the bicycle. This pintle carries a spring which engages with a hook on top of the brake shoe. The clamps are fastened by screw and nut, the latter being extended to form coaster foot-rests and the screw-heads are flattened on one side in proximity to the upturned end of the clamp plate to prevent rotation of the screw. When the brake is operated the brake shoe and supporting plate first swing about the front pintle, so that the front of the brake shoe is first brought into contact with the tire. Further downward pressure of the foot causes the brake shoe next to swing at its joint with the plate, so as to lower the rear end of the brake shoe, bringing the whole length of the shoe into contact with the tire.



When the pressure of the foot is released, the spring lifts the brake, lifting first the rear end of the brake shoe by swinging the shoe about the joint with the supporting plate and then swinging both the brake shoe and the supporting plate about the front pintle, so as to lift the brake shoe clear of the tire. The brake may be operated as a hand-brake as well as a foot-brake by connecting the supporting plate to an ordinary hand-brake lever. The inventor is J. H. Barr of Ithaca, N. Y.

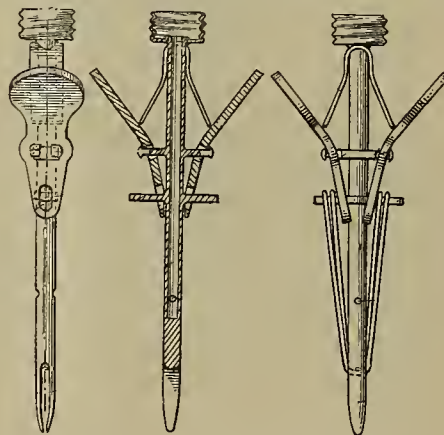
**Saddle Post and Clamp.**—The object of the designer has been to provide for an extensive range of adjustment of the saddle, with especial view to making horizontal adjustment of the saddle in its relation to the frame of the bicycle without changing the saddle tilt, and vice versa. The seat post has instead of the usual tubular L or T a top piece formed with a slot, as shown. The lower faces of this top piece are beveled and form a shoulder. The clamping plates are shaped to bear against the beveled faces and the top surface of the piece and may have curved grooves to hold the customary double saddle wire spring. A clamping bolt passes through the plates and the slot permits both plates and the bolt to be moved horizontally when the bolt is not tightened. The other construction

shown in the drawing illustrates the modified form used for securing a saddle provided with one flat spring. In this form the clamping plates have guiding lugs for the bolt extending into the slots on both sides of the bolt aperture. The illustration shows middle portion of the bolt broken away to indicate the position of



the guiding lugs. The inventor is W. A. Dickinson of East Orange, N. J., assignor to Searls Mfg. Co. of Newark, N. J.

**Puncture Repair Tool.**—This device belongs to the class of repair tools with which rubber bands are used for filling the puncture. The operation is described by the inventor as follows: "In carrying the device into operation I take a rubber band larger or smaller, according as the puncture is large or minute, and place one loop of the band on one side stud, then stretch the band and carry an intermediate part thereof between the nibs of the hollow stem, and then pass a bight of both strands over the other side stud, returning an intermediate part of both strands again between the nibs, passing a second bight over the stud first engaged and returning the extremity of the strand back again between the nibs and engaging the other end loop with the opposite stud. The band may be so stretched as to permit of a greater number of doublings, so that there will be as many strands extending from the crotch of the nibs upwardly to the engaging stud as may be deemed advantageous to accord with the character of any

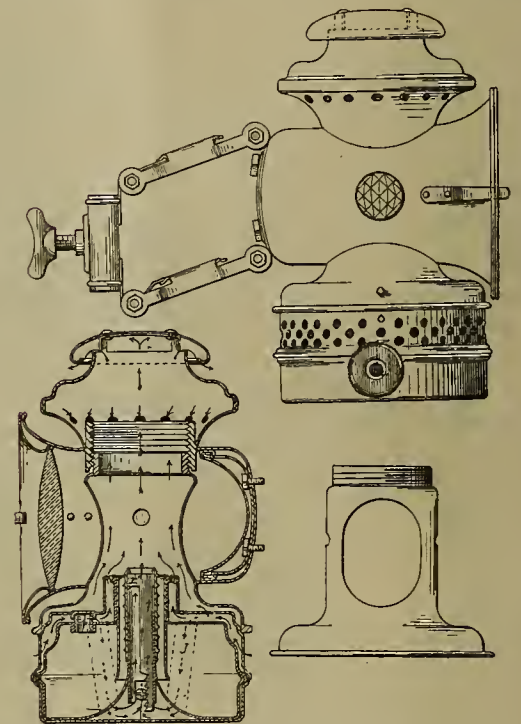


given puncture. The rubber is then wet to enable it to easily pass through the puncture and the stem is inserted for such a distance that the cementing orifices are carried beyond the inner wall of the tire. The cement is then injected, issuing through the orifices and becoming sufficiently incorporated on and within the several strands, and then the spring levers are operated so as to cast off the

loops of the rubber from the studs. By quickly withdrawing the stem, the looped ends of the strands which fill the puncture are left in compact bunches. The cement introduced in the manner explained fills the interstices between the strands which pass through the puncture and also, with the bunched-up looped ends on the interior of the tire, forms a homogeneous mass, which effectually prevents all leakage of air."

With the tool may be provided a straight rod to be forced down into the tubular stem from the top to or beyond the orifices for the purpose of clearing the tubular stem of any cement which may have been left after the collapsible or other cement-containing can or tube has been detached. The inventor is C. C. Call of Springfield, Mass.

**Central Draft Lamp.**—The fount is reversible in the lamp body, allowing the lamp to be attached to either fork side of a bicycle without interference between the wick-shaft and the spokes of the wheel. The oil fount has a concave bottom which acts as an air pocket and a neck on top to which the wick tube is soldered extending downward into the fount. The wick-sleeve has barb teeth on its outside to assist in the even raising and lowering of the wick, which is bent around the sleeve. Opposite points in the sleeve are connected with a cross-

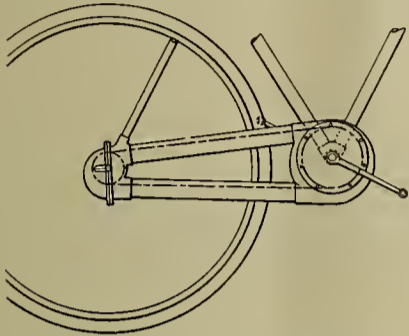


bar from which depends a rack-bar in which meshes the fluted or pinioned end of the wick-shaft, being protected from the oil in fount by passing through a small sleeve formed with the fount and passing entirely through it to the air pocket. A spring catch holds the wick-shaft securely against jars in any given position. The draft arrangement provides for a central draft through the wick-sleeve. Air also passes through holes in the depending flange of the lamp body, which is secured to a bead on the fount by a slip joint, thereby also holding the upper perforated section of the fount, which forms a draft plate, in position. The main portion of the air passes through these perforations in a sinuous course and is deflected inwardly toward the flame by the flared lower part of the chimney. A smaller portion of the air, however, finds its way downward through four tubes which lead from the top of the fount to the air pocket, and serves to steady the central draft air current. Between the central draft and the outer circular current the heated air and products of combustion are carried upward through the chimney as indicated by arrows in the drawing. The chimney which is shown in one part of the illustration has openings for sidelights and oval open-



ings in rear and front. The upper end of the chimney is screw-threaded to receive the chimney head which is formed with an internal screw-threaded flange, which extends upward and forms a wind guard for the purpose of preventing any outside current of cool air which might come through the perforation in the head from driving back the heated air and products of combustion arising from the flame. A cap is attached to the chimney head by riveted legs. The inventor is C. C. Armstrong of Columbus, O.

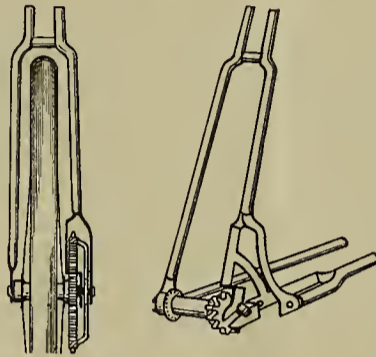
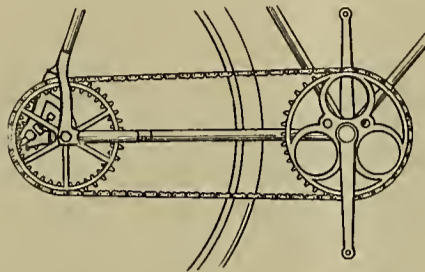
**Gear Casing Forks.**—The front sprocket wheel is inclosed within a casing, which is cast in one with the bottom bracket,



while the rear wheel is inclosed in a box-casing consisting of an inner half and an outer half. These two cases are connected together above and below by closed tubes, which are brazed in sockets of the front and rear casings and form together an integral part of the frame of the bicycle, and they also serve as a conduit through which the sprocket chain passes and by which it is inclosed. The rear stays of the bicycle frame are also secured by brazing to the inner rear casing. The outer rear box-cover is secured to the inner fixed half by screws or bolts and a vertical flange, as shown, so that it can be easily removed for gaining

which is screwed or bolted on to the front of it. The inventor is Z. H. Kingdon of London, Eng., assignor to D. A. McNeight of Liverpool, Eng.

**Compound Rear Gearing.**—The rear sprocket wheel is mounted in a bracket or sub-fork, being journaled in this bracket somewhat in front of the rear



wheel axle. It is of larger diameter than commonly used for rear sprockets and has internal gear teeth meshing with a gear pinion on the rear hub. The arms supporting the rear sprocket ring and internal gear are curved or dished as shown to permit alignment of the internal gear with the pinion. The inside branch of the sub-fork is bent so as to give room for the gear pinion between the axle and the periphery of the sprocket wheel. The object of the inventors is apparently to

provide a high gear which will run with small chain tension. The inventors are Enoch Haines and Robert Monahan of Lakewood, O.

William Bestie and William F. Bilger of Memphis, Tenn., have patented and assigned to J. J. Dupuy of Memphis and B. W. Arnold of Mont Vale, Va., an apparatus and a composition for repairing pneumatic tires. It consists in a bottle with an internally screwthreaded neck, intended to be screwed on to the inflation valve stem of a tire, when filled with a composition of glycerine, four ounces; fuller's earth, one half teaspoonful, and plumbago, one half teaspoonful, forming a black sealing fluid for the mending of punctures.

Patent has been allowed to Thomas B. Jeffery of Chicago for "a tire-cover in the form of an endless band or short cylinder consisting of a plurality of layers of bias fabric creased upon one surface to form parallel beads or ridges upon the opposite surface near the edges respectively, an additional strip or strips of adhesive fabric applied upon the creased side spanning the creases to render the beads permanent." The application for this patent, which is well known in its practical application, was filed January 26, 1894. French and English patents were granted for it in that year.

**New Agents Want Quotations.**

A new retail cycle firm which desires quotations from manufacturers is the Louis Vehon Company, 155 W. Jackson street, Chicago. The firm intends to operate on a large scale.

The total insurance on the plant of the Keystone Cycle company of West Reading, Pa., which was destroyed November 12 at a loss of \$60,000, was \$28,700.



**It Pays**

to keep the experienced riders on your side. Remember how many there are now, and how many more each season adds. Besides what they buy themselves, they practically do the ordering for the mass of new riders, who come to them for advice.

**Now what do the veterans want?** The very best of everything. The best of tires—they know what it is to have light, resilient tires under them throughout a long run. They know that cheap tires are dull and heavy—what they save the pocket comes out of the body—the extra effort required to drive them during a single day's run uses up enough bodily vigor to pay the difference in cost.

**League Tires help the rider.** Made of the finest Para rubber, not a grain of soft rubber or substitute in them, they dance with life and lightness. Specify them on your wheels; they "get there and get back," and good riders know it.

**LEAGUEKIT,**

the puncture doctor, mends single-tube tires. Makes quick and sure cement repair, or quick and sure plug repair—only tool that does the work of two kits at the price of one.

- New York.....25 Park Place.
- Philadelphia .....308 Chestnut Street.
- Chicago .....143-145 Lake Street.
- St. Louis.....411 No. Third Street.
- San Francisco.....509-511 Market Street.

**NEW YORK BELTING & PACKING CO. LTD**

Mention The Cycle Age

## CHOOSING USEFUL EMPLOYEES

### SELECTION BY TEMPERAMENT

#### Brain Size and Structure As an Index to Qualifications—Thinkers and Workers Distinguished.

It is quite evident that the matter of temperaments, as qualities of the human organism vitally affecting the nature of any work, and the amount of it accomplished, has been seriously underestimated by employers of all classes of labor. While it is impossible always to accurately gauge the personal character of an applicant for an office or shop position, or his capacity for work, by outward appearances, it is equally true that semi-reliable signs almost invariably display themselves in the person, to which indexes the astute employer can hardly afford to be oblivious or indifferent.

#### Fine Mind Indicated by Thin Face.

The first physiological sign to command attention is that of the brain, wherein it is quite possible for the novice in character judging to err, especially in the points of brain size and structure. Brains below a certain size, for instance, cannot exhibit much mentality and force, but the largest-sized brains, so frequently possessed by coarse, soft men, are usually equally deficient in these two most important respects. Fineness of mind is necessary to receive the best of impressions from the outer world. The mind of a fine-grained man or woman is like a carefully and skillfully prepared photographer's plate, instant to receive and reasonably sure to retain impressions from those thoughts, facts or objects capable of impressing them. A coarse-grained person receives infinitely fewer perceptible impressions than his finer-grained brother, and these are from the coarser and more material forms immediately surrounding him. A well-defined, lasting and profitable impression depends upon a power to make and a condition to receive it. Hardness seems to be a requisite to durability of impressions, as well as to good health and tenacity of life. The fine-grained and hard, thin-faced man often lives three times as long as the coarse-grained, full-blooded and full-faced man, to the great surprise of those who are unable to distinguish between fineness and coarseness (or fullness), between spirit-life and blood-life.

#### Hard, Coarse Men are Laborers.

Hardness and fineness are nearly synonymous. Softness is the complement of hardness, and, if we can so speak, negative to it. Too much of it is an index to physical weakness, to mental imbecility and shortness of life. Fineness and hardness are signs of vitality. Fineness and softness, on the other hand, are not long-lived. Soft fineness is different from hard fineness. Fine softness is different from coarse softness. Coarse, hard men are the lowest classes among physical workers, the men best adapted to come into immediate contact with nature's roughness and asperities, to clear up the forest, plow among stumps and stones, to operate the mines, to stand on the docks and breast all seasons' storms, make the irresistible and impetuous bayonet charge, etc. To them we are indebted for what human hands, unaided by mechanical science and art, has produced and constructed. The coarse soft men seem to be the least useful class, unless in the capacity of consumers, so as to keep the market good and prices up. They would not, if they could, and they could not if they would, accomplish a maximum of the best work, either with hand or head. Their softness

is a complement of the hardness of the coarse-hards.

#### Fine-Hards Mentally Powerful.

The fine, hard men are the most important in any department of business. They can think and work also, especially if they have some judicious coarseness. They have great power over both mind and matter, they understand the complex relations of life and govern their actions accordingly. The fine-hards comprise most of the hard thinkers, philosophers, inventors, scientists and especially the highest types of business men, who project and consummate works of great value to facilitate commerce and better human conditions. They are the men who set the coarse-hards to work, with their brawny muscles, sturdy resistance and sustained physical energy, to give form and structure to their thoughts, ideas and plans. They are to the world of mind what the coarse-hards are to the world of matter. The fine-hards are the head-workers, the coarse-hards the body-workers. The soft-fine have great mental and sustaining power of a certain kind, but they are liable to be too negative, yielding and unstable for the stern realities of practical business life.

### ERA OF ARDUOUS WORK

#### Brains and Energy at a Premium—Progressive Methods Ignore Sentiment in Business.

While it may not be a pleasant subject for contemplation, yet it is none the less a stubborn fact that never before have natural laws had such free play as now in the commercial world. Despite the inertia of ignorance and conservatism, the superficial interference of ignorant legislators and the short-sighted and impracticable schemes of enthusiastic reformers, commerce is being gradually freed from those shackles which have limited its scope and restricted its usefulness. There have consequently followed the free play of natural laws and the results of unrestrained competition. No longer is there any divine right in business nor any fostering care and favoritism which provide for the incompetent at the expense of the capable.

The new era puts a premium on brains and energy, on youth and strenuousness. It means that even long service and faithfulness cannot be an excuse for incapacity and imperviousness to modern ideas; that good intentions cannot supply the place of new thoughts, that concerns and men who are not "up-to-date" must give place to those who have learned to adapt themselves to their environments. It means, likewise, the steady appreciation of the standard of merit and the setting of a pace that already taxes our staying powers.

Those who have studied this new era the closest and believe in it the most are yet in the dark as to its ultimate outcome. It has much that is good, some that is bad, for it is the hard, the practical, the unsympathetic, yet withal the progressive side of business. Most of all, it is a fact, and as such will have to be accepted. Whatever its future may be, for it is yet only in its infancy, some things may be predicted of it with reasonable certainty. Its solution will be the outcome of the application of all the elements of human nature, not merely the selfish ones, for the ethics of trade will never be simply those of a pack of wolves, and its solving will embrace that of many of the economic problems that now perplex us.—Iron Age.

For some time past British India has been flooded with circulars issued by fifth-rate cycle merchants in England offering to supply high-class bicycles at low prices. The Indian trade has issued a warning to people contemplating the purchase of these goods.

## DOINGS OF STANLEY BROTHERS

### REGULATION OF GASOLINE FLOW

#### Steam Pressure at Instant Command and Automatically Controlled After Fire is Lighted—Racing Vehicles.

An invention of the utmost importance in mechanical carriage propulsion has been brought out by the Stanley brothers of Newton, Mass., in connection with their labors for producing an ideal steam road wagon. Hitherto the gasoline fired steam boiler has been always liable to flooding the burner with fluid gasoline, so that a conflagration followed the lighting. By simply changing the course of the gasoline supply pipe leading from the gasoline tank to the burner, the Stanleys have made it impossible for fluid gasoline to ever enter the burner. Nothing but the vapor of gasoline can enter the burner, and hence there is no possibility of lighting a puddle of gasoline, instead of setting fire to the expected small jets of gasoline vapor.

#### Weight and Power of Engine.

The result of this modification is that the Stanleys now have a steam boiler weighing less than a hundred pounds which will supply a pair of steam cylinders 2½-inch bore by 3½-inch stroke, cut-off at 9-16, at 822 revolutions per minute, the boiler pressure being 140 to 150 lbs. per square inch. These incredible figures are correct, as they represent the actual performance of the Stanley wagon at Charles River Park, Boston, Nov. 9, 1898. This Stanley steam boiler can be left for any length of time after the fire is lighted, with the certainty that it will neither reduce nor increase its pressure, nor will it blow off any steam; the boiler acts alternately as a steam generator and as a surface condenser, when the wagon is standing, and no steam is being used, the Mason regulator controlling its action perfectly. The practical result of all this is, that the driver can leave his Stanley wagon for an hour or two hours, with the certainty of having a full head of steam ready to use when he returns. The only failure possible occurs in case the gasoline tank becomes empty; when the fuel supply ceases the mechanism simply becomes inert, and that is all. The water cannot run short in the boiler while the engine is not working, because there is no escape of steam at the safety valve. When the steam pressure is above the regulator limit, the regulator turns cold air through the 300 thin copper tubes, and the boiler pressure quickly falls. Then the regulator slightly increases the fire, and so on, the pressure in the boiler not varying a pound, no matter how long the engine stands still. After the fire is once lighted the source of power needs no more attention, and the driver has precisely the same control of the situation that the motorman of a trolley car has; he has a full supply of power by simply moving a lever. The glass water-gauge is in full view, and hence in case of failure of the pump to work the driver is at once informed.

#### New Styles of Stanley Wagons.

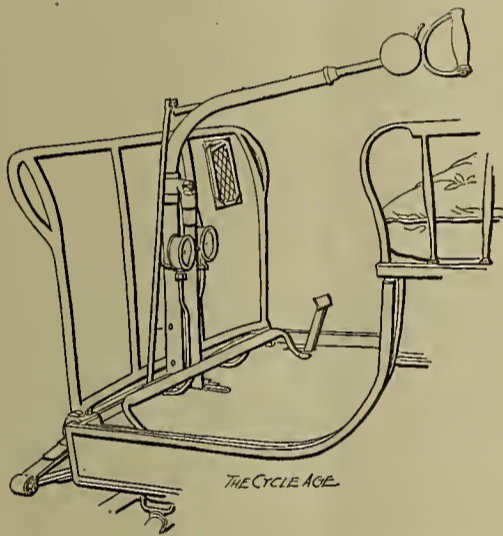
The Stanleys have decided that 510 lbs., which was the weight of the carriage run at Charles River Park, driver off, is too heavy for a two passenger carriage, and they are now completing a 470 lbs. wagon, which they hope will constitute their commercial model. The two-seated surrey, to carry four passengers, is nearing completion; this vehicle will weigh 450 lbs. They also have under construction a racing wagon for one passenger which will weigh, empty, 250 or 275 lbs. This wagon will have the same engines and boiler used with the heavier vehicles, and the Stanleys are confident that

with one passenger only, flying start, this carriage will reach unexampled speeds. Except that the Stanley wagons demand a considerable supply of water, they very nearly fill the requirements of the motor vehicle for all around utility, and give promise of extended use as soon as they can be supplied, and as the makers of these wagons have lately abandoned their somewhat absurd contention that patents are disgraceful things, and have announced their intention to protect themselves as fully as possible, the establishment of a large factory for the construction of Stanley steam wagons, seems to be assured, as well as a continuance of the highly successful labors of these two brothers in the field of effort which now absorbs their entire attention.

HUGH DOLNAR.

**Whitney Wagon Steering Lever.**

A not very good photograph led to a misrepresentation of Whitney's novel and ingenious steering lever, on page 16 of the Cycle Age of Nov. 3, 1893, the throttle crank and rod being omitted. In the engraving given herewith these parts are clearly shown. The small crank on top of the curve of the lever at the left is spliced to rotate with the spade-handle grip, so as to open or close the throttle valve by means of the long slender connecting rod leading downward from the



crank to the machinery under the foot-board. The grip has a fore and aft movement for reversing the engines, but the throttle crank shaft, being spliced to the grip shaft, does not partake of the fore and aft movement of the grip, but is affected by the rotation of the grip only. A very small arc of vibration of the throttle crank suffices to fully open or close the throttle valve, so that this movement does not cause any inconvenience in operating the steering lever by the slightly rotated grip.—HUGH DOLNAR.

**Found Tire Plugging Difficult.**

A Chrisman, Ill., dealer writes to Cycle Age as follows regarding the trouble he has had in plugging punctures and mending rents in low-priced single-tube tires, and the means he has adopted for making them serviceable as double-tube tires:

We conduct quite an extensive repair shop for a country town, doing nearly all kinds of repair work that comes in our line, and while we have had some trouble with the construction of cheap wheels, our greatest trouble was with the tires with which these wheels are fitted.

We found it nearly impossible to plug even the smallest puncture without tearing the tire, compelling us to resort to the vulcanizer. We cite one case in which a tire exploded, tearing a hole large enough to place two fingers in. We have converted a number of these tires from single tube to double tube by cutting a slit in them, inserting an inner tube, sewing them up, etc., similar to the double tube cemented tires.

A. E. Schnitker.

Custom neglected is custom lost.

**FRONT OR REAR WHEEL DRIVE**

**DURYEA ADVOCATES THE LATTER**

**Bad Roads and Front Load Incompatible—  
Rear Steering Slow—Chain Wear  
Avoided by Casing.**

Peoria, Ill., Nov. 15.—Your interesting article on "Road Contact of Wheels" has been read with pleasure. The motor vehicle business is so new that everybody is more or less feeling his way along in the dark. Each maker views the problem from his standpoint and in the light of his experience, and is not to be blamed for errors he makes, when he does the best possible. In the article referred to the question of front or rear driving was brought up, and the writer assumed it to be a debatable question. As a matter of fact it is not so. Any motor vehicle to sell on the American market must be able to traverse the average American road as it now exists. We cannot wait for better roads, because roads, like other things, are not changed until a demand for change exists. This demand the bicycle has started, and the motor vehicle will follow up with a most efficient second. But the vehicle today, in order to be practical and salable, must take these roads as they are. Hardly a day goes by in muddy or freezing weather but what we find places where the greatest possible traction is required. Our vehicles being very light weight and very heavily powered do not find themselves short of power, but they do find occasional places where traction is lacking. For example, a steep, muddy hill will permit the driving wheels to slip in the slight effort required to propel the steering wheel or wheels forward. In a case like this forward drivers would be simply helpless. If they carried sufficient weight to enable them to get up such a hill, the vehicle would take a header in attempting to go down it. We use rear drivers and place the weight very largely thereon, so that in hill climbing just sufficient weight is carried by the forward wheels to insure safety against upsetting backwards.

**How Steering is Affected.**

If makers use their vehicles on level streets only, this point does not come up, but if they are building vehicles to be sold throughout the country broadcast, it is certain that they cannot be front drivers. A further objection is found in the fact that front drivers are usually rear steerers, and a rear steering vehicle is not so comfortable as a front steerer. Any of the old school cyclers, who used rear steering tricycles, will bear witness to this fact. The rear steering vehicle must have its steering wheels turned in the wrong direction first, and then follow the forward wheels in the right direction. To get out of a car track they must first cross the rails to the wrong side, and afterwards to the right side. This method may serve very fairly for slow speed rigs, but if the motor vehicle is to supersede the horse it must be capable of greater speeds. The public expect this, most motor vehicles now on the market give it, and the future motor vehicle will not be a success without it. So, if there were any question as to front or rear driving, the objections against rear steering alone would be sufficient to settle the matter.

In the same article the question of pivotal construction for the front axle so as to permit vertical movement of the wheels was introduced. This system was tried by the Duryea Bros. in their earliest vehicles, but was afterwards abandoned, as being a costly, complicated and unnecessary construction. Ordinary horse vehicles run for years over all kinds of roads and without this construction, and the motor vehicle properly built can do likewise. While it is true that lifting the load requires power, it is also true that over ordinary roads this difference is not sufficient to be worth considering. The motor vehicle must of necessity be used by people having no previous experience therewith, and simplicity and reliability are greater features than slight additional economy, for the cost per mile is so much less with any motor vehicle than with horse vehicles that questions of economy do not arise.

**Chain and Gears Incased.**

A queer admission is made in the latter part of this same article regarding the twisting effect of the motor vehicle on the roads. In the first place, the axle is pivoted horizontally to avoid twisting, but, secondly, the chains are believed to be worn out because of the twisting effect. From the writer's experience with chain driven vehicles, he is convinced that the fault is elsewhere. Duryea vehicles are running every day, using chain drivers, and the chain is not giving any trouble. Of course, the chains are made as finely as possible, being our own design and made to our order. They are also cased, to protect them from the ever-flying dirt and

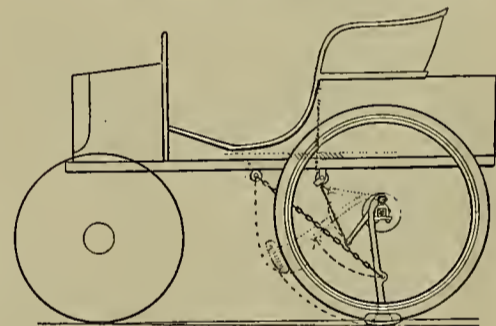
mud, and are self-oiling, so that they do not wear perceptibly.

Chas. E. Duryea.

Mr. Duryea overlooks that the writer of the article to which he takes exception distinctly states that he personally ascribes the excessive wear on the chains of the steam vehicle described by him to the absence of casing and not to twisting of the chain. On the other hand, he does not state definitely whether the pivoting of the front axle by which Mr. W. E. Whitney has aimed to avoid twisting was a feature of those wagons in the use of which excessive chain wear was observed, or is a recently added feature, which has not been in practical operation a sufficiently long time to determine its effect on chain-wear. The latter seems to be the most plausible inference as otherwise it might have been stated positively that the pivoting of the axle had or had not remedied the chain trouble. However, the point which Mr. Duryea evidently desires to emphasize is that chains are a good and durable driving medium, as used on Duryea vehicles, whatever they may have proved to be under different conditions. His reference to rear steering and its peculiar unsuitability to roads, furrowed by ruts and streets with car tracks, should be of considerable interest to the builders of vehicles.

**Emergency Brake for Vehicles.**

To escape injury to rubber tires on mechanical vehicles by sudden stoppage or reversal of power under speed a French inventor proposes the brake shown in the accompanying illustration. It will be readily seen that the brake shoe is designed to be dropped under the driving wheels so as to remove the tire from direct contact with the rough ground over which the vehicle may be driven when



brake service happens to be required. To disengage the brake when travel is to be resumed, it would seem to be necessary to back the wagon out from over the brake shoe, first. The inventor has apparently mostly the hard and flinty roads of Europe in view, as his arrangement will not lessen that portion of the stress on tires which arises from the sudden stoppage, but only the additional wear and tear which may be caused by roughness of the road.

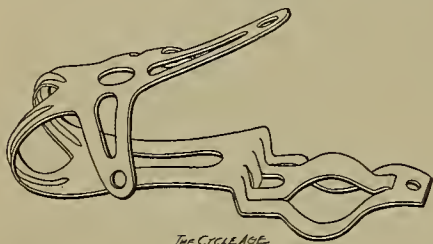
**Better Times in Australia.**

It is generally conceded by even the most confirmed pessimists that the tide of prosperity in Australia long ceased its ebbing and is now steadily flowing. The lean years belong to the past. Business is distinctly good and is improving. Though July and August are usually dull months, there are those who are able to say that they were the best of the year to date. The change in the spirit of business men is perhaps more marked in New South Wales than in any other colony. In Sydney it is rare to meet anybody who does not look forward to the coming summer with confidence that it will prove the best since 1891. In Australia, as elsewhere, there are numbers who have missed their chances and will never regain lost ground, but there is also a whole generation who are now facing opportunity for the first time.—Australasian Coachbuilder.

# INFORMATION FOR BUYERS

## TOE-CLIP THAT SNAPS ON.

In the accompanying illustration is shown Griswold's Self-Fastening toe clip which is made by M. E. Griswold Cycle Specialty Co., 45 South Canal street, Chicago. This clip is fastened to the pedal by simply snapping it on the barrel and may be removed by a strong jerk pulling the spring clasp apart. While in use, however, it cannot come loose by any movement of the foot, as a small flap of the metal plate is hooked into the sideplate preventing the clip from vibrating around the barrel and thereby also preventing it from getting into the position where it may be pulled off. The clip is made from

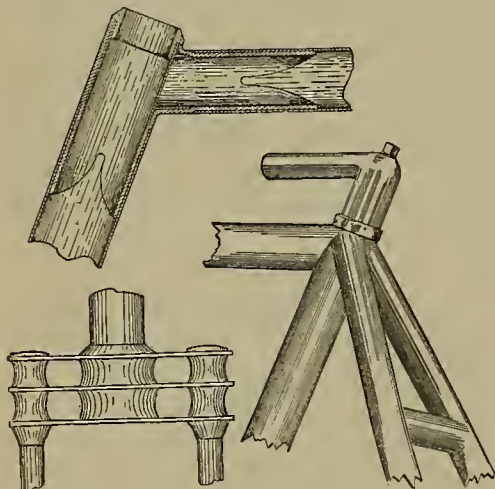


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a single piece of sheet steel and will fit any modern rat-trap pedal except those which are excessively narrow between the sideplates. The Griswold company has special machinery for turning this clip out as inexpensively as consistent with the high grade of stock and nickel plating that the trade expect in toe clips. Each clip is carefully spring-tempered after going through the punching and bending process in which the blank receives its form and is guaranteed by the company not to buckle out of shape when roughly used. The manner of attachment to the pedal also serves this end, making it possible for the clip to yield sideways when accidentally bumped against a curb or an obstruction in the road.

## THE OLIVE WHEEL CO.'S MODELS.

Traveling representatives of Olive Wheel Co., of Syracuse, N. Y., are showing the company's new sets of models to representative agents throughout the country. Among the features of the patterns there are naturally no startling innovations, as the construction followed this year proved very acceptable to the trade, but the flush joint construction, seat post cluster design and triple fork crown are shown in the accompanying illustrations as examples of the individuality which has always marked the Olive company's production. It is noticed in the flush joint construction that the two dangers have been avoided which are the bane of indifferent cycle designers, that is, there is neither too much accumulation of metal by which the effect of shocks would be concentrated at the nearest comparatively weak point of the frame, nor is the



metal forced into sharp corners in the presses so as to violate its structure. "Sixteen ounces of quality for every pound of price" remains the shibboleth by which the company aims to enlist the cooperation of active agents.

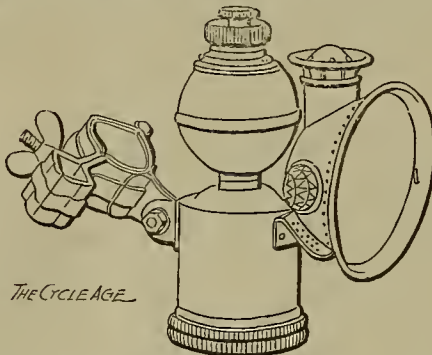
## PEERLESS LINE FOR '99.

Twelve models constitute the complete line of the Peerless Mfg. Co. of Cleveland, O., for the coming season. Three of these are 30-inch wheel models, which will not be carried in stock, so orders must allow extra time for assembling. The Peerless road machines are made in three models—the regular 28-inch wheel machines in diamond and drop frame, listing at \$50, and the 30-inch wheel model for men only, at \$60. Triumph

roadsters are also in three models, similar to the Peerless, but retailing at \$35 for the standard sizes, and \$40 for the 30-inch. The Bluebird racer is in two models, the standard size being listed at \$65 and the 30-inch model at \$75. The double diamond tandem is catalogued at \$75 and the combination double-seater at \$85. All the Peerless machines are finished in plain black of exceptionally fine lustre, and good nickel plating, making a finish calculated to appeal strongly to the good taste of a class of purchasers which the company is pleased to cater to largely. The Triumph roadsters are finished in three popular colors—black, maroon and green—while the Bluebird racer is finished in a color suited to the name. The tandems are graceful and of comfortable lines, and the double diamond is built either double or single steering. The heights of men's frames throughout the line are 22 and 24 inches, with 26 as an option; women's frames, 21 and 23 inches. Stationary or adjustable bars of new and attractive design are fitted, and the equipment throughout is standard and desirable.

## ELECTRO GAS LAMP IMPROVEMENTS.

The general form of the Electro gas lamp, made by the Electro Lamp Co., 45 Broadway, New York, is so attractive and convenient that no changes have been made for the season of '99, except in minor details, which are nevertheless of vast importance in the perfect operation of an acetylene lamp. The water chamber has been made larger and the top opening is now arranged so that the lamp can be filled quickly without the opening stopping up with air bubbles. The valve is of a new pattern, and



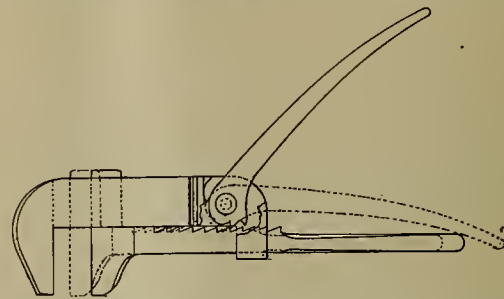
THE CYCLE AGE

the company states that no matter how much the lamp may be jarred or jolted, the flame will not vary in size. It is also so arranged that the water passes directly to the carbide instead of dropping on the carbide, as it did in the '98 lamp, as the cartridge now fits up tight against the valve. The reflector is made of aluminum, it having been found that no matter how highly polished the nickel reflector might be, it would tarnish in a short time, and could not be cleaned. With the one made of aluminum, the tarnish can be rubbed off with a soft cloth, making it always bright and new looking. The reflector is fastened to the body of the lamp, instead of the neck of the water chamber, which makes it stronger in every way. There is no opening around the burner tip, as in the '98 lamp, which at times allowed the suction of the wind to take the gas from the tip, putting the lamp out. The bottom clamp of the carbide chamber is of the same pattern, but arranged so there is no leakage of gas. The bracket is much stronger in every way, and the company will also make a bracket for it to apply to cartridges. The most important new feature of the lamp is the carbide charge, which, owing to the carelessness of the average consumer, was allowed to deteriorate. The new charges are all hermetically sealed, and could be kept out of doors an indefinite length of time without the atmosphere affecting the carbide contained therein. With this lamp will also be sold a permanent charge, which will allow the consumer to insert the carbide himself, making it much cheaper if he desires economy rather than convenience.

## CLAMPS NUTS AUTOMATICALLY.

A wrench has been designed by C. J. Bonsfield of Bay City, Mich., which will clamp the nut to which it is applied by the automatic pressure of the hand in operating it. This is accomplished, as shown in the illustration, by arranging on a slotted bar with the outer jaw as its extremity, a second bar carrying an inner jaw and adapted to slide along the slotted bar. The sliding bar is provided with teeth or notches for forcing the bar forward by engagement with the

teeth of a cam pivoted in the slotted bar, when the cam is rotated by a lever which forms part of the wrench handle. The inventor believes that this wrench will do the work of a clamping wrench, by which marring of nuts is avoided, more effectively than any of the more elaborate affairs that have been designed for this purpose, so long as no heavier work is required than that incidental to the use or repair of a bicycle. He is preparing to place it on the market within a short time and will use such exceptionally good material that there will be no danger of breaking the cam teeth which



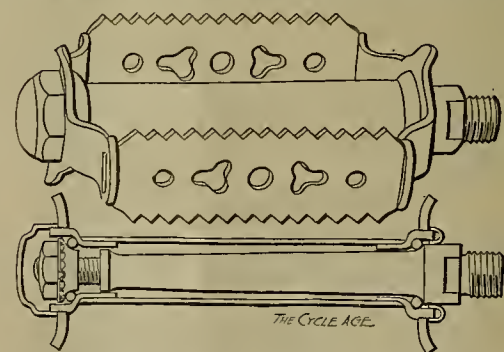
bear the heavy stress. This necessarily will make the wrench somewhat costlier to manufacture than other bicycle wrenches on the market.

## SPEEDER COMPANY'S MODELS OUT.

The Speeder Cycle Co. of New Castle, Ind., announce that they will have one of the most complete and finest lines of bicycles manufactured in this country. They have three different models, the Alcazar, New Castle, and Atlas. The Alcazar will be built in two models, with 28 and 30 inch wheels. They will be built of the very best material with triple crown, all crowns nickel plated, Fauber hanger, flush joints throughout, 3/4-inch drop to hanger, and seat post and handlebar expanders. The 28-inch Alcazars will list at \$50, the 30-inch at \$55. The New Castle will have diamond front fork, diamond cranks, and diamond lower and upper rear stays, flush joints, seat post and handlebar expanders. It will be one of the finest machines on the market, and will list at \$40. The Atlas will be a first class machine with 1 1/4-inch tubing in the diamond, flush joints, 2 1/2-inch drop to crank hanger, adjustable handlebars, with handlebar expanders, and will be up to date in every particular. It will list at \$35. These machines will be enameled in three colors, black, maroon, and olive green. The catalogue showing the complete line will be out in a very short time.

## THE ROUGH RIDER PEDAL.

Mackie-Lovejoy Mfg. Co., 60 N. Clinton street, Chicago, have placed a new pedal in the market, called Men's Rough Rider pedal, which is built to stand hard knocks. It is being sold alongside of the Arrow and



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Advance patterns which are well known to the trade, and is provided with the same style of interlocking cone and washer by which tightening and bending of pedal bearings are prevented on all Mackie-Lovejoy pedals. The illustration shows the design and construction of the Rough Rider. The spindle is drop-forged and thoroughly case-hardened. The bearings are dust-proofed by a screw-cap at the outer end and an annular spring washer at the inner end. It is made in rat-trap and combination patterns in both men's and women's sizes and is heavily nickel plated.

## ANDRAE TELEPHONES AND SUPPLIES.

A catalogue of telephones and electrical supplies has just been issued by Julius Andrae & Sons Co., of Milwaukee, which has been engaged in the manufacture of such

**Columbia Dealers Pleased.**

ST. CLOUD, MINN., Oct. 31, '98.  
POPE MANUFACTURING Co.,  
Hartford, Conn.

We are pleased to receive your circular No. 27 and to note prices you quote for 1899. We have always thought your prices too high to enable a dealer to compete successfully with other wheels, but with these prices you are now making and the line you are putting on the market, we feel that there is no use looking farther or handling any other wheel. Shall be glad to have your representative call on us as soon as convenient so that we may arrange for next season's trade, will probably want some sample wheels for holidays and trust we may increase the sale of Columbia and Hartford wheels as much in 1899 as we did in 1898.

Kindly let us know about when we may expect a call from your traveler.

Yours truly,  
THE GRINOLS' CO.,  
(Signed) C. D. GRINOLS,  
Sec'y & Treasurer.

DERBY, CONN., Nov. 15, 1898.  
POPE MANUFACTURING Co.

Dear Sirs: We are very much pleased with the last Model 50 Columbia Chainless and it was sold before it was in the window five hours. The price is such a decided change that people seem now to think that they can afford one who would hardly talk with you before. The wheel received is a perfect running one apparently so far and has given our customer perfect satisfaction and he is so pleased that he is constantly asking his friends to ride it. We expect to sell quite a number. We enclose an order for another Model 50.

THE HUNT PAPER CO.

MILLVILLE, N. J., Nov. 10, 1898.  
POPE MANUFACTURING Co.

Dear Sirs: I predict the season of '99 will be one of the largest in the history of your company, your prices are right and there is no doubt about the wheels being all right, especially the "Chainless." At the reduced price it should take the place of all high grade chain wheels.

W. G. HAY.

LEXINGTON, KY., Nov. 10, 1898.  
POPE MANUFACTURING Co.

Dear Sirs: "I have been riding a Chainless myself all the season and am free to say that it is without a doubt the nearest thing to perfection in a bicycle which I have ever ridden.

I have ridden this wheel since February and have never adjusted a bearing or put a drop of oil on it, and I think it runs smoother to-day than it did when I first began riding it."

SMITH, WATKINS & CO.

**Gold Medal at Omaha.**

The Pope Manufacturing Company were awarded the gold medal for bicycle exhibit at the Trans-Mississippi Exposition held in Omaha.

**The Chainless.**

(Joliet News, Nov. 4, 1898.)

The Columbia chainless drops to \$75 next year which will bring it within the reach of the west, and will make a big scatter in the bicycle world. There is nothing like it. A man on a chainless is a nabob. People treat him that way, and he feels that way.

In Chicago 215 were sold this year, the price being \$125, but next year will see a great change, for the wheel comes next to a steam engine. There was a feeling that it would not run as easy as a chain wheel, but that has not been the experience and the record smashing of the season shows it. The time from New York to Boston was cut five hours, and to Albany four hours and thirty-nine minutes. Teddy Edwards made 250 consecutive century runs during the year on the chainless, and the News editor has made Jim Flanders tired.

# QUALITY and PRICE

The rare combination of quality and price which we are offering in Columbia, Hartford and Vedette bicycles, has never before been approached by any other line. The quality of our wheels has been admitted for years, even by our competitors, to be unsurpassed. Their plea for business has almost always been that they offered something just as good as a Columbia or Hartford for less money. The force of that argument has been discounted by our 1899 prices. Columbia and Hartford bicycles for 1899 are better than any of their predecessors, which have stood as STANDARD during their respective seasons.

Here is QUALITY.

Here is PRICE.

Columbia Chainless,	-	\$75.00
Columbia Chain,	-	\$50.00 40.00
Columbia Tandems,	-	75.00
Hartford,	- - -	35.00
Vedettes,	- -	\$25.00 26.00

If you secure the Columbia Agency, you will be offering your customers the best bicycles to be had at prices but little more than the cost of the poorest.

Write to, or call at once on the Columbia Distributing Point in your territory. You will be sorry if your competitor gets the agency.

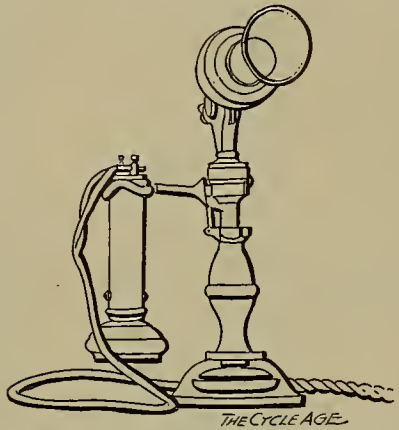
**BRANCH HOUSE DISTRIBUTING POINTS:**

- |   |  |   |
|---|--|---|
| BOSTON, MASS., 223 Columbus Ave.  | Iem, Mercer (except Princeton).  | Charles Ave.  |
| Maine, New Hampshire, Eastern Massachusetts to the Worcester county line.   | State of Delaware, Eastern Maryland, eastern peninsula of Virginia.  | Louisiana, Texas, Mississippi, El Paso.   |
| NEW YORK CITY, 12 Warren St.  | PITTSBURG, PA., 435 Wood St.   | ST. LOUIS, MO., 817 Pine St.  |
| Following counties in New York state: Kings, Queens, New York, Orange, Putnam, Richmond, Rockland, Suffolk, West Chester.                             | Following counties in Pennsylvania: Allegheny, Washington, Beaver.   | Missouri, Kansas, Arkansas, Oklahoma, Indian Territory, Southern Illinois.  |
| Following counties in New Jersey: Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Union, Sussex, Warren, Hunterdon, Somerset.            | BUFFALO, N. Y., 609 Main St.   | CHICAGO, ILL., 105 Wabash Ave.  |
| PHILADELPHIA, PA., (Hart Cycle Co.) 816 Arch St.  | Following counties in New York state: Erie, Chautauqua, Niagara, Cattaraugus.  | Iowa, Indiana, Wisconsin, Minnesota, North and South Dakota, Nebraska, Northern Illinois, western half of northern peninsula of Michigan. |
| Following counties in Pennsylvania: Chester, Lancaster, Lebanon, Dauphin, Schuylkill, Berks, Lehigh, Carbon, Northampton, Bucks, Montgomery Delaware. | Following counties in Pennsylvania: Erie, Crawford, Warren, McKean.  | PROVIDENCE, R.I., 15 Snow St.   |
| Following counties in New Jersey: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean, Sa-  | ROCHESTER, N. Y., 32 East Ave.   | Rhode Island.   |
|   | Following counties in New York state: Monroe, Orleans, Genesee, Wyoming, Livingston, Wayne, Allegany, Steuben, Ontario, Yates. | PORTLAND, ORE., 134 Sixth St.   |
|   | DETROIT, MICH., 272 Woodward Ave.  | Washington, Oregon, Idaho, and Montana.   |
|   | State of Michigan, except the western half of the northern peninsula.  | SAN FRANCISCO, CAL., 344 Post St.   |
|   | NEW ORLEANS, LA., 1757 St.   | California, Nevada and Arizona.   |
|   |  | DENVER, COL., (Gano Cycle Co.) 1614 Stout St.   |
|   |  | Wyoming, Utah, Colorado, New Mexico, Texas.   |

All points the United States not specified above will be heretofore from the Home Office of the as

**POPE MFG. CO., Hartford, Conn.**

goods for the past thirty-eight years and was one of the first concerns to handle them in a retail way in connection with bicycles. Just now the company is using strongly their suitability for sidelines for cycle dealers throughout the country, and it reports meeting with gratifying success in its endeavors. In the introductory to the new catalogue the Andrae say: "Experience with poor telephones has increased the demand for the Andrae—because the Andrae is a good telephone. We do not say the 'best.' The word has been so misused that it has lost nearly all of its good significance. It seldom tells the truth and therefore we will not use it. It suggests rivalry, a factor which, in our case, is all upon one side, and therefore of no moment to us. We have had our own work to do

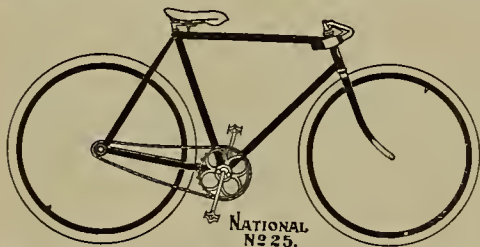


THE CYCLE AGE

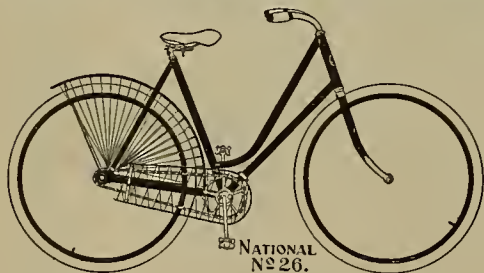
and we have done it. Our work has been to attain the ultimate stage of telephone perfection. To this end we have employed busy brains and clever fingers. We accepted possibilities and returned realities; and now, in the Andrae, we offer the most ingenious and most carefully made telephone that mechanical skill, capital and energy can produce." The Andrae line of telephones includes three styles of standard exchange instruments with and without the adjustable arm for the transmitter; the standard long-distance and the long-distance, swinging arm desk instruments; the inter-communicating or warehouse instrument, designed to meet the requirements of extensive factories and office buildings and dispensing with the use of switch-board and operator; and the long-distance portable desk telephone, here shown, which is one of the many conveniences that science has placed within the reach of the busy man as he labors at his desk. A full line of telephone parts and implements for constructing and equipping complete lines of communication are also supplied by the Andrae company.

NEW NATIONAL MODELS.

In making its announcement to the trade the National Cycle Mfg. Co. of Bay City, Mich., states that it will stick to its old policy of selling direct to the dealer without the intervention of the jobber. Emphasis is put upon the intention of the com-

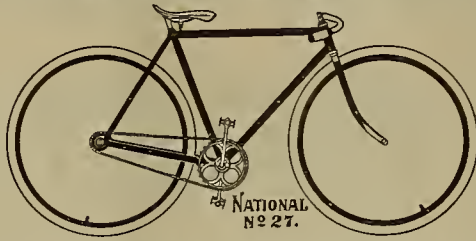


pany to protect the dealer in the matter of price maintenance, the channels through which the National is marketed, and the inviolable use of the National trade-mark. The line for 1899 consists of four new single machines, tandems being built to order only. Model 25 is the regular 25-pound roadster,

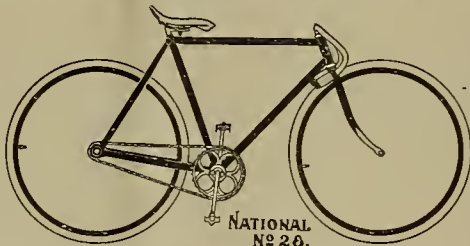


with 3-inch drop, 5½-inch head, 23-inch frame, with options of 22 or 25-inch frames; list \$60. Model 26, the only lady's machine in the line, is built with 22-inch frame and 3-inch drop, with option of 20-inch frame. The weight of this model has been reduced two pounds below that of '98; list \$60. Model 27, listing at \$65, is the 30-inch wheel which is

made at the special request of many of the company's old dealers. After making several experimental machines, Superintendent Wilcox decided that the closely built bicycle



was to be desired, and accordingly has produced a machine with 4½-inch wheel base and 23-inch frame. With 3½-inch drop and 7-inch cranks, it is a most suitable mount for the tall man. President Smith of the company says his 30-inch machine rides



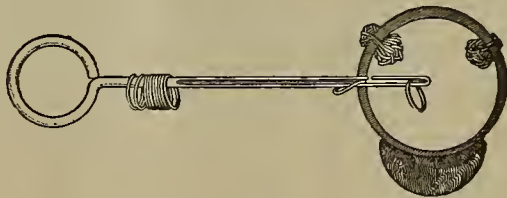
easier and seems to fit him better than any other bicycle he has ridden. The National racer weighs 21 pounds and lists at \$75. It has 22-inch frame, 3-inch drop, 4½-inch head, light rims, spokes, hubs, sprockets, and chain.

CRUCIBLE STEEL IN WOLFF-AMERICANS.

With construction and design of the ablest cycle manufacturers extensively copied and imitated by makers of lower rank it is frequently noticed that a design which was excellent for the material in which it was first produced by the originator is thoughtlessly appropriated by others who embody it in material of a much lower grade. The result is trouble. In bicycle construction the result is breakage and frequent recourse to the repair shop. Low grade material must be designed and worked by original methods adapted for low grade material and not by imitation, if halfway acceptable results shall be produced. In bicycles the use of low grade material means either increased weight or danger of breakage, usually both. In all cases it means also much lessened durability. A certain assurance that the best material is used is today the best guarantee of high grade in bicycle construction. It guarantees good workmanship, for nobody would spoil good material by cheap work, knowingly. It guarantees good construction, because the construction which is imitated by all low grade manufacturers is necessarily that which was originally designed for the best material. That is the law followed by commercial imitators. It is with these points in mind that R. H. Wolff & Co., Ltd., of New York, draw the trade's attention to their exceptional position as producers of the highest class of crucible steel and wire. Being enabled to obtain at first cost a steel for bicycle work which is acknowledged to be the best for a multitude of purposes that come within the range of bicycle construction, they point out how this special position creates the only assurance of high class bicycle manufacture, which every thinking person must admit to be valid and genuine without discussion. They place the argument at the disposal of their agents as a valuable assistant for convincing customers that Wolff-American bicycles illustrate that important difference between high and low grade bicycles which frequently escapes the customers' ability for investigation.

REPAIR TOOL PRICE REDUCED.

The Sure Thing tire mender, manufactured by the Brown-Lipe Gear Co., of Syracuse, N. Y., which was sold extensively the past

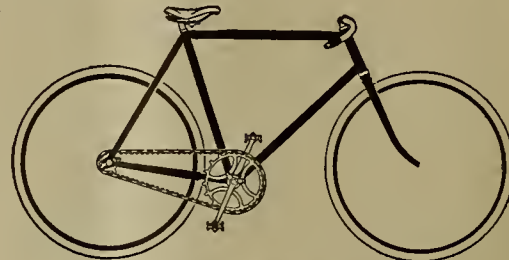


season, has just been reduced 33-1-3 per cent in price, and will hereafter be mailed post-paid on receipt of price in stamps. The repair kit, as shown in the accompanying cut, consists of a slotted and grooved needle, package of rubber bands, and a vest-pocket case. The kit is for making quick repairs on single tube tires in emergency cases on the road, no cement being required, and a temporary repair being effected that is good

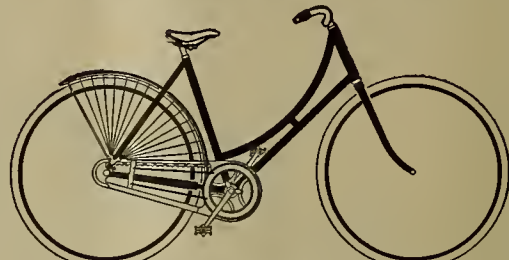
for several hundred miles of riding. The company is prepared to furnish electrotypes for jobbers' catalogues.

NEW STEARNS MODELS.

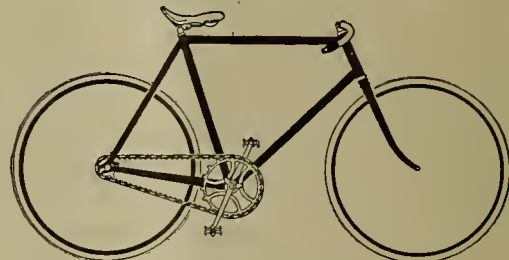
The advance catalogue of E. C. Stearns & Co., of Syracuse, N. Y., is just out. It shows outline views of the eleven '99 models of



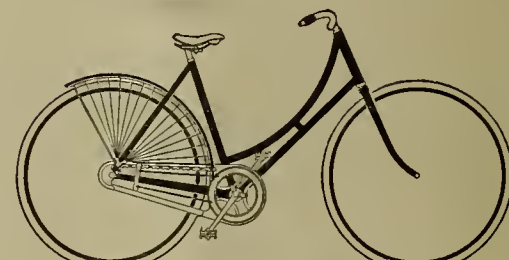
Model E—Weight, 24 lbs. Price, \$50.



Model F—Weight, 24½ lbs. Price, \$50.



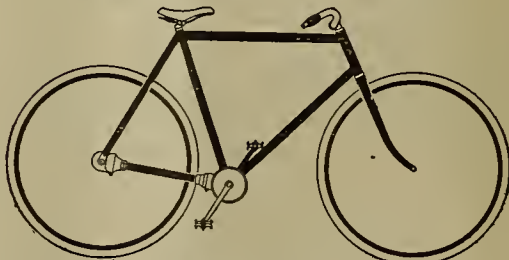
Special—Weight, 21½ lbs. Price, \$60.



Ladies' Special—Weight, 23½ lbs. Price, \$60.



Racer—Weight, 20 lbs. Price, \$60.



Model G—Weight, 27 lbs. Price, \$75.



Model H—Weight, 27½ lbs. Price, \$75.

Stearns bicycles, reproduced herewith, giving also specifications and detail drawings and descriptions of the minor parts which have undergone changes. Grips are no long-

# Net Profits Are What The Dealer is After



## National Bicycles

\*\*\* GIVE THEM TO HIM.

They are good machines sold at a fair price and to dealers only. They give riders satisfaction and save the dealer the expense of constant repairs to keep the rider satisfied. That's where the profits go—into constant tinkering of the bicycle whose first cost is cheap.

NATIONALS NEED NO TINKERING—  
THEY ARE BUILT RIGHT \*\*\*

Ask for our traveler and  
look over his samples.

National Cycle Mfg. Company

\*\*\* BAY CITY, MICH. \*\*\*

NOT SOLD ON BARGAIN COUNTERS

Mention The Cycle Age

Don't  
Forget!

....THE....

# ECLIPSE

Is the Leader for '99 at \$50.00 List.  
They Stand the Test....

....THEY ARE FITTED WITH THE....

MORROW

AUTOMATIC COASTER AND BRAKE

Thousands of riders are enthusiastic  
over this device. It will be a great seller.  
Wise buyers will get our prices be-  
fore completing arrangements.

ECLIPSE BICYCLE CO.

ELMIRA, N. Y.

Mention The Cycle Age

THE  
YALE

## We Have the Same Agents...

Year after year. There  
must be a reason for this.  
It is not difficult to guess.  
Our BICYCLES always  
please.

THE KIRK MFG. CO.  
TOLEDO, OHIO.

### Distributing Agents:

Conroy Mfg. Co., 28 John St., New York.  
H. B. Shattuck & Son, Boston, Mass.  
Jas. Bailey Co., Portland, Me.  
Carlin & Fulton, Baltimore, Md.  
Mistrot Bros. & Co., Houston, Tex.  
Boutell Bros., Minneapolis, Minn.  
Powell & Clement Co., Cincinnati, Ohio.  
P. E. Allison, Louisville, Ky.

Mention The Cycle Age

## Initial Tension Expansion Spring SEAT POST

The Only True Ja Absorber.

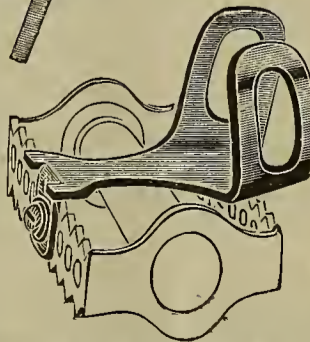
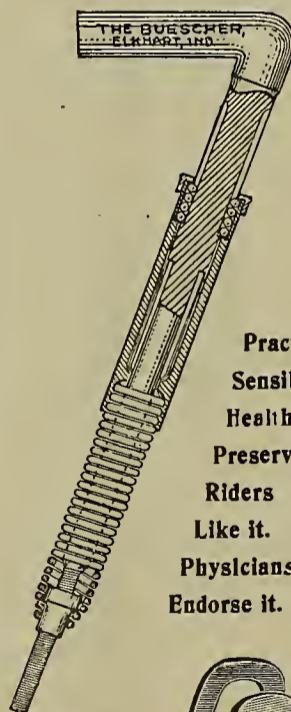
(Patent Pending.)

PRICE, \$2.50 EACH.

SYNONYM FOR THE BEST IS THE  
NAME OF

THE BUESCHER MFG. CO.

ELKHART, IND.



No. 3 TOE-CLIP Patent  
Correct practical Sept. 14, '97.  
design, 35c pair.

Practical,  
Sensible,  
Health  
Preserving  
Riders  
Like it.  
Physicians  
Endorse it.

The jobber, the dealer  
and the user of bicycle sun-  
dries know this.

Our products are stand-  
ard and reliable in style,  
quality and price.

'99 CATALOGUE  
mailed at your request. It  
will pay you to see same  
before ordering a single  
sundry.

Complete sets of  
Pumps, Lamp brackets,  
Toe Clips, Coasters, the  
best Spring Seat  
are shown in it.

See our Tronser Guard.  
We make specialties—  
write for estimates.



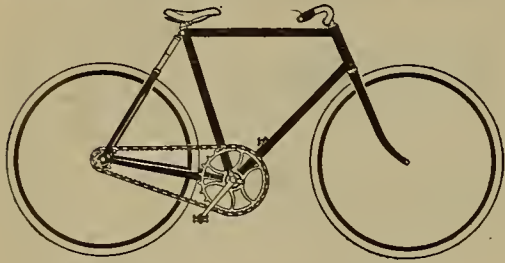
No. 7 FOOT-  
PUMP, barrel  
1 1/2 x 12. Solid  
stirrup. Price  
80c Each.



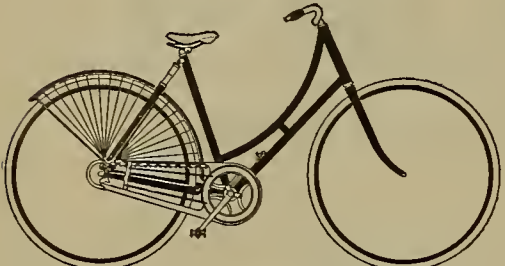
No. 3 COUPLING.

Latest and Best. Every Pump should be fitted  
with it. Pat. July 14, 1896.

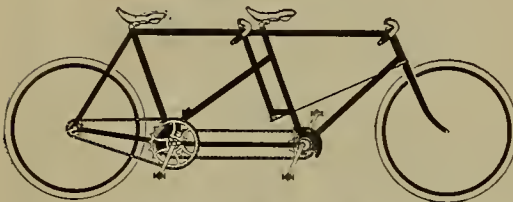
er cemented on the bars, but are attached mechanically by a screw. Hartford and Palmer tires will be regularly fitted, and option will be given on Kangaroo and M. & W. single and double-tube tires. The Morrow



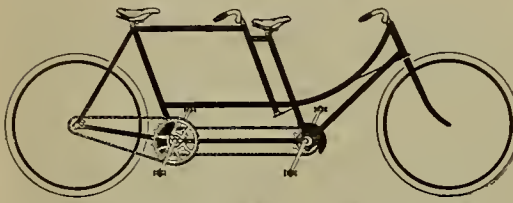
Model K—Weight, 23 $\frac{3}{4}$  lbs. Price, \$65.



Model L—Weight, 25 $\frac{3}{4}$  lbs. Price, \$65.



D. D. Tandem—Weight, 43 lbs. Price, \$75.



Comb. Tandem—Weight, 45 lbs. Price, \$75.

automatic coaster and brake will be fitted to Models E and F upon order. The regular catalogues will be ready for distribution about December 1.

#### SMITH CO.'S THREE-CROWN PARTS.

Parts for three-crown bicycle frames are now being made in quantity by C. J. Smith & Sons Co. of Milwaukee, consisting of crank hangers, seat post clusters, rear crowns, rear forks and stays and rear fork ends for making the rear end of this style of frame in flush joints. All of these parts are made of sheet steel, the clusters being arranged to use with expanders. The forks and stays are tapered D-section, and fit onto the crown at the large end, and on the rear fork end at the small end. The crown is a new piece of the company's own design and is very light and strong.

#### WHEELER SADDLE COMPANY BUSY.

The Wheeler Saddle company's plant at Detroit, Mich., is now running full time in every department. The extraordinary demand for the company's model "Extra" has necessitated the putting on of a full force earlier than was at first contemplated. The Wheeler line consists of but four models—the men's and women's Extra, the Special roadsters, and the Cork-Top racer, all having "that curve" in the back and finished in the careful and stylish manner that has always characterized Wheeler saddles. Attempts have been made to imitate these popular goods, but reliable wheelmakers always prefer the genuine to an imitation, as is amply testified by the many contracts the Wheeler people have already secured.

Bigelow & Dowse Co., 229 Franklin street, Boston, has renewed its distributing agency for the Davis Sewing Machine Co. of Dayton, O., and will carry the full line of bicycles made by this concern, including the spherical hubs and hanger '99 model. In addition to this line it will handle in a jobbing way the B. & D. Special, Shawmut, Park Flyer, and the Fay juvenile bicycles, the last named being the product of the Fay Mfg. Co., which Bigelow & Dowse have arranged to represent.

Notice has been served by the Eclipse Bicycle company that a coaster and brake device is being made and advertised which it alleges to be an infringement of the Eclipse letters patent, and that unless the manufacture of such coaster and brake

ceases and the advertisements be withdrawn, the company will institute infringement proceedings immediately in the United States court.

#### TRADE NOTES.

S. K. Dingle has entered the service of the Mechanical Fabric Co., of Providence, R. I., which manufactures Emperor, Conqueror and Flexifort tires, and is now putting on the market a new tire called the Hobson, to meet the popular demand for a serviceable article at a moderate price. Mr. Dingle will make his headquarters with Wm. H. Sheldon & Co., selling agents for these goods, at 105 Reade street, New York.

The Lozier Manufacturing Company's branch in Toledo will move into new headquarters on Madison street for its local retail business. The building, which has just been erected, will be fitted up as a model bicycle emporium. Jack Swindeman will be in charge of the store and, besides, will have charge of the retail business in several counties adjoining Toledo.

Kelly handle bars and Kells saddles have been introduced successfully in England by Lew Keck, traveling salesman for the former, and Brown Bros., London, handling the latter, and the trade in those lines has taken on a satisfactory aspect, according to Charles Weaver, who jointly represents the Kelly Handle Bar Co. and the Kells Mfg. Co. in Cleveland.

The Hoffman Bicycle Co., of Cleveland, O., has completed its '99 models, and a fortnight ago started its traveling salesmen out on the road. Mr. Smith went east to cover eastern Ohio, New York, Pennsylvania, and the New England states. Mr. Dobbins will take in western Ohio, Indiana and Illinois, and a third man will cover Michigan, Wisconsin, Iowa, etc.

Hollinghead & Wirtz, 2 Stone street, New York, basing calculations on actual and prospective orders, anticipate producing upwards of half a million pedals this year, their capacity being 3,000 pair a day. Among their new contracts are large orders from some of the foremost bicycle making concerns of the country.

The Bridgeport Gun Implement Co., of Bridgeport, Conn., reports having in hand orders for 150,000 pair of Bridgeport pedals, which will tax its facilities in this line to the utmost. Additional orders for these pedals would necessitate their manufacture outside, which would mean added cost of production.

The Gendron Wheel Co. of Toledo has twelve men on the road. Since July 1 the concern has been working on '99 models and 6,000 of them are now ready for shipment. The Gendron company runs its bicycle department the year around.

J. H. Johonnot, formerly of the firm of Cramer & Johonnot, selling agents for the Barnes bicycles, in Buffalo, N. Y., has formed a partnership with E. B. Cassety and will soon open a store for the sale of Olive bicycles in that city.

Charles H. Weld has been made sales agent at Marshall, Mich., for Duckworth chains, the Cycle Tool & Mfg. Co.'s expander, seat-post cluster and one-piece crank-hanger, and for Otto Konigsloew's line of jobbing bicycles.

A. T. Wilson of Denver was in Toledo last week and closed a contract with the Union Mfg. Co. for 1,000 Vikings. He will have the exclusive sale of the Viking bicycles in Colorado.

The Shelby Steel Tube Company is putting in position at their Greenville mill the largest piercers in use in the world, large enough to pierce a billet 5 $\frac{1}{2}$  inches in diameter.

Charles Litzky and J. F. Rivers, constituting Northwestern Cycle Co., have secured the agency for Columbia and Luthy bicycles in Minneapolis and St. Paul.

E. P. Blake & Co., Boston, Mass., cycle dealers, have absorbed the business of H. Lorentzen & Co.

#### GAS LAMP REQUIREMENTS.

##### Mechanical Features Needed and Results Most to be Desired for Perfect Gas Lamps.

What should be the mechanical construction of the perfect gas lamp? What results are desired in operating a gas lamp in order to earn the designation "a perfect gas lamp"? Both questions are asked by the Frank E. Bundy Lamp Co., and answered by them in the following manner:

It is an undisputed fact that an acetylene gas lamp, of a size suitable for bicycles, cannot be constructed which will admit of the gas being ignited and extinguished in the same manner as an oil lamp, and be absolutely safe. As long as there is moist-

ure in the receptacle which contains the carbide, gas will be generated, and, if a lamp has a valve to turn the gas off, from the moment the gas ceases to have an exit the pressure rises, and while the lamp might be made strong enough to withstand the pressure, the results, when the gas is turned on again, would not be at all satisfactory or safe. So an impossibility cannot be considered a requisite for a perfect gas lamp. The following are the only mechanical necessities for a perfect gas lamp:

1. Treatment of the carbide by furnishing moisture through an absorbent and not letting the water attack the carbide direct.

2. Absolutely automatic regulation of the water, so that under no circumstances will any more water or moisture be able to attack the carbide than the operator intends to have, or than was intended by the manufacturer of the lamp.

3. Simplicity of construction and operation.

4. Size and weight consistent with the results desired, particularly the amount of light and reasonable minimum hours of burning.

5. No possible chance for gas to escape, except at the burner.

6. All parts interchangeable.

7. Handsome appearance and graceful proportions.

8. Carbide to be used in such a form that it may be quickly and in a cleanly manner renewed in the lamp, and be absolutely impervious to moisture until placed in the lamp.

The following are the results which are mostly to be desired, and which should be obtained, in operating a perfect gas lamp:

1. A reasonable amount of light.

2. At least five hours of burning at one time.

3. The lamp may be relighted and burned without renewing the carbide, if the lamp has not previously given the stated number of hours' burning.

4. Pure gas and white light.

5. The lamp should not get hot so as to prevent handling with impunity.

In many gas lamps a needle point valve allows the water to pass directly to the carbide, with no other feature to control the passage of the water from the water chamber to the carbide, so that when, by a sudden jar, the lamp is shaken, water is precipitated in a large volume direct to the carbide and a large amount of gas is generated, which passes through the burner with a huge flame and smoke, and through the water chamber and so out into the air, giving off the most disagreeable odor, and in some instances the gas is ignited at the wrong place, completely ruining the lamp, with injury to the bicycle.

The extent to which acetylene gas lamps are being made and used, and the absolute worthlessness of a majority of them, really calls for a government license, an examination before any lamp could be placed on the market, and no lamp should be allowed to be sold which did not come up to the standard and requisites as enumerated above. Piracy is common among gas lamp makers. This feature is stolen from one lamp and that feature from another, and a lamp is produced inside of a few weeks, without any thought or study as to its practicability and safety.

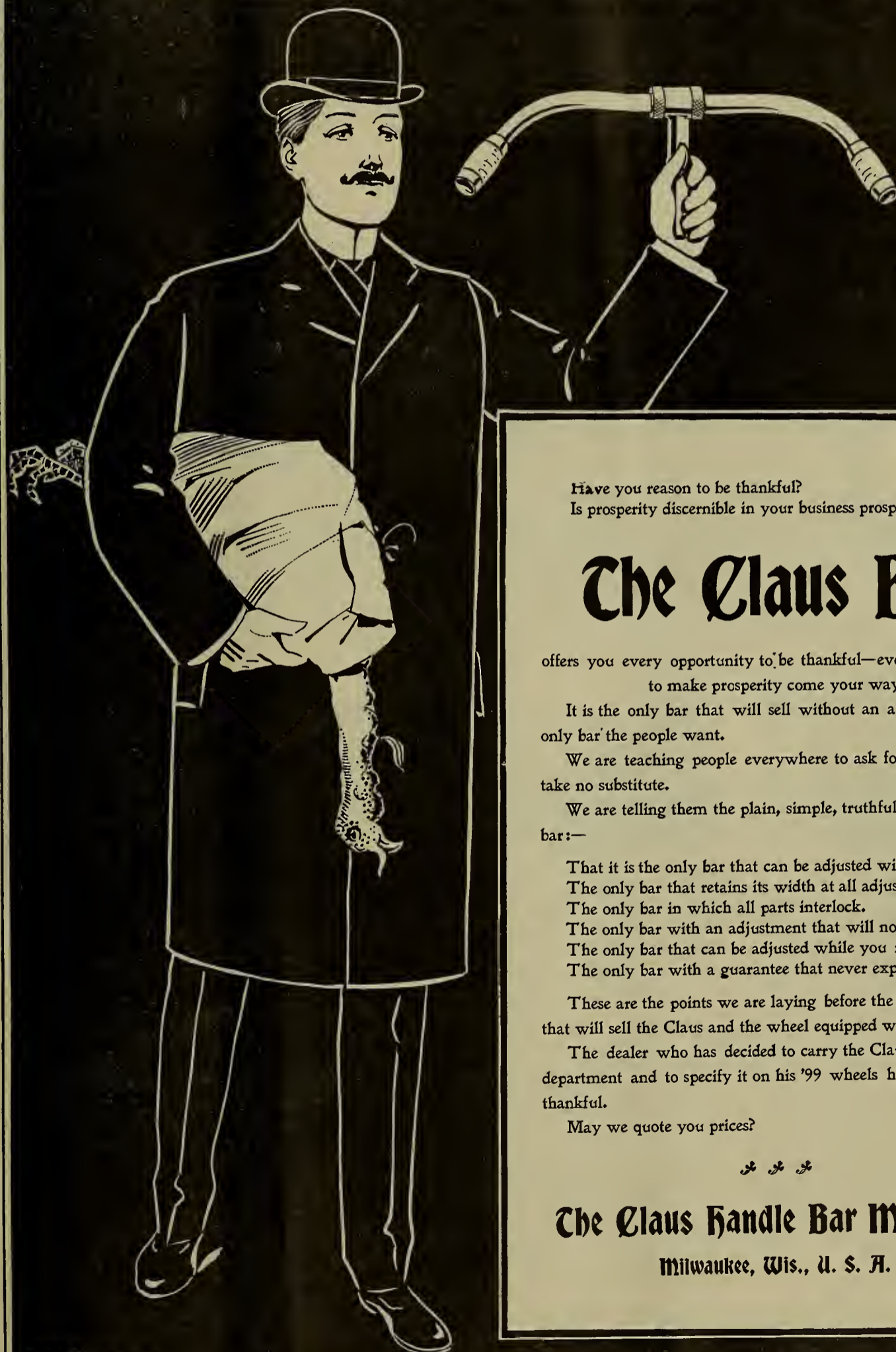
The Bundy lamp, produced after two and one-half years of experimenting and trial, is designed on scientific principles. The ease and cleanliness with which it can be lighted has been remarked by everyone who has examined it.

The carbide charges, called "carblots," are hermetically sealed and absolutely impervious to moisture, rendering them perfectly safe in any house or store, and therefore not affecting insurance. The carblots are of a very novel construction, whereby blotting paper is utilized in such a form that the water never comes in contact with the carbide, but the moisture which passes into the blotting paper is absorbed gradually by the carbide and gas is generated in an even and constant manner. Gas passes from the generating chamber, through a purifier, into the gas chamber, and is cooled, and the gas burns with a pure and white flame. In no way is it possible for gas to find an exit in any place except the burner, if the carbide receptacle is properly screwed up. The Bundy lamp can be relighted and burned two, three or four times with the same charge without renewing, if the stated number of hours have not been burned out previously. This is a valuable feature of the Bundy lamp. To produce a certain amount of light and a certain number of hours of actual burning in an acetylene gas lamp, it is required that the lamp should be of sufficient size to hold water and carbide enough to produce such volume of light for this number of hours. The beauty of finish and the graceful proportions of this lamp meet with general recommendation and approval.

The Bundy people are the sole owners of any and all patent rights for the use of an absorbent in the treatment of carbide in the gas lamp. Their factory in Elmira, N. Y., is large and completely equipped for the sole manufacture of gas lamps of all descriptions.



# REASON TO BE THANKFUL



Have you reason to be thankful?  
Is prosperity discernible in your business prospects for 1899?

## The Claus Bar

offers you every opportunity to be thankful—every opportunity to make prosperity come your way.

It is the only bar that will sell without an argument. The only bar the people want.

We are teaching people everywhere to ask for the Claus—to take no substitute.

We are telling them the plain, simple, truthful facts about our bar:—

That it is the only bar that can be adjusted without a wrench.  
The only bar that retains its width at all adjustments.  
The only bar in which all parts interlock.  
The only bar with an adjustment that will not wriggle.  
The only bar that can be adjusted while you ride.  
The only bar with a guarantee that never expires.

These are the points we are laying before the people. Points that will sell the Claus and the wheel equipped with it.

The dealer who has decided to carry the Claus in his sundry department and to specify it on his '99 wheels has reason to be thankful.

May we quote you prices?



**The Claus Handle Bar Mfg. Co.**

Milwaukee, Wis., U. S. A.

# THE PASTIME AND SPORT

## Pacemakers Against Horses.

Philadelphia, Oct. 21.—While Major Taylor was practicing world's records at Woodside Park last Wednesday, two of his pacemakers, Nat Butler and W. F. Sager, were at Point Breeze track trying conclusions with the horses. Nat rode against Albatross, the guideless pacer, in a half-mile, best-two-in-three match. The horse won the opening heat handily. Butler, however, took the next two heats, and the race, not, however, without a protest from the owner of the horse, who al-

and the Union Velocipedique de France. The latter quickly accepted him as a member and conferred upon him the honor of "chief consul of the U. V. F. for America."

## Taylor Challenges McDuffee.

Last Wednesday Major Taylor, through his manager, Charles Ward, issued a challenge to Eddie McDuffee, former holder of the mile record, to meet him in a mile race against time, best two in three, either flying or standing start, as McDuf-

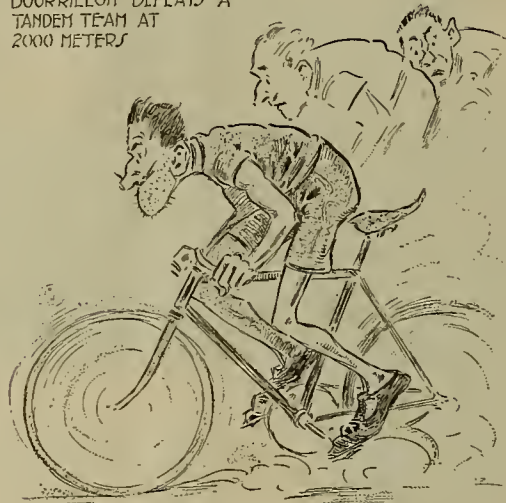
## Organizing Western Opposition.

St. Louis, Nov. 21.—C. W. Mears, official handicapper of Ohio; George D. Locke, newly elected chief consul of Illinois, and the local League workers were in conference here last Thursday laying plans for organizing western opposition to the eastern League ticket. With these three states as a nucleus, it is hoped that enough western divisions can be rallied to the support of the Pennsylvania faction to control the coming assembly and elect a western ticket headed by T. J.

"MAJAH" STILL AFTER FATHER TIME.



BOURRILLON DEFEATS A TANDEM TEAM AT 2000 METERS



McDUFFEE RECEIVES A CHALLENGE



EARL KISER AFFLICTED WITH STAGE FRIGHT



WESTERN STATES ORGANIZING TO OPPOSE L.A.W. EASTERN TICKET



NAT BUTLER BEATS A HORSE

leged that Nat rattled the horse by continually shouting "whoa! whoa!" throughout the second and third heats. Times of the heat were 1:08½, 1:08 and 1:16 respectively. Sager was not so successful in his one-mile venture against Lena N., whose driver kept the mare going 'till the cyclist was almost distanced, the race going to the horse in straight heats. The track was too rough for fast work on a bicycle. Times of the two heats were 2:20 and 2:20¼.

## Honors Conferred on Banker.

George Banker, the world's mile champion, who has been in France since last July, and who expects to remain in Europe until the end of next year, recently sent in his applications for membership in the Touring Club of France

fee may elect, the time in each instance to determine the winner, the contest to be decided on the same track on the same day and directly following one another, the toss of a coin to determine the precedence. Taylor states that not only will he personally wager \$1,000 on the side that he will win, but that his pacemakers will make up a similar sum between them to bet with McDuffee's pacemakers the same way.

A women's six-day indoor race opened in Chicago last Monday, the contestants riding two hours nightly. The principal attraction is Lisette, the French rider, who has ridden more than twenty-nine miles in the hour, and with a liberal handicap defeated Jimmy Michael in Europe, two or three years ago.

Keenan, first vice-president of the League.

## Bourrillon and Champion Win.

At Agen, France, November 6, Bourrillon won the 2,000-meter final heat of a scratch race in 4:20, with Guignard second, Dangla third, and Soibud fourth. He also won a match race against a tandem team, himself riding singly and passing the multiplet only by a hard effort in the home stretch. Champion won a fifty-kilometer match race from Bertin in 1:01:00, finishing eleven laps ahead of his opponent. Champion was motor paced, while Bertin had two triplets and two quadruplets.

## Huret Wants to Meet Elkes.

Constant Huret, who recently broke a number of long-distance world's records

“The proof of the pudding is in the eating.”

THE  
**ORIENT CHAINLESS**

FITTED WITH SAGER GEARS

HOLDS SIX WORLD'S RECORDS

AMONG WHICH IS THE MILE IN 1:31½  
 Does this prove anything?

If you see the proof better take on the ORIENT.

If you don't see it better write us at once and we'll show you the proof.....



**Waltham Mfg. Co.**

WALTHAM, MASS.

**One Model** and  
**35,000 of them**

**HIGH GRADE  
 LOW PRICES**

\*\*\* WILL BE OUR PRODUCT FOR 1899

**NEW FEATURES**

3-inch drop to hanger, flat cranks—two piece, Star sprocket, ball retainers, felt washers, thumb-screw chain adjuster, H. & A. perfect fitting chain, tool steel cones.

They stand comparison  
 They are attractive  
 They are easy running  
 They are durable  
 They are quick sellers  
 They are money makers

JOBBERs—Write us for prices, you can't resist  
 \*\*\* our values.

**THE SOUDAN MFG. CO.**

488 Carroll Ave., Chicago, Ill.

in France, including the fifty and 100-mile records, paced by motor tandems, fitted with wind shields, wants to come to the United States to meet Harry Elkes, and other long-distance riders. He is under the management of R. Pogon, who managed Lesna's trip here in '97. Huret thinks \$5,000 and expenses would be sufficient inducement to bring him here, but would no doubt come for much less. He believes he can surpass Cordang's record of 616 miles in twenty-four hours.

**TAYLOR'S RECORD BREAKING ENDS**

After Placing the Mile Figures at 1:31 4-5 Major Quits—Pleased with His Slate.

Philadelphia, Nov. 21.—The world's mile record was lowered another fifth of a second last Wednesday by Major Taylor, who gave a really marvelous exhibition of riding and astounded the hundreds of spectators and the posted officials by his unpaced runs to close large gaps left by his pace. He had to ride twenty-five yards unpaced to make the first pickup, and fully seventy-five yards unpaced to make the second pickup, yet he finished strong in 1:31 4-5. He was paced by the Crooks, Henshaw and Callahan quint teams.

In the dressing room, after the ride, he complained of severe pains in the thighs and across the hips, and said that he had never felt the effects of his exertions before in that way. They soon passed away, however, and he went for the three-quarters mark again.

The pickup was well made in this case by the Henshaw team, and the Major finished strong a fifth of a second inside of record in a fine burst of speed at the finish. His time was 1:08 2-5.

Rain came Thursday, and continued to the close of the week, putting an end to the record breaking. Taylor was not sorry, for he was about ready to quit anyway, the strain of his last mile trial having left its effects. Thursday night J. H. Sager gave a banquet to the Philadelphia press men, and displayed the diving gear whose speed qualities Taylor has so successfully demonstrated.

Saturday the pacing teams were paid off and the great record camp brought to an end. During its four weeks the expense to the Sager Gear Co. has of course been heavy, but really nothing as compared to the expense which other makers went to years ago to attain smaller results. There was no expense for months of preparation, and two weeks served to clean up the record slate in most excellent style, only the two-thirds-mile record being missed in the list from the quarter-mile to the two miles inclusive. With the temperature close to freezing point in most of the attempts, only two failures were made, and Taylor was never once shaken from his pace, and no matter how ragged the pickups might be, he closed again and again gaps which would have been impossible to other record breakers. Taylor says that with his chainless gear it was impossible to lose the pace as he found the action so positive no jerks of the pacing machines could drop him. He used a twenty-four pound wheel geared to 114. He also had a twenty-pound machine but found no use for it.

Taylor now holds the following records:

Distance—	Taylor's Time	Prev. Record.	Holder.
Quarter-mile	:22 2-5	:22 4-5	E. Taylore
Third-mile	:29 4-5	:30 3-5	E. Taylore
Half-mile	:45 1-5	:45 1-5	E. Taylore
One kilometer	:57 3-5	:58 4-5	E. Taylore
Three-quar. mile	1:08 2-5	1:10	J.S. Johnson
One mile	1:31 4-5	1:32 3-5	E. Taylore
Two miles	3:13 3-5	3:21 2-5	E. Taylore

On the straightaway of the Nashville, Tenn., mile track, in October '96, John S. Johnson placed the quarter, third and

half-mile figures at :20 2-5, :27 4-5 and :44 1-5 respectively, but these were never accepted by the L. A. W. racing board.

**BOUHOURS MAKES RECORDS**

Without Wind Shields the French Favorite Lowers Palmer's 100-Kilometer Time—Other Records.

Paris, Nov. 8.—Paced by three electric tandems, and without the aid of wind-shields, Bouhours yesterday broke Palmer's 100-kilometer world's record of 1:59:47 1-5 by 2:28 on the Paris track, but did not lower Huret's record of 1:54:24 2-5, made October 15 with the aid of wind-shields. This last record is not officially recognized, but probably will be regarded as a world's record classified as "wind-shield" record.

Bouhours broke also the 80 and 90-kilometer and the 50 and 60-mile records, and continued, after covering the 100 kilometers, for the two-hour record, which he lowered by 1,826 meters. His new records are as follows:

Kilom.	Bouhours Time.	Previous Record.	Holder.
80	1:32:57 1-5	1:33:33 1-5	Bouhours
90	1:44:33 4-5	1:47:03 1-5	Palmer
100	1:57:19 1-5	1:59:47 1-5	Palmer
Miles.	Bouhours Time.	Previous Record.	Holder.
50	1:33:29:03	1:34:45:04	Palmer
60	1:52:55:03	1:55:20:00	Palmer
Hours.	1	2	Holder.
1	52 kil. 16 m.	55 kil. 831 m.	Elkes
2	102 kil. 15 m.	100 kil. 189 m.	Palmer

**Chase Challenges Elkes.**

Arthur Chase, the English long distance crack, has issued a challenge to Harry Elkes, holder of the hour record, to meet him in an hour race with unlimited pace for the best purse that can be secured, and a side bet for \$500. He wants the race to come off as soon as possible, and if Elkes cannot accept, he offers to ride against Tom Linton.

**NEWS IN BRIEF.**

Smith Fowler's quest for racing men to invade the Bermudas and Cuba this winter is not likely to be successful, as the racing men have promise of eight large meets in New Orleans and others southwest, which will bring them into California, where a circuit of a score or more meets had been arranged for this fall. Racing in Bermuda is largely an uncertainty, while California proved a good field for the circuit chasers.

Major Taylor says he has an older brother living in Indianapolis who can beat him at any point in the racing game, but who is too indolent and enjoys pleasure too much to go into training. If Major can induce him to ride next season he wants to match him against Michael's brother or Gardiner's brother, or against any other racing man, he says.

Chief Consul Rotier, of the Wisconsin division L. A. W., has tendered his resignation to President Potter, to take effect December 1, when his term expires, and has recommended Frank P. Van Valkenburgh for appointment to the position. There will be no division election this fall, and the old officers hold over for another year.

It is said that Earl Kiser does not like the stage. He is constantly afraid that Bald will be taken sick, in which case he would have to speak the star's lines. Kiser says that he has quite enough to say now, although it is but one line and he has a hard time remembering that, owing to stage fright.

The first state sidepath convention was held in Rochester, N. Y., November 12, and discussed bills to be presented to the legislature fixing bicycle license fees at from 50 cents to \$1 and creating sidepath commissions to supervise the construction and care of the paths.

The Kansas division election of officers in the League has closed, with the following result: Chief consul, James B. Doncyson, Topeka; vice-consul, H. E. Best, Council Grove; secretary-treasurer, A. E. Hickerson, Topeka; representative, O. K. Leigh, Hutchinson.

Washington, Nov. 20.—At the annual election of the local division L. A. W., the following officers were elected: Chief consul, J. W. Somerville; vice-consul, J. D. Frazee;

secretary-treasurer, Charles E. Wood; for representatives to the annual meeting, J. S. Jones, A. Girouard and Wm. T. Robertson. Mr. Somerville, who succeeds Wm. T. Robertson as chief consul, is one of the most prominent and influential business men in this city.

Edward Kragness lowered the fifty-mile standard road record to 2:13:29 on November 13, on the San Francisco and San Leandro course. The figures will hardly be accepted by the Century Road Club, however, as they were made on Sunday.

Floyd McFarland has met with success on the Pacific slope in arranging a circuit for the A. R. C. U., which will start the season's work in '99. With Sunday racing promised them, Californians are working to aid him in every way.

The racing season in Paris having closed, Tom Linton, Bouhours and Champion will pay especial attention to record breaking. Bouhours says he intends to hold all records from one to 100 kilometers, including the hour record.

Michael expects to bring his younger brother to America when he returns, and will enter him in middle distance races.

**MISCELLANEOUS.**

Advertisements under this head 5 cents per word first insertion, 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received.

**FOR SALE**

**FOR SALE**—Two Vim vulcanizers and two M. & W. tire cement kettles; will sell cheap. E. H. BRUNELLE, Troy, N. Y.

**IF YOU WANT** the best bicycle stand or holder made, send to us for circular and prices. HUBBELL Bros., Kelly Cornets, N. Y.

**MAKE your own Tire Fluid**—Five formulas for fifty cents. Costs 80c. per gallon. DAN ANTHONY, San Antonio, Tex. 3

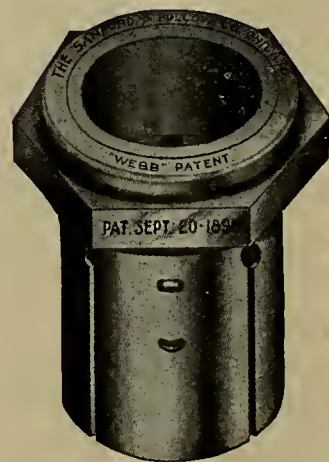
**FOR SALE**—Bicycle Chain Plant; in use two seasons; capacity, 200 chains per day; Gas Generators, Sprocket Miller, Hub Machinery, Wheel Truing Stands and other bicycle machinery; owners retiring from business. For particulars and prices, address THE MOORE CYCLE FITTINGS Co., Harrison (Newark), N. J.\*

**WANTED**

**WANTED**—Pacific Coast traveler desires position with bicycle house placing agencies this winter. Address LOGAN CYCLE Co., Hollister Cal.

Additional Miscellaneous Advertisements on Page 118.

**THE FIRST EXPANDERS**



were made in '94 by

**WEBB**

but they were not put on the

**MARKET**

unt'l satisfactory.

Beware of Infringement. Buy the Genuine, It's Just as Cheap.

**The Sanford & Pollow Co.**

235 LAKE ST., CHICAGO.

# Barnes Bicycles

A HAPPY lot of people are Barnes' agents who have seen the new line for 1899. They say that the **wheels talk**. Well, that is what you want, for it will increase your sales but not your expenses.

The Barnes Special and Superba at \$50.00 are surely a pair that cannot be improved at the price. Our traveling salesmen are now out, and if you can't wait for them write us for particulars of our entire line.

Advance Catalogue will be ready in a short time and our regular Annual Catalogue about January 1st.

**The Barnes Cycle Co., Syracuse, N. Y.**

Mention The Cycle Age



## QUALITY MAINTAINED



1899 Models  
Ready ❁❁❁

Mannesmann Tubing

Flush Joints  
Low Hanger  
Large Sprockets

**STERLING**

**BICYCLES**

Roadsters, - \$50.00  
Chainless, - 75.00  
Tandems, - 75.00

Correspondence Invited from  
Energetic Agents ❁❁❁

SEND FOR  
1899 CATALOGUES

**Sterling Cycle Works, ❁ Kenosha, Wis.**

**WANTED**—Position; twelve years with bicycle firm who are going out of business. Address. M. A. C., care Cycle Age.

**WANTED**—Salesman to carry a special bicycle saddle on commission as a side line. This saddle will be extensively advertised and is an easy seller. WM. B. RILEY & Co., 324 Market St., Philadelphia, Pa.

**WANTED**—Position as foreman of assembling room; ten years' experience; best references. Address, ASSEMBLING, care Cycle Age.

**WANTED**—Agents throughout the United States and Europe to sell the Best Double Roller Chain on the market; large commission; every chain warranted. THE ÆTNA HARDWARE CO., Unionville, Connecticut.

**WANTED**—Foot-power screw cutting lathe; must be in perfect condition and cheap. A. H. SEADALE, 1856 Washington Ave., New York.

**WANTED**—Repair shop outfit and stock wheels; write us full what you have to offer. K, care Cycle Age, Chicago.

**WANTED**—Bicycle to exchange for a Union cash register, total adder. Address WM. GRAH, 2 W. Broad St., Columbus, O.

**TWO GENTLEMEN**, leaving about Jan. 1 by wheel from Chicago to Florida and return, are open to do advertising en route. S. P. A., care Cycle Age.

**THE ADVERTISER** is in the market for 100,000 pairs '99 pedals. Address S, care Cycle Age.

**To Manufacturers of Cycle Sundries** and others who are looking for a profitable article to manufacture for the season of 1899 will be sent a free sample, postpaid, on application to "D.B." The Cycle Age

Mail us your Subscription.

# HUBS CHEAP

point this year. Tandem, single and two-sprocket hubs, drilled (28-32) (32-36), 7, 8, 9, 10, 11, 12-tooth sprocket, 1/2 or 3/16 thick, any chain line desired.

in price, not in quality. We manufacture hubs only and for that reason make them cheap. Our prices will be a genuine surprise to you. The close buyer wins. Our hub is of such handsome design it can be substituted for the hub for which you are paying twice the cost of ours. If you don't believe it write for sample and quotation. We guarantee them to last as long as the wheel and can make deliveries. Look out for THAT

STEWART BROTHERS CO., 250 W. Lake Street, CHICAGO.

## MANSON THREE-CROWN

1899 models, with 30-inch wheels and eccentric hanger, are ready for delivery. Send for catalogue. Address

Manson Cycle Co., 153-155 W. Jackson Bd., Chicago  
Mention The Cycle Age



STRIPPED WHEELS.

Sizes frames 22 and 23-inch full flush joint, handsomely decorated two-piece hanger.....\$11.50  
With Fauber hanger..... 13.00  
30-inch stripped ('99) wheels, 4-inch drop..... 20.00

F. S. WATERS CO., 155 W. Washington St., Chicago.

Mention The Cycle Age

### "White Scorchers"

1899 Model  
30-inch Wheels

## I Am Pleased...



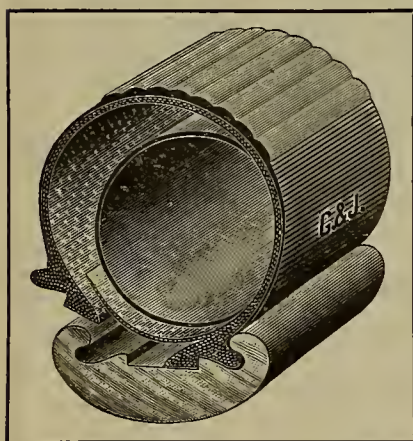
to announce that nearly all of the large jobbers have closed arrangements for handling the

### Sprocket Chain Washer

It will be vigorously pushed by these Jobbers, and Dealers everywhere can purchase them through their customary trade channels.

Walter Luther Dodge,  
97 Clark Street, - CHICAGO, ILL.

# The Detachable Tire...



is the most practically repaired and consequently the most satisfactory tire

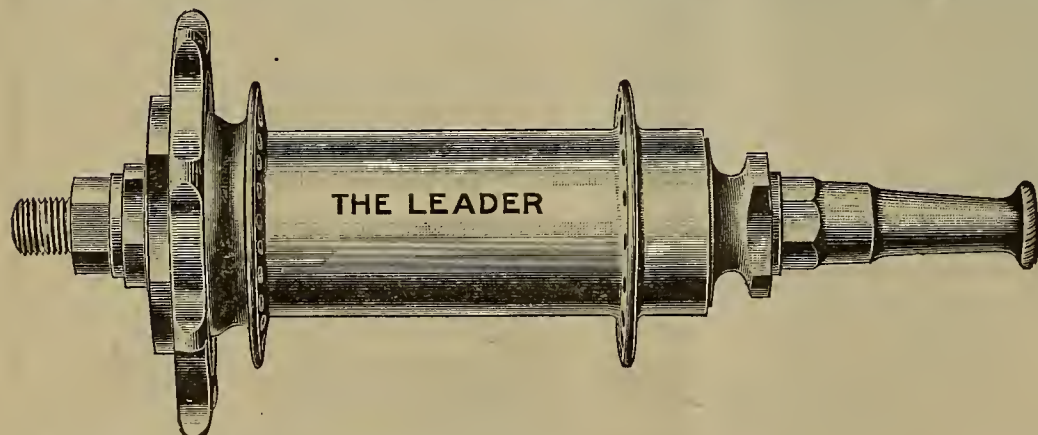
MADE AND SOLD TO THE TRADE DIRECT BY

## Indianapolis Rubber Co.

INDIANAPOLIS, INDIANA.

## STOCKTON MANUFACTURING CO., NEWARK, N. J.

MANUFACTURERS OF THE



Gem and Leader Hubs  
Gem Pedals

Stahl  
Detachable Chains

F. A. HASTINGS & CO., 159 Lake St., CHICAGO,  
Western Representatives.

NEW YORK SALESROOMS, 107 CHAMBERS STREET.

# THE CYCLE AGE

## AND TRADE REVIEW

VOL. XXII—No 5.

CHICAGO, DECEMBER 1, 1898.

NEW SERIES No. 54.

### BOARD OF TRADE DIES HARD STOCKHOLDERS TO MEET AGAIN

**Two-Thirds of All the Stock is Required to Wind Up the Corporation.**

New York City, Nov. 28.—What little life is yet left in the National Cycle Board of Trade will in all likelihood be pelted out of it on December 20, at which time the stockholders will again meet to complete the work of dissolving the corporation. At the stockholders' meeting held in this city on November 17, it will be remembered, the opinion was expressed that the Board "should be forthwith dissolved." The directors, taking this as their cue, spent a brief hour in ratifying the action of the stockholders. When next the stockholders meet it will be moved that the Board "is herewith dissolved."

Then all will be over but the shouting.

#### Instructing the Pallbearers.

The call for the second meeting of the stockholders has already been issued. It was accompanied by the following whip, the issuance of which was made necessary in order to make sure of a two-thirds representation of all the stock:

As the National Board of Trade of Cycle Manufacturers exists as a corporation under the laws of the state of New York, its dissolution can only be effected by compliance with the statutes which are very explicit in regard to a two-thirds representation at the meeting of which the enclosed notice is a warning.

It is, of course, desirable that you should attend in person, but, in the event of your inability to attend, it is sincerely hoped that you will execute the enclosed power of attorney at as early a date as possible and notify the secretary to whom you have executed the power of attorney, so that we may be sure of having a full representation at the meeting.

Permit me to suggest that any one of the thirteen directors—provided that you are sure that the one selected will be present—will take pleasure in acting in that capacity for you; or, if you deem it advisable, it will be entirely satisfactory if you will execute it, leaving blank the name of attorney, which can be filled in upon the date of the meeting, so that one of those present may act for you and we may thereby be insured the vote of your stock.

It is absolutely necessary to have acknowledgment of power of attorney made before an officer who has power to acknowledge deeds—a notary public or licensed officer. Where there is a New York commissioner it is suggested that your acknowledgment be made before him.

George Hammann,  
Secretary.

No corporation was ever helped out of the world with more punctilious regard for ceremony. Such solicitation for the safe conduct of this dark enterprise is no mean indication of what might have happened had the Board elected to make full use of its opportunities while it was conscious of its power.

Although it has been freely asserted that out of the ashes of the Board there

would arise an association of bicycle makers, which would legislate upon such subjects as were of importance to them alone—such, for example, as the guarantee and options—yet there are no signs at present visible which justify the hope that an early realization of such a hope will take place. Analysis of the condition of mind and feeling of bicycle makers discloses the shocking fact that the requisites for an enduring association of such people are not in evidence. There is similarity of interests, but not equality of interests. The large houses are fatuous in the belief that they will crush or absorb their small competitors, while the latter with undiminished zeal set to work to grow great and flourishing. With these warring sentiments in mind, it is absurd to entertain the belief that an organization could be founded which would exert much greater power for good than is to the credit of the corporation which is now being hurried to its grave. Still it is not improbable that an association of bicycle makers may be formed, with no large aims, which in conjunction with other trade organizations will shape minor affairs which threaten injury to the trade at large.

#### Tube Makers in Trouble.

Tube manufacturers in England are disturbed. A formal demand for an increase of wages has been presented in two or three places in the midlands. It is reported on fairly good authority that one of the large concerns will have great difficulty in paying dividends on its shares. Pressure has been put upon many buyers to complete their contracts during the past few months by one of the largest makers. The wisdom of the step has been questioned. It is now rumored that the company has been required to pay up a heavy amount to a German factory for goods ordered but not accepted. The amount involved is said to be \$60,000. There is a large shipment of tubing in the New York custom house. It has been there two years. Lately the owners have tried to induce the authorities to pass it at a reduced rate on account of the drop in prices, but without avail.

### PATENT COMMISSION'S REPORT PUBLIC HEARINGS ARE ENDED

**Caveats May be Abolished - Patent and Trade Mark Fees May be Reduced.**

Washington, Nov. 25.—The commission to revise and amend the patent and trademark laws of the United States has concluded its public hearings, and is now at work formulating a report on the matters considered and discussed at its several sessions. Among the matters that will be elaborated upon is the subject of international registration of trademarks.

#### Caveats Afford no Protection.

The sentiment in favor of abolishing caveats is strong, but it is not thought that the commission will recommend such a change. The United States statutes provide that an inventor, who is working to reduce his invention to practice, may obtain a provisional protection by filing in the patent office a drawing and description of his alleged invention. The scope of the protection afforded by such filing has always been a matter of dispute. It is held by some to afford the inventor no protection whatever, because it only entitled him to notice of the subsequent filing of another caveat, or of an application for a patent upon a similar invention, and it is argued that the same purpose can be accomplished by the subsequent filing of an application and giving opportunity to both persons claiming to be the original inventor to establish priority of invention. The statute does not extend the privilege of filing caveats to citizens of other countries which are members of the international union. The question whether this right should be extended to foreigners will be touched upon by the commission in its report.

#### Regarding Interference Proceedings.

Among the questions that will be discussed in the report is one in reference to interference proceedings. Under the prevailing rules a foreign inventor, who is contesting for priority of invention, is only permitted to carry back the date of his invention to the time of publication of his patent in a foreign country, while to the United States inventor is extended the privilege of establishing the date of reduction of the invention to practice, which is always earlier than the date of filing or issuance of the patent.

#### Trade Mark Fees are too High.

Another important matter that will be touched upon in the report is a proposition involving the reduction of the fees required upon the filing of an application for registration of a trademark in the United States. The present fee is \$25, payable at the time the application is made, and in case the registration sought

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is refused because of conflict with prior existing registered marks, the applicant loses his fee. As the labor connected with the examination and registration of trademarks is slight, it is contended that the fee should be reduced.

#### Patent Fees May be Reduced.

Many arguments have been presented to the commission relative to a reduction in the fees demanded for the granting of a patent. The present fees amount to \$35, made up of a first government fee of \$15, and a final government fee of \$20. It is contended by inventors and patent attorneys that the first and final government fees should be placed at \$10 each, and the income of the patent office would still be sufficient to meet all its expenses. The officials of the patent office, however, do not look with favor upon any proposition looking to a reduction of the present fees. They argue that the fees now charged in the United States are less than those of any other country.

#### Separate Patent Court Needed.

The Patent Law Association of this city has made a compilation of the bills pending in congress affecting the patent laws, together with the views of the association thereon, and found that everywhere there was an agreement upon these three points:

1. The necessity of carefully studying out some plan to put into the best shape the mass of material piled up in the United States patent office, so that a thorough search might be made by the examining corps, by attorneys making validity searches, and by the public generally in search of information.

2. That there are now too many appeals in contested cases in the patent office.

3. That the present arrangement of circuit courts of appeals as courts of final resort is a failure in the patent system, and that one final court is wanted whose rulings will cover territory co-extensive with the grant.

For some time the association has been peculiarly impressed by the necessity of making a firm stand against the constant tinkering with the patent system by means of ill-considered bills. At this time it is the judgment of nearly all patent lawyers that some provision must be made to establish a final court in patent causes. Some desire a separate patent court—the majority, in fact, seem to favor that—while others would restore jurisdiction to the Supreme Court of the United States on the ground that there should not be a final court other than the Supreme Court for a special branch of law.

#### Installment Payments Bother Agents.

Buffalo, Nov. 28.—This is the hardest period of the year for dealers who sell on the installment plan. After the riding season closes buyers who bought on this plan, and still owe balances, forget the obligations, and as a consequence agents have great difficulty in making collections. In this connection the records of the police court recently furnished a curious instance of the needy condition of many buyers. A man was robbed of his week's salary while he slept in his apartments. The police accused the man's wife and she confessed, explaining that she was being pressed for payment of her bicycle and took this means of getting the money.

#### Space at the 1900 Paris Show.

The space allotted during the great Paris exhibition of 1900 to the French exhibitors in the cycle section has been increased to a much larger area than was obtainable at the lately-pulled-down Palais de l'Industrie, where the annual national cycle show was formerly held. The price of space will be \$4 per yard, with participation in the profits, if any, by the exhibitors.

## NEW BANKRUPTCY ACT RULES

### APPROVED BY SUPREME COURT

#### All Proceedings Heretofore Taken in Conformity to Act of 1867 Will be Upheld.

The United States Supreme Court has announced the new bankruptcy rules which it was authorized to frame and promulgate under the national bankruptcy act of July 1, 1898. They will take effect on January 2, 1899, and all proceedings heretofore taken substantially in conformity with the act and to the regulations of 1867 as far as practicable will be upheld.

#### Proceedings Delayed for Rules.

Notwithstanding the new bankruptcy law has been in force over three months the courts in eight districts declined to proceed with the reference and adjudication of the petitions for the reason that the Supreme Court had not promulgated the rules, forms and orders required by the act. In all other cases the courts have proceeded and adjudicated petitioners bankrupt or have referred the cases to the referees for action. Since the law took effect 1,700 petitions in voluntary bankruptcy have been filed. Singularly, the districts of Delaware, eastern Pennsylvania, Southern Georgia, Nevada, New Mexico, western Virginia and Wyoming show that no persons therein have applied to be adjudged bankrupt. As the involuntary feature of the law which permits creditors to have their debtor adjudicated a bankrupt did not take effect until November 1, it has been impossible to obtain any data with reference to the operation of this provision.

#### Summary of Principal Rules.

Rule 13 allows either the judge or the referee to pass upon a trustee appointed by creditors, but allows his removal by the judge only.

Rule 14 forbids the appointment of trustees by the courts.

Rule 15 renders it allowable to dispense with trustees in cases where there are no assets.

Rule 16 provides for the immediate notification to the referee of his acceptance.

The duties of trustees are outlined by rule 17. One of these requires him to prepare a complete inventory of all the bankrupt's property coming into his possession.

The regulations for the sale of property made by rule 18 provide that all sales shall be made by public auction unless otherwise ordered by the court.

Upon petition by a bankrupt, creditor, receiver, or trustee, setting forth that a part or the whole of an estate is perishable and that there will be loss if the same is not sold immediately the court may order the same to be sold, with or without notice to the creditors, and the proceeds to be deposited in court.

#### As to Proof of Debts.

Rule 21 relates to the proof of debts. The first provision under this heading is as follows: "Depositions to prove claims against a bankrupt's estate shall be correctly entitled in the court and in the cause. When made to prove a debt due to a partnership it must appear on oath that the deponent is a member of the partnership; when made by an agent, the reason the deposition is not made by the claimant in person must be stated; and when made to prove a debt due to a corporation, the deposition shall be made by the treasurer or, if the corporation has no treasurer, by the officer whose duties most nearly correspond to those of a treasurer. Depositions to prove debts existing in open account shall state when the debt became or will become due; and if it consists of items maturing at different dates, the average due date shall be stated, in default of which it shall not be necessary to compute interest upon it. All such depositions shall contain an averment that no note has been received for such account or any judgment rendered thereon. Proofs of debt received by any trustee shall be delivered to the referee to whom the cause is referred."

Rule 22 relates to the taking of testimony and is as follows: "The examination of witnesses before the referee may be conducted by the party in person or by his counsel or attorney, and the witnesses shall be subject to examination and cross-examination. A deposition taken upon an examination before a referee shall be taken down in writing by him, or under his di-

rection, in the form of narrative, unless he determines that the examination shall be by question and answer. When completed it shall be read to the witness and signed by him in the presence of the referee. The referee shall note upon the deposition any question objected to, with his decision thereon; and the court shall have power to deal with the costs of incompetent, immaterial, or irrelevant depositions, or parts of them, as may be just."

Under the head of "Conduct of Proceedings," rule 4, it is provided that "proceedings may be conducted by the bankrupt in person in his own behalf, or by a petitioning or opposing creditor, but a creditor will only be allowed to manage before the court his individual interest. Every party may appear and conduct the proceedings by attorney, who shall be an attorney or counselor authorized to practice in the Circuit or District Court. Notices and orders not required to be served on the party personally may be served upon his attorney."

Rule 6, relating to petitions in different districts, says: "In case two or more petitions shall be filed against the same individual in different districts, the first hearing shall be had in the district in which the debtor has his domicile, and the petition may be amended by inserting an allegation of an act of bankruptcy committed at an earlier date than that first alleged, if such earlier act is charged in either of the other petitions; and in case of two or more petitions against the same partnership in different courts, each having jurisdiction over the case, the petition first filed shall be first heard, and may be amended by the insertion of an allegation of an earlier act of bankruptcy than that first, if such earlier act is charged in either of the other petitions; and, in either case, the proceedings upon the other petitions may be staid until adjudication is made upon the petition first heard; and the court which makes the first adjudication of bankruptcy shall retain jurisdiction over all proceedings therein until closed."

#### In Matters of Priority.

In the matter of priority and in cases where two or more petitions are filed by creditors against a common debtor alleging separate acts of bankruptcy on different days, it is provided by rule 7 that preference shall be given to the petition alleging the earliest act of bankruptcy. In case all the petitions name the same day for the act the cases are to be consolidated.

Rule 8 provides that any member of a partnership who refuses to join in a petition to have the partnership declared bankrupt shall be entitled to resist the prayer of the petition in the same manner as if the petition had been filed by a creditor of the partnership and to make all defenses which any debtor proceeded against is entitled to take by the provisions of the act.

Rule 9 provides that in all cases of involuntary bankruptcy in which the bankrupt is absent or cannot be found it is made the duty of the petitioning creditor to file, within five days a schedule giving the names and places of residence of all the creditors of the bankrupt according to his best information. If the debtor is found the petitioner may apply for an attachment against the debtor to furnish a schedule.

#### Question of Redemption.

Rule 28 permits the filing of petitions for redemption of property whenever "it may be deemed for the benefit of the estate of a bankrupt to redeem and discharge any mortgage, or other pledge or deposit or lien upon any property, real or personal, or to relieve said property from any conditional contract, and to tender performance of the conditions thereof, or to compound and settle any debts or other claims due or belonging to the estate of the bankrupt." Hearings in such cases are provided for, notice to be sent to all persons interested, in order that they may appear and show cause why such order should not be issued.

Rule 29 relates to keeping of accounts concerning money deposited, and rule 30 to the imprisonment of debtors. The latter rule is as follows: "If, at the time of preferring his petition, the debtor shall be imprisoned, the court upon application may order him to be produced upon habeas corpus by the jailer or any officer in whose custody he may be before the referee, for the purpose of testifying in any matter relating to his bankruptcy. The court may upon like application discharge him from such imprisonment. If the petitioner during the pendency of the proceedings in bankruptcy be arrested or imprisoned upon process in any civil action, the District Court upon his application may issue a writ of habeas corpus to bring him before the court to ascertain whether such process has been issued for the collection of any claim provable in bankruptcy, and if so provable he shall be discharged; if not, he shall be remanded to the custody in which he may lawfully be."

Voluntary gifts when the donor is actually insolvent, and when the necessary consequence of his acts is to hinder or defraud his creditors are conclusively fraudulent.



**NINE MONTHS' CYCLE EXPORTS**

**SLIGHT DECREASE IS VISIBLE**

**Tables Showing Official Returns for September and Nine Months of the Present Year.**

Exports of bicycles and bicycle material from the port of New York for the week ending November 22, are recorded as follows:

	Bicycles.	Mat'l.
Austria Hungary .....	.....	\$ 224
Switzerland .....	.....	1,500
Holland .....	2,137	3,715
France .....	1,173	1,823
England .....	4,726	4,639
Russia and Finland .....	608	50
Spain .....	.....	60
Denmark .....	134,110	6,875
Norway and Sweden .....	13,553	380
Scotland .....	.....	40
Italy .....	50	1,395
Germany .....	7,366	6,522
Australia .....	1,336	592
New Zealand .....	3,190	250
Newfoundland .....	40	.....
Mexico .....	449	.....
U. S. of Colombia .....	170	211
British E. Indies .....	700	195
Dutch E. Indies .....	224	51
British W. Indies .....	464	865
British Honduras .....	.....	10
British Guiana .....	696	133
Brazil .....	2,116	54
Cuba .....	289	.....
Totals .....	\$163,397	\$29,590

Exports from England for the week ending November 12 were as follows, the figures for bicycles and materials being combined:

Adelaide .....	\$ 890
Albany .....	100
Antwerp .....	100
Bangkok .....	90
Bombay .....	4,010
Boulogne .....	215
Brisbane .....	250
Calcutta .....	2,720
Cape Town .....	8,160
Christchurch .....	630
Cologne .....	75
Demerara .....	125
Durban .....	6,795
East London .....	310
Flushing .....	299
Fremantle .....	570
Gibraltar .....	95
Hamburg .....	160
Hong Kong .....	180
Invercargill .....	50
Kurrachee .....	3,520
Madras .....	1,365
Malaya .....	110
Malta .....	240
Melbourne .....	14,580
Oporto .....	200
Penang .....	75
Perth .....	500
Port Elizabeth .....	835
Rangoon .....	370
St. Petersburg .....	2,000
Singapore .....	475
Sydney .....	1,460
Wananue .....	80
Wellington .....	150
Total .....	\$51,825

**American Exports for September.**

Governmental returns on the exports of cycles, parts and accessories for the month of September (1898, 1897 and 1896 compared) are as follows:

	1896.	1897.	1898.
United Kingdom ..	\$105,714	\$ 68,914	\$ 36,533
France .....	4,107	3,974	4,638
Germany .....	17,233	49,497	64,180
Other Europe .....	24,834	20,196	35,262
British America ..	12,822	16,001	11,837
Central America ..	5,446	466	585
Mexico .....	5,821	4,648	5,735
Santo Domingo ..	195	102	.....
Cuba .....	184	593	61
Puerto Rico .....	566	522	124
Other W. Indies ..	4,749	5,600	2,819
Argentina .....	3,715	6,314	8,579
Brazil .....	1,204	6,833	5,879
Colombia .....	3,028	1,788	503
Other S. America ..	6,962	4,334	2,142
China .....	1,557	2,868	3,510
Brit. East Indies ..	4,512	5,860	11,988
Hong Kong .....	.....	180	.....
Japan .....	4,322	8,912	12,918
Australia .....	83,343	24,510	22,011
Other Asia .....	2,129	6,238	6,937
Africa .....	3,735	15,915	16,967
Other countries ..	.....	60	.....
Totals ..	\$296,178	\$254,325	\$253,208

Governmental returns on the exports of cycles, parts and accessories for the

nine months ending with September (1898, 1897 and 1896 compared) are as follows:

	1896.	1897.	1898.
United Kingdom ..	\$1,020,971	\$1,908,880	\$1,547,833
France ..	113,760	239,643	459,887
Germany ..	204,789	1,119,848	1,381,503
Other Europe .....	336,961	996,603	852,175
British America ..	504,945	688,037	553,511
Central America ..	49,235	18,708	5,554
Mexico ..	37,687	56,112	50,951
Santo Domingo ..	478	3,722	598
Cuba ..	4,681	6,959	3,406
Puerto Rico ..	7,884	3,104	1,354
Other W. Indies ..	28,984	102,690	56,667
Argentina ..	13,988	36,124	79,031
Brazil ..	16,840	23,453	82,040
Colombia ..	16,948	15,730	6,893
Other S. America ..	27,576	46,659	34,518
China ..	7,413	16,423	18,337
Brit. East Indies ..	8,342	21,179	105,868
Hong Kong ..	.....	5,621	6,436
Japan ..	34,334	58,421	106,503
Australia ..	262,911	372,030	175,264
Other Asia ..	26,533	52,576	161,270
Africa ..	20,628	107,197	134,414
Other countries ..	.....	607	1,699
Totals ..	\$2,745,438	\$5,900,326	\$5,725,712

**British Exports for Eight Months.**

British cycle exports for the years of 1896 and 1897 and eight months of the current year are shown in the following table:

	1896.	1897.	1898.
January .....	\$ 624,535	\$ 762,820	\$ 480,465
February .....	701,125	688,195	474,225
March .....	891,885	855,830	482,245
April .....	786,335	638,085	522,340
May .....	798,765	697,950	434,700
June .....	772,285	583,050	371,275
July .....	716,755	566,850	383,450
August .....	650,140	483,165	287,835
September .....	633,560	430,460	.....
October .....	893,320	497,845	.....
November .....	720,600	446,610	.....
December .....	1,060,555	444,785	.....
Totals .....	\$9,304,860	\$7,155,645	\$3,436,535

**Worcester Co. Mortgage Suit Decided.**

The foreclosure suit of the Central Trust company of New York against the Worcester Cycle Mfg. company, of Middletown, Conn., under a mortgage of \$500,000, which has been pending for several months, was heard in the United States circuit court at New Haven last Thursday. In the decision handed down the judge declared that the mortgage indebtedness was not sufficiently proved and that the mortgage held by the trust company against the bicycle company's Middletown plant was invalid. The arguments on both sides were based on technicalities. The report of the receiver, Frank S. Smith, on the condition of the property and as to the rights of the trustee, Charles G. Goodrich, was presented the same day.

**Seeking Location in Peoria.**

W. D. Smith, of the W. D. Smith Cycle Company of Denver, which during the past fall manufactured and sold a number of chainless bicycles driven by levers, has been in Peoria, Ill., recently with J. E. Miller, of Peoria, who is superintendent of the Denver factory, exhibiting his machine and endeavoring to interest Peoria capitalists in its manufacture. The intention is to move the Denver factory to Peoria and effect some sort of a consolidation with the Rouse-Hazard plant, manufacturing both the chain-driven and lever machines. Whether this can be done or not depends much upon the disposition that is made of the latter plant by the banks, which bought it in at sheriff's sale October 24. If such a plan is carried out it will require that about \$50,000 capital stock be taken by Peoria capitalists, of which amount one leading citizen has declared himself willing to take half. The promoters hope to close the deal soon and start a factory with from 300 to 400 employees.

The bicycle dealers of the City of Mexico are reported to be preparing to make a joint purchase of the Piedad bicycle track, for the purpose of promoting annual and quarterly race meets.

**REBATE ON AFRICAN IMPORTS**

**EXPORT TRADE ENCOURAGED**

**Shippers Sending Goods Through Cape Colony Will Get Rebate of Three Per Cent.**

The government of the colony of the Cape of Good Hope has reduced the rebate on imported goods passing through the colony to the inland states from 5 per cent to 3 per cent. This reduction applies to the South African Republic, Orange Free State, and Rhodesia, and marks an important departure. The colony transit rate has by this act been brought down to the level of the Delagoa and Beira rates, in Portuguese territory, and when Natal has followed suit, which will be soon, it will insure uniformity of the transit rate throughout South Africa. The reduction, it is stated, means a present of between \$250,000 to \$300,000 per annum to the importers of Johannesburg alone.

**America Benefits by Freight Rates.**

The increase that is taking place in the volume of American exports to Africa is causing no little concern abroad. At the same time it is causing no little satisfaction among shippers here, especially as the intense rivalry among the three regular African steamship lines—and the consequent low rates for freight—promises to continue. It is estimated that freight rates from the United States average about 15 per cent lower to South African ports than from London, the British lines working under a pool arrangement by which rates are maintained. Consequently where market conditions are about equal America is getting the preference. Furthermore, as cheap freight rates are now open to all, shipping to Africa is now much more general than formerly and is not confined to the few commission houses that formerly had absolute control of the African business.

**Growth of African Trade.**

The interest of the cycle industry in African markets is best shown by reference to the statistics which are available for eight months' trading during the present year, which amounted in value to \$117,447, as compared with \$91,282 for the same period in 1897 and \$16,893 for 1896. During the month of August last the value of the cycle exports to African markets amounted to \$16,015, as compared with \$14,056 for August of 1897 and \$8,665 for the same month in 1896.

Exports of general American merchandise to Africa are increasing with astonishing rapidity, and would of late have been much greater were it not that our trade with Madagascar has virtually ceased since the French took possession.

**Parts Making Plant to be Sold.**

Buffalo, Nov. 28.—The Supreme Court handed down a decision last week with reference to the disposition of the Spaulding Machine Screw Co.'s plant, which is in the hands of a receiver, and the referee will sell the entire plant under the foreclosure of a second mortgage for \$52,000 held by John R. Keim, of New York City, for money advanced to conduct the business. The sale is set down for December 8 and will be subject to a first mortgage indebtedness of about \$18,000.

**German Agents Under Suspicion.**

Exporters of bicycles in Europe are being publicly warned not to reply to applications for cycles from a German firm of bad repute, Josef Amrhein, of Wuerzburg, or Heinrich Schelbert, of the same town. Proceedings have been commenced against them for fraudulently issuing forged bills.

# Jobbing Bicycles

— ...FOR 1899 Trade

\*\*\*NO OLD STOCK. EVERY MODEL NEW.  
TALKING POINTS THAT HELP YOU SELL.

For the requirements of 1899 trade we shall build three  
distinct lines of complete bicycles, embodying all features  
of value known in up to date construction. ❀ ❀ ❀ ❀ ❀

## We Are Ready Now

to show you our samples and to figure on your supply,  
either in complete or stripped bicycles. SNELLI, Hubs,  
Handlebars, Forgings, Pedals, etc., are standard. Our  
long experience and immense facilities enable us to give  
you the best of service and guarantee you quality at  
the right prices. Your inquiries will receive our prompt  
attention. ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀ ❀

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SNELL CYCLE FITTINGS COMPANY,  
TOLEDO, OHIO.

# THE CYCLE AGE

## AND TRADE REVIEW

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

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### ENORMOUS PROFITS ON SHOWS

Unless his carefully laid plans miscarry, Frank W. Sanger will clear up \$70,000 or more by conducting a cycle show in New York city next January. One would never guess at this by reading the following para-

graph from his circular to the trade:

Realizing that the cost of space to the exhibitor should be reduced to as low a price as possible, the management have made such cost at prices ranging from \$25 to \$125 the dimensions remaining the same. This charge includes platforms and iron uprights for signs, and is a reduction of one-half from the charges made in the last show.

Here are some calculations made from the chart of the show, which indicate the extent of Sanger's generosity:

69 spaces at \$125 each.....	\$ 8,625
102 spaces at 100 each.....	10,200
9 spaces at 75 each.....	675
41 spaces at 50 each.....	2,050
25 spaces at 25 each.....	625
Total of Rentals	\$32,175

Now there were about 100,000 tickets sold at the last cycle show held in Madison Square Garden, and they were worth 50 cents apiece. Granting that the forthcoming exhibition will be as successful in point of attendance as the previous one—to deny the probability of this would be fatal to the project—Sanger will be enriched by \$50,000 more. To this add a modest \$5,000 for pickings, such as installing electric lights, bar privileges, leasing furniture to exhibitors, and so forth.

Deduct \$2,200 for railings and \$2,430 for platforms—they are to be free to exhibitors—valuations which are obtained by referring to the contract prices on these articles at the time of the Coliseum show held in Chicago. Also deduct \$10,000 for advertising expenses, music, electric light, heat, rent—not \$1,000 a night, though, for Sanger is leasing the building this time, not renting it, and its price is undoubtedly made moderate, as it often is, to suit a special need—and then strike a balance:

RECEIPTS	
Rentals.....	\$32,175
Gate Receipts.....	50,000
Pickings.....	5,000
	\$87,175
EXPENDITURES	
Railings.....	\$ 2,430
Platform.....	2,200
Rent, etc.....	10,000
	\$14,630
Profit	\$72,545

With the prospect of a large profit, even before the doors of the exhibition are open, it is little wonder that Sanger can, with composure, say to the trade:

Nothing whatever will be spared to make the forthcoming exhibition as signal and distinguished a success as those heretofore given.

The whole subject is referred to the trade with power to object.

### FRAMES OF DOUBLE DESIGN

Think what he may about the merit and saleability of bicycles with thirty-inch wheels, no manufacturer probably feels absolutely certain of the quantity of this class of machines that he can sell. It is not precluded that the demand for them, after having been nursed up to a certain point, may suffer a sudden decline. The first set-back

has already come in the form of record breaking performances on chainless machines of two different types, and it is, at best, doubtful if troubles of other kinds will not arise after the riding season shall have opened. Manufacturers, in that case, would not like to find themselves caught with a large number of frames on hand, for which they could find no sale. Neither can they consider it desirable to delay manufacture until definite orders shall have been received. To do so is almost out of question under the present trade conditions, when prompt deliveries constitute an indispensable feature of success.

A frame construction which would be applicable to twenty-eight-inch wheels as well as to the larger size would, under these circumstances, seem to be desirable for safe trading. Extreme drop of the hanger and extreme shortness of the head are the uncompromising features of the thirty-inch wheel frames which allow no latitude in this respect, and which it seems that the prudent manufacturer should avoid incorporating in his production. If he could limit the drop to two and quarter inches, and raise the top bar one inch at the front end, his risk would be much reduced, and he would be enabled to proceed with manufacture at an even, economical pace and without too great anxiety about the possible fluctuations in the public's demands. By specifying "stirrup" pedals, "swinging" pedals, or "jointed cranks" for his thirty-inch model, the necessity for excessive drop might be obviated, and lengthening of the head to give the top bar a one-inch tilt adds at all events a desirable element of strength and durability, which will be more appreciated by the public next year than it is now.

A frame of this design, when used with twenty-eight-inch wheels, would, of course, show a horizontal top bar and a two and three-quarter-inch drop of the hanger. The rear forks would appear somewhat longer than necessary, but even this might be avoided by giving a greater range to the chain adjustment device. A hub construction providing for "removable" axles would make it easily possible to increase the range of chain adjustment to three inches by permitting the closing of the axle slots at both ends.

By the customary arrangements with chain makers for return of odds and ends of chains, loss on chain stock is readily minimized, and pedals, front forks and wheels would represent the only material, in regard to the purchase or making of which special caution would have to be observed.

Ordinarily it is doubtless a poor policy to straddle an issue and to build convertible machines of any kind, but in the case of the thirty-inch wheel fad the risks are many and the inducements are few, and a little safeguarding of the manufacturing interests would seem to be appropriate, for it may be assumed that dealers will not and cannot share any of the manufacturer's risks, but will give their orders in a highly conservative manner.

### ALLAYING BUYERS' PREJUDICE

The reduction in the list prices of chainless bicycles by so generous a margin as \$50 will add an element of minor difficulty to the relations between retailers and captious customers. To a very large class of people a lowering of price lists has every appearance of forced acknowledgment of former prices having been inflated to the point of unreasonably high profits, and they look upon a voluntary reduction, no matter how great, as still leaving the former conditions existing, only a smaller scale. Experience has shown that when the attitude of such persons toward any product is of this unreasoned nature, it is not changed by the reduction, but is only transferred along with and pitched against the lowered price list. The plain fact of greatly lessened cost to the buyer fails of appreciation, being placed in the shadow of the cherished and nurtured grudge against lists that have been withdrawn. In such cases, when a purchase has been fully decided upon, the funds and the contentions of the customer are arrayed against the article and its salesman as mercilessly as if the place of dealing were an auction house instead of a regular store conducted on recognized business principles; and, if vacillating is allowed, the price finally paid is apt to be determined by the force and effect of the counter resistance.

With customers whose common practice it is to browbeat the seller into making concessions, explanation and argument are

usually alike unprofitable; but there are instances where reference may be made to cycle trade conditions in a way and manner to satisfy reasonable inquiries, to gain friends and help sales. The first requisite to entrance upon such grounds is, of course, a thorough knowledge of one's subject. The next may well be that quality of open fairness of mind, allied with personal earnestness, which, founded upon the first requisite of knowledge, insures respect, even if it does not carry conviction.

The reasonable inquiry as to the \$50 reduction in chainless list prices for 1899 is not so difficult to answer in a logical and satisfying sort of way as may appear on the surface. The following outline might supply the framework for such an answer: High prices are the natural and normal accompaniment of a new device, or the introduction of some striking novelty in connection with an older one. In no other way could the expense of its production on a limited scale be safely met. The whole history of mechanical improvement bears corroborative evidence on this point. The conditions which go to make lower prices come into being only with the progress of a new device toward popularity and permanence, the former assuring ample support for its production on a generous scale, and the latter eliminating the factor of costly change. At the beginning, also, high prices are of positive value to buyers, taken as a whole. They act as a brake upon the tendency to adopt a new invention to the extent of departing from well-tried principles and making an unmanageable fad of the newer one. During this interval the experiments and conclusions of the laboratory and the factory are supplemented by those of the public, arrived at by independent means, on a scale, though limited, sufficient to add the testimony of experience from impartial outside sources. At first the expense of bringing out and sustaining the device rests upon the makers and a few who are willing to pay well for the privilege; but later it is shifted entirely upon the vastly increased numbers of buyers in such a way as to become a profit instead of a burden to the producers of it. In the last analysis, the interests of manufacturers, retailers and purchasers lie along one and the same line. The price of \$125, having served its original purpose in keeping the chainless situation within due bounds, for the first season, gives way, in the natural order of things, to the new price of \$75—a price whose fairness must appeal to every reasonably-minded person. In the present state of the cycle builders' art, however, that price is ample to assure the incorporation of the highest grade into all parts of the chainless mechanism, and at the same time adds very materially to the stability and solidarity of the industry. In point of time, and in degree, the reduction of \$50 in chainless prices for 1899 over 1898 seems most appropriate and justifiable.

These suggestions are given to retailers for what they are worth in practical application to individual cases. Their offering in detail insinuates no lack of knowledge of all mentioned points on the part of tradesmen. Their suggestive value may be considerable, however, first, as showing the desirability of meeting customers fair and square on all points of reasonable difference of opinion; secondly, as showing a manner of discussion which has met with notable success in several instances under direct observation.

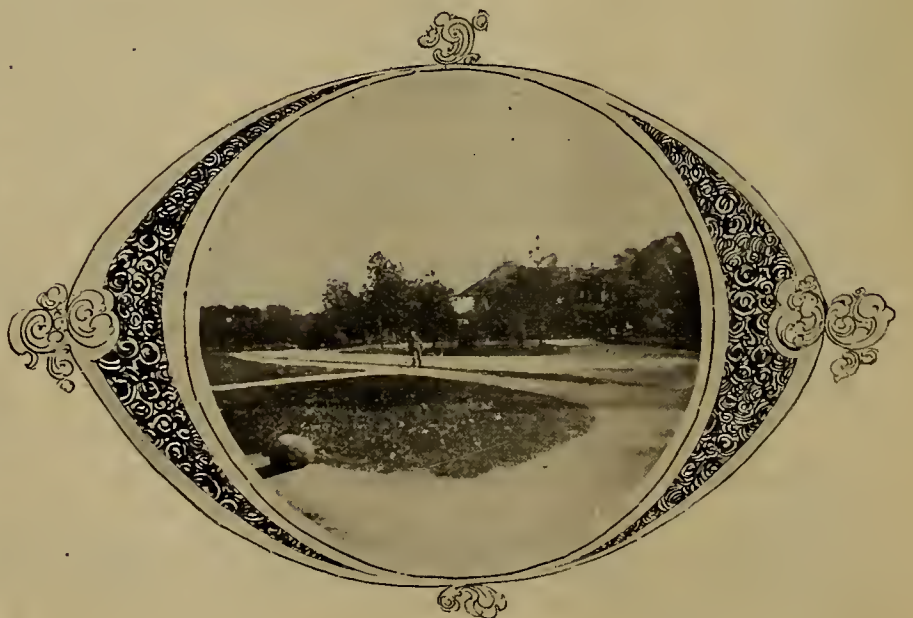
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In many states in the Union there are statutes which impose severe penalties upon non-resident corporations which fail to comply with the requirements for doing business within those states. For example, until recently a foreign corporation which could not produce a certificate entitling it to conduct business in New York was unable to maintain an action in the state upon any contract made by it in the state. This law, which in effect was a franchise tax on non-resident corporations, was quite recently declared unconstitutional. Somewhat similar laws are in force in Illinois, Ohio, Indiana, Missouri, Michigan, California, New Jersey and Wisconsin. In all of these states the constitutionality of the laws is openly challenged and steps are being taken by powerful trade organizations to have them declared void. There has been no general compliance with the provisions of these laws, and the few corporations which have paid heed to them have done so under protest and with the understanding that they might later attack their legality. The primary intent of the laws was to make the secretary of each

state the agent of non-resident corporations so that service could be had without going outside of the state to obtain it. The laws discriminate so strongly against non-residents that it is the unanimous opinion among competent lawyers that no outside judge would decide that service could be had on a secretary of state, and consequently any judgment rendered could be set aside. Such laws interfere with interstate commerce because they restrict trade between the various states. They are clearly in violation of the federal constitution, which guarantees that the citizens of one state shall enjoy all the privileges that are granted to the citizens of any other state. It is even believed that it can be shown that such laws partake of the nature of class legislation in exacting from non-residents of a state what is not exacted from people who reside in it. The advice of a state attorney-general, conspicuous for his legal learning, to all who may be harassed by the operations of such laws is to slight their importance and swing into line with the organizations which, as fast as is practicable, are training their batteries to destroy the last vestige of illiberal enactments. The corporate interests in the cycle industry, which, through the instrumentality of the national board of trade were worked up to a high pitch of excitement in the early portion of the year, may, therefore, take heart of grace and quiet their unreasonable but unnatural fears.

\* \* \* \* \*

Tire fastening on pacing machines was lately made the subject of considerable theorizing on the part of racing men, when the postponement of one of Taylor's racing matches was made necessary by the creeping of a tire. With characteristic love of the most mysterious and theatrical explanation that could be squeezed into service, the creeping was ascribed to the "enormous heat developed by the ground friction of the tire under the magnificent speed of these space-annihilating machines." This heat is supposed to have melted the rim cement, although air and rubber are both notoriously bad conductors. A less far-fetched explanation may probably be found in adulteration of the cement, the weight of the machine with its riders and the large diameter of the tire; factors acting as simple mechanical elements for overcoming the adhesion between tire and rim. If cement will sometimes give way on ordinary bicycles under the stress produced by the small resistance to their propulsion operating of a leverage of 1½ to 1⅝ inches—the diameter of the tire—it is hardly to be wondered at that the resistance to the propulsion of a multiple machine, being greater nearly in proportion to the number of riders, will cause the same result with frequency when operating with 2 to 2½-inch leverage. The increase of tire diameter, it is true, is somewhat offset by the larger cemented surface of the broader rims, but the stresses due to the weight cannot be circumvented. On motor vehicles it has been found necessary to resort to mechanical fastening of the pneumatic tire casing. Probably a similar expedient should be adopted for large pacemaking machines.



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47 WARREN ST., NEW YORK.

Mention The Cycle Age

44TH AND NORTH AVES., CHICAGO, ILL.

## To Wise Buyers

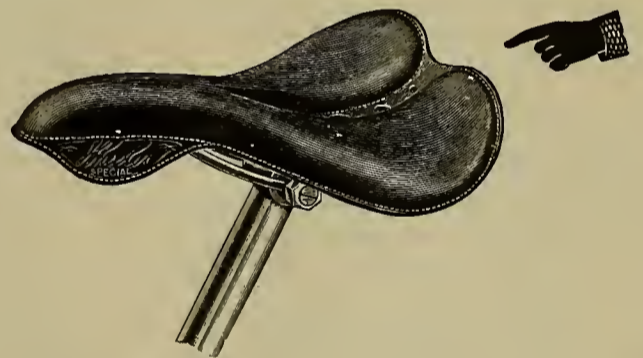
You can't do business unless  
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YOU CAN GET IT ON THE FOLLOWING  
MACHINES:

Spalding, Pierce, Stearns, Orient, Iver-  
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WRITE THESE MAKERS FOR  
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HAVE ALWAYS BEEN MADE WITH THAT  
CURVE IN THE BACK.

OUR LINE FOR '99 COMPRISES BUT FOUR DISTINCT MODELS:

- "EXTRA" Woman's . . . . Broad, Soft and Easy. ❁❁
- "EXTRA" Men's . . . . Hygienic and Durable. ❁❁
- "SPECIAL" Roadster . . . . An ornament to any wheel.
- "CORK-TOP" Racer . . . . Light and Graceful. ❁❁❁

These saddles are made and finished in the care-  
ful and stylish manner that has always character-  
ized Wheeler Saddles.

Send for samples of the most popular saddle on  
the market.

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Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT.  
New York Distributing Agents: HARTLEY & GRAHAM.

## NO USE FOR CYCLE SHOWS

### An Emphatic Condemnation of National Exhibitions by Makers of All Kinds

Makers are being asked to exhibit at two national cycle shows, one in New York and the other in Chicago, but for reasons which are obvious to all who have tasted the bitter fruit of past national exhibitions they prefer to hold back their support. If one only gave heed to the noisy demonstrations of the show promoters he would be inclined to conclude that the entire body of manufacturers was aflame with eagerness to participate in the exhibitions, but careful enquiry reveals the fact that many of the concerns which were conspicuously identified with the outward success of shows in other years are resolutely determined to get along without the use of such adventitious aids to business.

The show promoters are straining every nerve to have it appear that they are but acting in response to a spontaneous trade demand. In New York the suave Sanger, affecting no deep knowledge of trade conditions, rests his argument upon the apparent need there is for enlightening the "thousands of new riders who have never attended a cycle exhibition, nor had the opportunity to examine the latest improvements under the favorable conditions afforded by a national show." If he did not perceive this darkened condition of mind in the public Sanger would be wanting in one of the chief qualifications for a man of his calling. A little matter he cautiously refrains from mentioning, however, is thoughtfully summoned into view by one of his critics, who wittily remarks that though millions go to see the elephant at the circus and cheerfully plank down half a dollar for the privilege, yet none is desirous of buying the elephant.

#### The Trade is Off Its Base.

The adventurous Van Sicklen in Chicago is not content with so plain a presentation of the necessity for his show. He is ambitious of doing something more than merely staging the wares of exhibitors. He, therefore, appears in the role of trade prophet and vows to make the fortunes of all who will pay tribute to his genius. With a national show he will cure all the ills which are tormenting and devitalizing the cycle trade. He will, to quote his own brilliant diction, "put the trade back on the pedestal on which it stood in former years." His fiery, tumultuous thoughts on the subject of the relation of the trade to shows escape expression in human speech and he brays in this fashion:

There is no industry so great that it can afford to drift along, taking things just as they come, and make no effort to better conditions now prevailing in the cycle trade.

Other fragments from Van Sicklen's elegant plea for trade support are herewith presented:

The action of the "powers" in shutting off on cycle shows has resulted in a loss of interest by the general public, and a consequent loss of sales. A properly conducted show will, in a large measure, rectify this trouble and have a tendency to put the trade back on the pedestal on which it stood in former years.

The cycle industry is the only great industry not represented by annual shows. The impression two or three years back was that cycle shows were simply jollification meetings, and were not responsible for the great interest being shown in the industry by the general public. The apathy of this same public since the discontinuance of these shows should prove conclusively that they are a good thing.

This show is to be given with the idea always in view to boom the trade, arouse enthusiasm that is and has been dormant for

months, and should receive your hearty co-operation.

Expenses will be kept to the very minimum, consistent with the proper conduct of the business, and no exorbitant charges will be made.

#### What the Makers Say.

Now what do makers say in reply to these and similar foolish statements? Just this:

1. That national exhibitions interfere with trade policies.
2. That they are too expensive.
3. That they keep alive the public's eagerness for novelty.
4. That they are much inferior to road work, with which they greatly interfere.
5. That they are of no service at all to parts and material houses unless held in August or September.
6. That they are market places where prices may be cut.
7. That they do not attract dealers whose orders are most difficult to secure.

Whatever may be thought of these opinions by professional showmen, or whatever the outcome of their efforts to make their enterprises stick, it is absolutely certain that the exhibitions of the coming year will as little resemble those previously given as a mountain looks like a pin head. From the shows in Chicago and New York the firms which make machinery, material, parts and the like goods will be absent. Many who formerly exhibited bicycles, tires and rims will also test the virtue of holding aloof. In fine, it is extremely probable that both shows will prove disappointing in the number and character of cycle exhibits, which will scarcely be atoned for by the much-vaunted display of automobiles.

#### Condemnation of the Shows.

The following opinions may help to steady those houses which are wavering between a desire to cut loose from shows and a fear that they will have no support in so attempting:

#### Nothing Equivocal About This.

Most emphatically, and without the slightest hesitation, we say we are opposed to cycle shows at any time, place, or under any circumstances. We can think of nothing that would induce us to encourage exhibitions of this kind in any way, shape or manner. We do not think it is any more essential to hold cycle shows in order to enhance in any way the interests of bicycle manufacturers than it is necessary for boot and shoe makers, harness makers, furniture manufacturers or the manufacturers of any kind of goods to hold annual exhibits in order to convince their patrons that it is necessary for them to wear boots and shoes, to put harness on their horses, or furniture in their houses.

ECLIPSE BICYCLE CO.

#### Double Work for Traveling Men.

We do not believe in cycle shows, because in our judgment there is a very much more economical way of handling this kind of business. Latterly it was our experience that the buyer was simply a looker. He came to the cycle show to see what he could find in the market, then went home, and it was necessary for a traveling man to visit his establishment in order to sell him at all. The result was really a double expense, because the traveling man could show him and convince him just as readily by his samples as he could to show him his samples at the cycle show and then visit him afterwards.

HUNTER ARMS CO.

#### Shows Distract Agents.

We are not now and never have been in favor of bicycle shows. A few years ago, when they seemed to be considered a necessity by the majority of the trade, we refused to have anything to do with them, as our first and only experience in that direction taught us that a bicycle show was a

great detriment to our business. We prefer to go out after our customers rather than to have them come in all at one time, when they are so much taken up by other things that they return to their homes without having bought anything, at least in the way of a bicycle. Our opinion has always been that a bicycle show should not be a place where any wholesale business was invited or expected, but that if any such a function were held it should be with the idea of interesting the general public and not with the idea of making a trading place of it. In the event of such an exhibition the best time to hold it would be just before the opening of the riding season, say in February.

NATIONAL SEWING MACHINE CO.

#### Shows Delay Sales.

We are unalterably opposed to cycle shows. We think a show is the greatest detriment to the bicycle manufacturer that he can have. It only delays his sales, holds his business back, and keeps him in ignorance until after the season is on, then it all comes in a rush, and the result is there is no good derived. Regarding local shows, would state we do not believe in these. We think the only way to show bicycles is for each agent to have his own opening, and it is a good idea when they can all have their opening on the same day. We would not do anything to promote a cycle show of any kind, as we have had experience along this line with the previous shows, and it is only a good place to spend money and hold back your business.

THE HOFFMAN BICYCLE CO.

#### Shows Hurt the Makers' Interests.

We think that cycle shows, both national and local, are a nuisance to the business, tending only to hinder instead of advance the manufacturer's interests.

REED & CURTIS MACHINE SCREW CO.

#### No Use for Cycle Shows.

Cycle shows are directly for the benefit of cycle manufacturers. As we are not cycle manufacturers, we do not consider that we are in a position to express an opinion as to whether such shows are beneficial to the industry or not.

THE BILLINGS & SPENCER CO.

#### Expense Enormous; Benefits Doubtful.

The expense to the manufacturer of taking part in an exhibition is enormous, and the benefits derived are of a doubtful nature.

THE NEW YORK STANDARD WATCH CO.

#### Will Not Support Shows.

We are not in favor of cycle shows of any description; we will not support same.

MARIO CYCLE WORKS.

#### Will Not Exhibit at Shows.

We are totally opposed to bicycle shows, either general or local, and would decline to participate in them.

INDIANA BICYCLE CO.

#### Opposed to All Shows.

We are not in favor of cycle shows, and we are especially opposed to a national show.

JULIUS ANDRAE & SONS CO.

#### Shows Unsettle the Market.

We are not, and never have been, believers in national cycle shows. The state of uncertainty in which they keep the market is very detrimental to the interests of manufacturers, particularly those of our own kind who cater to the jobbing trade. We have attended a good many shows both in private capacity and as exhibitors, but could never see that enough business resulted from such exhibitions to warrant the expense and trouble. We think, however, that small local shows help to stimulate interests in a retail way.

COLTON CYCLE CO.

#### Promoters and Exhibitors in Danger.

We are opposed to all cycle shows, either local or national. We believe that they are no longer needful to the industry. From a commercial standpoint we cannot but foresee disappointment to both the manager and the exhibitor. If a cycle show is held at all it should be arranged for early January in New York, with a view to interest the smaller dealer, the rider and the foreign buyer.

LEAGUE CYCLE WORKS.

#### Parts Makers Oppose Shows.

As parts makers we are opposed to shows.

THE CLEVELAND MACHINE SCREW CO.

#### Shows Interrupt Business.

We are inclined to doubt the profit to manufacturers of a general bicycle show. It is possible that could such a show be held in the month of November it might result in sales of sufficient magnitude to warrant the expense incurred. We believe that a large bicycle show awakens considerable enthusiasm in the local public, but do not believe

that the enthusiasm thus awakened extends beyond the locality immediately adjacent to the exhibition. In our judgment a show held in the month of February is not profitable to the manufacturer, for the reason that it takes the time of a number of people who might at that season be much more profitably employed.

BUFFALO CYCLE MFG. CO.

#### Shows Inferior to Road Work.

We have never considered a bicycle show particularly advantageous to manufacturers. It is our experience that efficient road work is far superior to exhibitions. While shows no doubt attract a large crowd, the same may be said of other things. People will pay 50 cents to see the elephant at the circus, but no one wants to buy the elephant.

STRAIGHT MFG. CO.

#### Tire Makers Don't Want Shows.

Our experience has been that cycle shows are not necessary, and in case one were held we probably should not take space.

AN EASTERN TIRE HOUSE.

#### A Hint to Show Promoters.

We are opposed to shows because our experience has made it very plain that we can get the same amount of publicity for less money by means of the usual methods of advertising. It may be, however, that their real benefits are greater than their apparent ones. Undoubtedly in the past they have acted as a stimulant to the trade, and the trade (like an individual under the same circumstances) has suffered from the ill effects. This experience is not likely to be repeated, and if shows shall be proven to contribute in any measure to the popularity of the pastime, they will be worthy of the continued support of the trade. There is no reason why the exhibitor should be put to a dollar's worth of direct expense. Spaces should be free, and the cost of delivering the goods to be exhibited borne by the exhibition company. The gate receipts are large enough to warrant this, and yet pay the proprietors a very handsome profit. We would favor holding shows, if at all, at the beginning of the retail buying season, so that the benefit of the impression made upon the buying public may be derived immediately, and not lost or weakened through the lapse of several months, as would be the case if shows were held earlier.

THE AMERICAN DUNLOP TIRE CO.

#### No Faith in National Shows.

We do not believe in national cycle shows. We have exhibited at a number of them, and while it has brought us orders we would have obtained the same orders without the use of the show. While we are not advocates of local shows, yet we think in many instances they might be a benefit to local dealers. That is a matter, however, that must depend upon conditions existing in the local territories in which they are held, and the manner in which the dealers can agree on holding them.

THE SHELBY CYCLE MFG. CO.

#### Too Late for a National Show.

We have grave doubts as to the value of national cycle shows. It is now too late to hold one this season. Traveling men are unable to do any work on the road prior to, or during the progress of the show; hence, if held at all, they should be not later than the month of November, in the early part of the month preferably. As to local shows, we believe that an opening, well advertised, given by the local agents, is far less expensive and more profitable.

ARIEL CYCLE MFG. CO.

#### Shows do not Attract Dealers.

We do not approve of a national cycle show, as it would attract only a very small per cent of the local dealers, and they probably would be from the immediate vicinity, and possibly a few of the larger dealers. Local shows we believe do good when properly managed. The most appropriate time for holding them would be shortly before the season opens. We ourselves are not very enthusiastic over shows of any kind.

INDIANAPOLIS RUBBER CO.

#### Many Agents Cannot Attend Shows.

We do not consider a national cycle show a desirable feature for '99 business. Neither do we favor local cycle shows. We are of opinion that the national cycle shows are somewhat of a detriment to the trade, as it is almost impossible to close contracts with agents prior to such shows, and they refuse to look at samples shown them previously. Then in many cases they are unable to attend the show when the time comes, which necessitates covering the territory twice. In regard to local shows, our experience has been that the local trade will attend such shows, but there is very little business done during the show, and they are further a needless expense, giving very little returns. It is our opinion and experience that in the present condition of the bicycle business the

customer makes a very thorough canvass before making selections, regardless of a show.

INDIANAPOLIS MAKER.

#### Usefulness of Shows is Ended.

We consider the cycle shows have served their usefulness. The bicycle business is now getting down to bedrock, like any other legitimate branch of business, the novelty and false boom having worn off. A cycle show, wherever it is held, generally forces the season, and it also aids in keeping alive the "season business" in bicycles. By this we mean the custom of having entirely new models each year—as though any wheel were only good for just one year, and then must be materially improved upon. This idea of a '97 model being entirely out-of-date as soon as the '98 model comes on the market is, of course, untrue and unnatural.

THE BRIDGEPORT GUN IMPLEMENT CO.

#### National Shows not Wanted.

We do not hesitate to record our vote against cycle shows as a general thing. If, however, the majority of the trade favor exhibitions we sincerely hope they will be local affairs, held late in the season (February or March) and conducted by the dealers for the purpose of attracting the riders' attention to the new models.

PEORIA RUBBER & MFG. CO.

#### Parts Cannot be Sold at Shows.

We are opposed to a national cycle show. Such a show is too unwieldy, and the trade is too much scattered to take part in such an exhibit except at great expense. Furthermore a national show delays business, and upsets all calculations of manufacturers. It is true that a national show in the early winter will enable a manufacturer to sound the riders on the innovations which he proposes to make in his line, so that if they don't take he can abandon them before he sinks additional capital. But suppose the new features prove popular, his competitors who are not blind will still have time to get on the market with something similar, and all the expense of original investigation goes for naught. We believe that there should be local cycle shows. The proper time is Washington's birthday. Manufacturers' plans are complete at this date; their agencies established; their attention can be better given to shows and they will have a stock of goods in every important trade center, so that a special exhibit need not be sent out from the factory. An impression can be made on riders at this time, and bicycles and sundries can be sold, which should be one of the chief things to consider. It is believed by some that the parts makers would be benefited by an early national show. We doubt it. Bicycle parts are sold on merit, or because of price, and a cycle show is a very poor place to sell anything to your brother exhibitors. Furthermore, the men usually in charge of a cycle exhibit are the salesmen and not the buyers of the company that they represent. When we do have more cycle shows, let us have them managed by representative men in the trade.

THE THAMES CHAIN & STAMPING CO.

#### Weary of Shows.

We hardly believe we are in favor of any more shows.

INDIANA CHAIN CO.

#### Favors a Show for Parts Makers.

From our own standpoint we can see no advantage in holding cycle shows. Whatever business we have with the cycle trade is generally done in August, September and October, and the small trade we do not get until February and later. We would suggest that if there is to be a cycle show that it should be an exhibit for manufacturers of parts only and should be held not later than August of each year; but if there is to be a cycle show of completed bicycles to appeal to the public, it should not be held anyhow until after January.

S. D. CHILDS & CO.

#### Opportunity for Freak Exhibits.

Recalling the extraordinary success of the New York shows of two and three years ago, when the Madison Square Garden was filled to the roof with exhibits and enthusiastic visitors, one could hardly account for the changes which would warrant any uncertainty as to their value to the trade and maker; but recent shows have been very different, either through circumstance or natural causes, and the question may well be asked if they are of value. We fear that the cycle business is undergoing such rapid and radical change that it is hardly worth while to stop for anything like a cycle show, and when it has gotten through with its changes perhaps the novelty and interest will be so completely knocked out of it that it will be like having a buggy or clothing show; in other words, the freaks and freak manufacturers will be gone and the business will be reduced to the same hard pan basis that other manufacturing stands on, and makers will not only be unable to stand the expense, but will not have the in-

clination to indulge in such things. The novelty is disappearing in the wheel business and with it, we believe, the shows.

R. H. INGERSOLL & BRO.

#### Shows Cause Price Cutting.

It is decidedly to the disadvantage of the manufacturers to hold a national show, for the reason that it encourages cutting prices, which is sure to come by having a number of makers side by side selling their goods. We would not favor a show except for the retail dealers. We believe a show for the dealers should be held sometime in the early part of February.

FANNING CYCLE MFG. CO.

#### Smooth Sailing Without Shows.

We do not think it is good policy for cycle manufacturers to exhibit at cycle shows. The tendency of all agents to hold off buying before the cycle show is a source of a great deal of annoyance, inconvenience and expense to manufacturers. It is absolutely nonsensical to think of making them of a national character in any event, and we would not think of supporting anything but local shows if we support any. This year's experience satisfies us that if there are no shows to interfere that salesmen can go out earlier and get business, which makes smooth sailing.

THE OLIVE WHEEL COMPANY.

#### Good for the Sport.

We hardly know how we stand as regards shows. There are arguments for them and also good arguments against them. We are inclined to believe, however, that a good show held in Chicago, followed by another one in New York, would have a tendency to keep up the interest in the sport.

We are inclined to believe that some time in the month of February is as good a time as can be chosen.

THE KIRK MANUFACTURING CO.

#### Believers in Trade Shows.

We are decidedly in favor of cycle shows. We believe that these shows should be trade shows, limited to two in number and held in January, one in New York and the other in Chicago. It is our opinion that these shows would be of inestimable benefit, but to obtain the best results they should be held under the auspices of some representative trade organization, if possible.

CUSHMAN & DENISON.

#### Chicago as a Show Center.

We believe that a national show held in Chicago would be of benefit not only to the trade of Chicago, but to the whole country. We favor such a show and would probably exhibit in it.

THE WHEELER SADDLE CO.

#### No Show in Brooklyn.

At a meeting of the Associated Cycling Clubs of Long Island held November 21, in Brooklyn, it was voted not to hold a cycle show in that city. So the chances for a show in Brooklyn can be considered slim unless the dealers take hold of the matter and conduct a show themselves.

#### Profits of English Makers.

Recent company reports from English concerns reveal the following profits or losses:

	Loss.	Profit.
Abingdon Cycle Co.....	\$ 51,995	
Appleby (chains) . . . . .		6,955
Dunlop Fittings . . . . .	\$22,325	
Jointless Rim Co. . . . .		133,390
Centaur Cycle Co. . . . .		91,295
Premier Cycle Co. . . . .		248,760
Quadrant Cycle Co. . . . .		8,100
Raglan Cycle Co. . . . .		77,605
Rudge-Whitwork Cycle Co. . . . .		106,115
(a) Riley Cycle Co. . . . .		\$ 23,210
(b) Star Cycle Co. . . . .		36,620
(c) Rover Cycle Co. . . . .		63,945
(d) Seddon Tire Co. . . . .	\$44,215	
(e) Presto Gear Case Co. . . . .	5,785	
(a) A dividend of 5 per cent was declared on \$155,000 capital stock.		
(b) Holders of preferred stock were paid 7 per cent dividend and holders of common stock 5 per cent. The capital stock of the company is \$600,000. The sum of \$12,500 was placed to reserve.		
(c) The capital stock of this firm is \$750,000, on which a dividend of 5 per cent was declared. The reserve fund now stands at \$50,000.		
(d) This loss has been accumulating since May of 1896. The capital stock of this company is \$625,000.		
(e) This loss is attributed to litigation and heavy depreciation in value of stock.		

The first Bulgarian cycle works were recently opened by M. Weber in Rustchuk.

## THE ENGLISH SHOWS

### General Features of Stanley and National Shows Distilled from Announcements and Illustrations

If the two annual English cycle shows, the Stanley and the National, which were this year held in the same week, November 18 to 26, have served no purpose at all commensurate in importance with the expenditure which they have involved, they have at least furnished an occasion for comparison between the English and American developments of the industry. While reliable information in regard to the public's attendance and the success or failure of the exhibitions as marts of trade where agents and jobbers are invited to open and close negotiations, have not yet come to hand, the general features in regard to new construction and the popularity gained for mechanical details, which at the time of last year's shows were placed on the scales to be weighed and judged by the public, are readily recognizable now from the advance notices of the exhibitors, which, in accordance with a time-honored tradition, have been reproduced by the English cycle press, and it seems probable that little information of value to American exporters or of interest to the American trade will be forthcoming from later and more explicit reports, except insofar as illustrations of ingenious details may then be given.

#### Catering to Small Builders.

That the necessity for economy is being realized by the English manufacturers is plainly evidenced by the fact that a considerable number of firms, which in former years patronized both shows, have this year chosen one or the other. It is supposed that it was one of the objects of making the two exhibitions simultaneous to enable the manufacturers to practice this retrenchment with good grace. In several instances it is noticed that a manufacturer gets double or triple representation, however, through the exhibits of jobbers who market his goods and who also have stalls at one or both of the shows. All through the Stanley show there was a marked frequency of exhibits of machine tools and material intended for the small local builder, indicating at once that the tendency to local manufacture has gained strength by those errors in financial policy of the large manufacturers which are now being so frantically corrected, and that the local builders have not yet been provided with all the needed facilities for doing good or economical work.

#### Back Pedaling Brakes in Evidence.

The construction features by which the English industry on the whole is distinguished from ours may be summed up in a few words, if only the finished product and not the methods of production are considered. The prevalence of gear cases, guards and brakes need hardly be mentioned, except to note the domination of the spoon brake applied to the tire over back-pedaling brakes. Rim brakes, especially the Bowden brake and the American Stanley rim brake, are inseparably connected with the use of steel rims for the wheels, yet they are not especially favored by the exhibitors. Rather may it be said that American back-pedaling brakes are gaining in favor, while yet distanced, so far as numerical representation at the shows is concerned, by the hand brake with spoon attachment. A special feature is the

strong inclination for a "free pedal" evinced by representative concerns. It is usually employed in connection with brake arrangement and is in all respects analogous to the automatic coaster and brake devices, which also in this country are being extensively adopted everywhere, except in large cities. The Juhel pattern of this device, which is a French invention of several years' standing, is the one preferred by the Humber company and combines the "free pedal" with a band brake operating on the front sprocket wheel. The whole aspect of the brake and coaster question as presented at the shows seems to indicate that the English public is as yet floundering in uncertainty on this point and that the market is open to conquest by whomsoever has the most meritorious thing to offer, and the means for pushing it into notoriety.

#### Approved British High Grade.

After this digression into the brake situation, which is not specifically English, it remains to point out what really constitutes the hall-marks of British 1899 construction, and especially high grade construction. Medium and lower grade designs scale downward from this, being as ever before determined by purely financial conditions. The hall-marks referred to are  $\frac{1}{2}$  or  $\frac{5}{8}$ -inch pitch roller chains resulting in front sprockets with as many as 86 teeth; "twin-stays," that is, lower rear forks consisting of two reaches of round tubing on each side of the wheel, the tubes being placed one above the other at a distance of about one inch, center to center, and joined butt-ended in a fork end fitting. The tubes are not cranked but brazed to a forging or casting that allows room for the good-sized sprocket wheels, which the public demand for high gears, makes necessary. The last characteristic feature that has become sufficiently general to signify common approval, is the eccentric chain adjustment which is usually adopted in connection with the twin stays. Vertical rigidity of a very positive order is the evident purpose of the double forks, and it is therefore consistent when the figure eight section forks, which were first employed to this end and were seen frequently last year, have given way to the two separate tubes held apart, truss-like. Isolated instances of the figure eight form are seen, however, and a firm or two use the double tube construction in front forks also so as to go on record in contradistinction to the Triumph company and other constructors, who favor "spring frames" and use round tapered front forks in the firm belief that even a single tube if of oval cross section is too stiff for this portion of a bicycle. If any other features should be pointed out as representing British preferences, one would begin to trespass on the ground which separates thoroughly approved from tentative construction. Still it is noticed that new alloys of white, non-corrosive metal are shown in hubs and spokes and that the tendency to replace steel with such metals meets with steady support if the continued and serene offering of them at shows and in the open market is a safe indication. Their luxurious price seems in reality to be the only obstacle

for a more general adoption of them. So long as this price remains, it may be surmised that English riders of subdued ambition and purse capacity will continue to guard against corrosion by patronizing the paintshop and the pegamoid company, and shunning bright steel and thin nickeling. Brazeless frame joints were much more strongly accredited at these shows than they were last year; the indorsement of the press has been obtained for them in a liberal measure and they would perhaps develop into a British feature of importance if their use were not hedged about by patents which seem to cover the available methods pretty thoroughly. Under the existing conditions the probation-period for them will probably be extended for several years before any decided preference, or the reverse for this manner of joining tubes will be pronounced.

#### Construction Under Probation.

Two morsels of new construction are presented which hold about the same interrogative relation to the market this year as several of the above mentioned features did last year. These are the spring frame and the long crank. Spring frames in one sense of the word are of course an old thing in all markets; but that which is now bidding for recognition is the "scientific" spring frame; indeed, a spring frame without springs, based upon the apparently heretic assumption that rigidity is a much overrated quality—except in rear forks—and has less to do with strength and efficiency of power application than commonly supposed. Being prolific of sharp internal vibrations in the structure, rigidity, it is also contended, militates against durability of a bicycle, and, as for comfort, even at hill-climbing, it is argued without serious contradiction, that the rigid machine is not worthy of comparison. These theories are finding ardent advocates in the British isles and may have a formative influence on future construction and on the weight question. So far they are exemplified in curved tubing which serves well the purpose of advertising the idea. Later they may run to lengthened wheel-base and thinner tubing of heavier gauge, so that finally the bicycle may present its largest tubing in the rear forks; or the trussed rear forks already mentioned may become the prevailing fashion in combination with thin tubes in the frame. The Pedersen or "cantilever" machine is exhibited in modified patterns by a number of licensed manufacturers and is a phenomenon pointing in the same direction.

#### The Long Crank Movement.

Long cranks, nine inches, have won laurels among English riders and writers of some influence. They are championed by a few companies in a tentative fashion, but do not as yet seem to carry the general public with them. Necessitating a high hanger, they are unlikely to influence forms of manufacture until a province of usefulness has been unmistakably marked out for them. Their adoption was first argued with force by an Austrian engineer of some note and he was ably seconded by Crompton, an English engineer of mature years. The advocates for their use seem to have been principally found among the veterans of cycling, and thus the suspicion is given color that long cranks are especially adapted for those whose muscular system no longer responds to nervous impulses with the automatic celerity of youth. If this should be so the long crank movement may yet be credited with giving a valuable hint of greater value for the future than it could have been at any time in the past.

When it is mentioned that the facts so far known in regard to the two shows furnish strong indications of a very inter-



esting evolution in the tire market favoring the most easily detachable and the most resilient patterns and that the "tubeless" tires, Fleuss and Trench, have lost none of their chances for success in the past year, nearly everything has been noted which may be dignified as "trade movements" of importance for present or future business plans. The Quadrant roller gear bicycle is the strongest British element of defection from the chain driven type. Not being made under the license system its progress in the public estimation is retarded, however, and it seems difficult to foresee to what extent it will pave the way for other, possibly American, types of chainless construction. The French Acatene and the Columbia chainless seem both to be farther advanced in the ways of commerce. The Elliptic is a chainless construction of the kind in which reciprocating levers are employed. Although the foot motion with this machine is elliptic and several records have been broken on it in the past season, there is no sign that its type will meet the public's approval. Its appearance seems to be against it.

#### Miscellaneous Details.

The number of new patterns of acetylene lamps which were announced for exhibition is astonishing, almost approaching in multitude those which this country will produce. Tricycles have reached to that point of recognition by the public that they are now made by one or two makers in more than one grade. One model is designed to be propelled by a cantering motion in imitation of horseback riding. It is for adults. The Esmond saddle which has a floating motion, laterally as well as lengthwise, is commented upon with praise as introducing a pleasing degree of comfort by new means. The principle upon which it is built has already been emulated by several American inventors who have obtained patents for similar designs. Another new departure in saddle making is the use of woven wire for the seat. The Gordon company offers a brazing composition which seems to be especially intended for repairmen, as it is warranted to flow spelter at a low degree of heat. One of the most interesting of these minor matters is an attempt to discard the monkey wrench by providing every hexagon nut on the bicycle which is ordinarily operated by this tool, with a square hole. Presumably these nuts must be made somewhat thicker than ordinary nuts of the same bore so as not to reduce the number of threads that determine its binding-effect. Several cycle manufacturers show a disposition to abandon the cotter pin for crank fastening, being probably influenced in this direction by American competition, but again the cotter is employed for securing the eccentric chain adjustment device to the fork end fitting. One eccentric adjustment device which seems especially neat is located in the crank bracket, but in order to avoid unsightly dimensions of the latter, it is supplemented by a reversible oval disk at the rear fork end. The disk is apertured at one end for holding the rear wheel axle. By reversing the disk, a half inch is added to the range of adjustment as obtained by the eccentric in the bracket.

#### CANADIAN DISCRIMINATING DUTIES

The Practice of Giving British Exporters a Tariff Advantage has not been Satisfactory.

Exporters of cycles and material will be interested in knowing that the effort of Canada by discriminating tariff duties to divert its import trade toward Great Britain and other countries that admit Canadian products at low duties, or none

at all, has not been in operation long enough to afford results that are decisive. but the results that have been attained are a great disappointment to Canadian and English statesmen who are trying to knit the British empire together into something like a customs union. They cannot greatly surprise persons who have studied the results of our reciprocity experiments and have learned from them that a small cause often has no effect whatever, instead of a small effect, as one might have inferred before watching the result, or its absence, of these small tariff influences.

It is true enough that a small difference will turn the course of trade. But the tariff is not the only item in the cost of goods. It is usually secondary to the selling price in the country of production, sometimes a very small part of it, and the concession in reciprocity and retaliatory tariffs is usually but a part of this part. Its relation to the cost of goods is therefore small, and while it is quite enough to divert the course of trade if all other conditions are the same, it seldom happens that all the other conditions are the same.

In August, 1896, the Canadian duties were the same on commodities from this country and from Great Britain; in August, 1897, the latter had an advantage of 12½ per cent, and in August, 1898, an advantage of 25 per cent.

#### STRETCHING ALIEN LABOR LAW

Ruling of Our Immigration Bureau Regarding Commercial Travelers Objected to by Canadians.

Washington, Nov. 28.—The Manufacturers' Association of Canada has drawn the attention of the Anglo-American Commission, now sitting in this city, to the recent rulings of the United States Bureau of Immigration, that the commercial travelers of Canada fall within the restrictions of the alien labor law, and that they cannot carry on their work on this side of the border. A large Canadian manufacturing firm, with branches at Toronto and Buffalo, recently submitted a statement to the Immigration Bureau as to the work of its salesmen on this side of the border, in selling both Canadian and United States goods. The answer of the bureau was that as the salesmen were Canadians they came within the operations of the law.

In bringing the matter before the Anglo-American Commission the statement is made that a large number of commercial travelers from the United States have regular routes through Canada, and that if this country intends to exclude Canadian salesmen it will be necessary to retaliate by excluding American salesmen from Canada. This exclusion will work a great hardship on bicycle, tire and sundries manufacturers, who have numerous agents traversing Canada in quest of orders. Efforts will be made, however, to have the restrictions removed on both sides.

#### Another Phantom Bicycle Trust.

An opium-smoking correspondent of an eastern daily paper is to the fore with a story which credits eight or ten of the large bicycle makers with the intention to pool interests, open retail stores in all big cities, and gather unto themselves all the business of the country. It is a favorite pastime with irresponsible contributors and credulous editors to dish up this harmless fiction two or three times a year to their hungry readers. But this time they show progress in work, for they have seized upon a corporation known as the Federal Bicycle Company and woven its name in the romance. Warming to their subject the nimble newspaper men have decided that with "the inability of independent retailers handling

one or two brands that are not so well known, and by working in harmony and under reduced expenses, the trust can make and sell bicycles so cheaply that in a year or two it will be in control of the industry." The trade endures the lucubrations of these gentry with a philosophic fortitude which compares favorably with that practised by the old woman of Syracuse, who declared herself content with the rule of the Tyrant Dionysius for fear he should be succeeded by the devil himself.

#### The Philadelphia Cycle Show.

Philadelphia, Nov. 28.—The forthcoming local cycle show under management of the local cycle board of trade promises to be much more successful financially than was that of last February. The committee in charge of the last show was antagonized by the national organization of manufacturers and the demands for space were disappointingly small. This year, however, President Brewster and his conferees will have a "free foot," and local agents handling machines manufactured by members of the national body will not be prohibited from exhibiting. The questions of date and a suitable building for the show are now engaging the attention of the board of managers. As regards the building, the choice has simmered down to the First and Second Regiment armories. The former is small, but is only a few blocks distant from the business center; the latter is 30 per cent larger than its rival, but is three miles uptown. The decision of the board will be announced the coming week.

#### Answer in Election Bet Case.

The answer of O. G. Staples, the garnishee in the case of the Bellis Cycle Company of Washington, D. C., against W. W. Marmaduke and others, as the winner of an election bet, was filed November 21. It was sought to secure these alleged funds in connection with a judgment at law, secured some time ago. In his answer Mr. Staples declares that he is not indebted to the defendants; that he has no goods, chattels or credits of the defendants; that no money, check or security has been deposited with him by the defendants; that if any money, check or security has been placed in the safe at the National Hotel it was not placed there in the custody of Mr. Staples, but by other persons, and without his authority or assent.

#### To Organize Chicago Cycle Workers.

President J. F. Mulholland of the Bicycle Workers and Allied Trades International union has made arrangements to send organizers into the Chicago district to organize bicycle workers. He believes the demand for bicycles next year will be unprecedented, and says the workers should have their share of the profit which will be made by manufacturers. "By organization," he says, "we can maintain a proper rate of wages and protect the interests of fair employers." A mass-meeting of bicycle workers will be called in a few days and efforts made to restore the various unions in the city to their former strength and influence.

#### State of Trade in Germany.

The directors of two German cycle making concerns have just made reports to the shareholders. One firm, which paid a dividend of 7 per cent last year, is unable to pay anything at all on the past season's trading. The other, which paid a dividend of 29 per cent last year, will pay 24 per cent this year.

An inventor at the Piraeus, Greece, has taken out a patent on a new chainless bicycle.

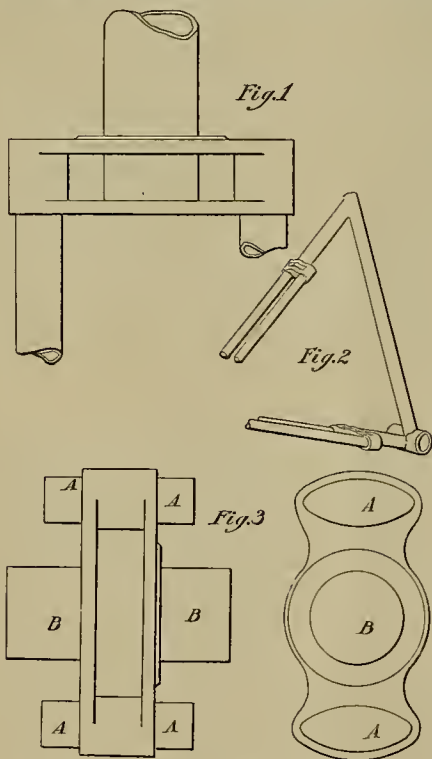
## UNUSED FORK CROWNS

### Chance for Originality and Variety in Forgings and Castings for Three-Crown Construction

In the constant race for novelty among American bicycle makers the fork crown has played an important part. The variety of fork crowns that have been tried is great indeed and each season sees new attempts to change, if not to improve, that part of the bicycle frame. Even the smallest builders have endeavored to use distinctive crowns and no sooner has one crown become popular than does someone try to change it enough to make a noticeable difference. Perhaps one reason why the fork crown has been changed so much is that it can be changed with very little expense to the builder and without altering any other specifications of the models produced. It is but a comparatively small matter to have a distinctive fork crown made, and the fact that the crown is a very noticeable part of a bicycle helps to make such a change desirable in the eyes of the novelty seeking builder. But in the United States where frame patterns are changed with a rapidity which seems scandalous to the conservative English maker, there is still one crown which has never been used. It is an English crown and was originated by a very conservative firm.

#### Combination of Satisfactory Types.

It is a combination of the double plate and the old Humber crowns, as is shown in Fig. 1. The Humber crown, while it was never in universal use, has always been used with success wherever adopted.



Just why it was dropped is hard to tell unless it be that it was not considered dressy enough to withstand the rapid conquest of the arch crown. Makers who have used the Humber crown will without an exception say that it gave entire satisfaction and that for all around service it could not be outdone. Cycle workers who have built forks with Humber crowns will all agree that there is no crown which is easier to build and to build accurately. The combination crown has the light open appearance of the double plate crown and the substantial qualities of the Humber. It is all in one piece and the holes for the reception of the lower end of the fork stem and the

upper ends of the blades may be accurately placed. The added weight over the double plate crown is slight, and the complete sleeve of metal surrounding the upper end of the fork blade gives good brazing surface at those points. All brazing can be done from the outside and as it is possible to run brass in around the fork blades at the lower side of the crown until it begins to run out of the top, it is not necessary to heat the point above a white heat in order to watch the spelter run underneath the metal. It is not necessary to make the crown more than three-fourths of an inch in thickness, thus allowing the steering head of the bicycle to be set close down over the front wheel, an item of importance in these times when many manufacturers are endeavoring to use low frames without having to accompany them with excessively short heads.

#### Little Machining Required.

Doubtless the most inexpensive manner of constructing the crown is to cast it, though of course it is very easily forged. With careful pattern making and core making, however, much, if not all, machine work may be done away with. At least the outside need not be machined nor the oval holes for the reception of the upper ends of the fork blades. In Fig. 3 is shown the manner of casting the crown, if it be cast. If all of the holes be cored six core prints should be placed on the pattern, these prints being marked in the illustration, A and B. The prints, A, each extend about three-eighths or one-half inch above and below the crown pattern, one core being used to make each of the oval end holes. The open space in the center of the crown, between the upper and the lower plates, is made without a core, the crown pattern being symmetrical and the mold parted at its center. The open center being formed in the mold by the molding sand, the core to form the holes for the fork stem cannot be in one piece extending clear through as the cores provided for by the prints, A. Two cores must be used, seatings in the mold being made by two independent prints, B, B, which do not extend through the center of the pattern. The prints, B, must be long enough to support the projecting ends which form the holes in the casting. To be on the safe side they should be at least three-quarters of an inch long in addition to the length which acts as core. If the patterns are well made and if the cores match them there is no need of machining the holes, a little filing to remove rough edges on the casting being all that is necessary. If it is desired to bore the holes for the reception of the fork stem, the prints, B, will of course be omitted and no cores used at those points. Otherwise the casting of the piece will remain the same.

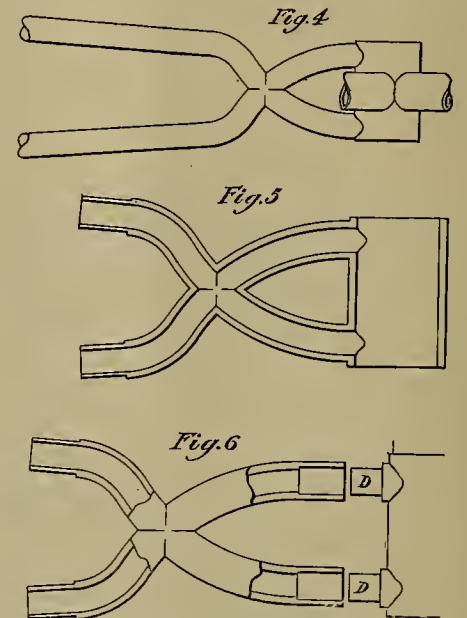
#### Substitute for Arch Crown.

In the rapid adoption of the three crown construction, cycle designers have seemingly forgotten that it is possible to use other crowns than the arch for the rear stays and forks. Without going into the matter of the desirability of the three crown frame, it may be safely said that other crowns might be used as well as the arch, thus giving the novelty seeker a chance to make his frame distinctive in construction without departing from popular lines. In Fig. 2 is shown the rear end of a frame in which the combi-

nation double plate and Humber crown is substituted for the common arch crown. The crown being lighter than the average arch crown and being, as has been mentioned, of easy making and of ready adaptation to fork building, it can be adapted to the rear end of a frame without any trouble. It would lend the frame a clean cut light appearance and could be used with good taste in either a flush or an outside joint frame.

#### Crossed Rear Forks.

A rational novelty in rear fork design that has never been tried, to the public's knowledge at least, is shown in Figs. 4, 5 and 6. In Fig. 4 the plan is shown incorporated in a flush joint rear frame. The effect is that of the two rear fork tubes crossing each other ahead of the rear wheel. The design is offered as a change from the common cranked rear forks and from the three crown construc-



tion. It adds no perceptible weight over the three crown construction, is just as strong, and perhaps a trifle stronger than the ordinary three crown make-up. Its appearance is catchy. There are two practical ways of making the fitting. Perhaps the best is to cast the hollow curved cross in one piece together with the hanger bracket, as is shown in the sectional view in Fig. 5. Straight rear fork tubes of either round or D section may then be placed on the rear ends of the cross. The second way is to make a separate cross piece as in Fig. 6, which may be used with a regular four lug hanger. The latter method has the commercial advantage of allowing the parts maker selling the piece to put it in all supply houses handling some popular make of hanger, the cross piece being proportioned to fit that hanger. The maker of the hanger will not then be called upon to turn out brackets with the cross extension made integral with the bracket. It is obvious that the forward ends of the cross must be accurately distanced in order that they will exactly coincide with the lugs, D, on the hanger, there being but little chance to spring either the hanger lugs or the branches of the cross. The part is easy to cast, it being made in a simple two part flask with one core which makes the hollow complete throughout all of the branches. The frame builder will have no difficulty in using the piece, as when it has been fitted to the hanger and the straight rear fork tubes placed on its rear branches there is but little chance for the rear frame to be out of true.

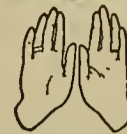
The wood rim works at Martinsville, N. Y., have been destroyed by a fire believed to have been intentionally started by a gang of incendiaries operating in North Tonawanda. The factory has been idle for a long time, but was soon to be started up again.



TRADE MARK



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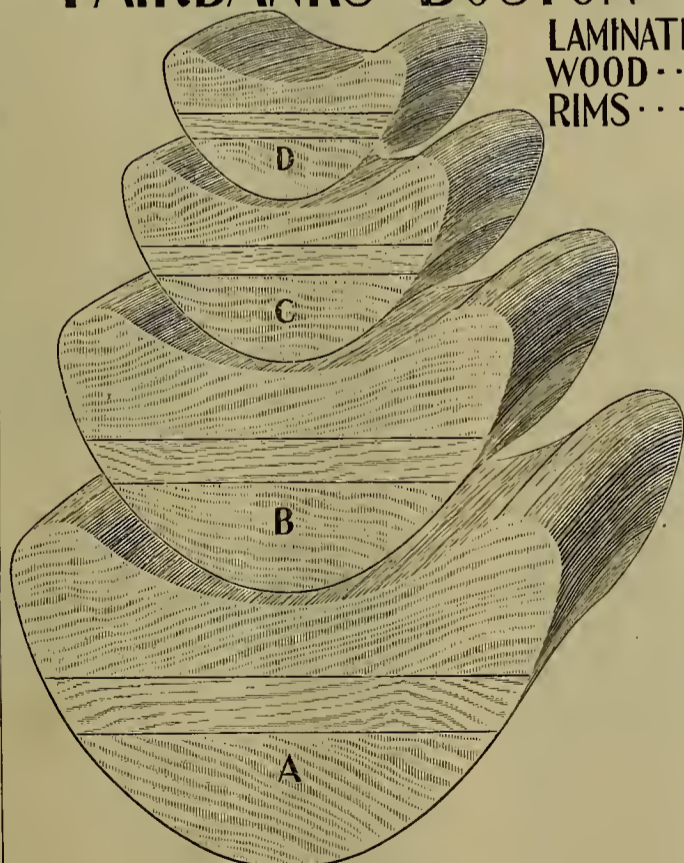


TRADE MARK



### FAIRBANKS-BOSTON-

LAMINATED WOOD... RIMS...



- A—28 x 2½-inch Carriage Rim.
- B—28 x 2-inch Sextet.
- C—28 x 1¾-inch Tandem.
- D—28 x 1½-inch Single Wheel.

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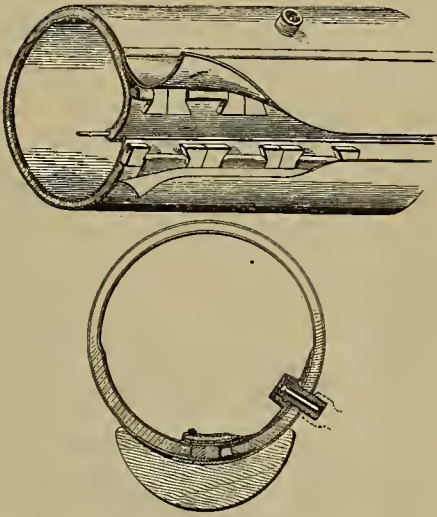
Hibbard, Spencer, Bartlett & Co., Chicago, Western Distributing Agents.

Mention The Cycle Age

## RECENT PATENTS

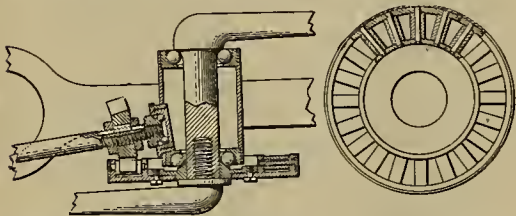
## Detachable Tire With Dovetailing Edges—Triple Steering Head and Bar—Factory Adjusted Hub

**Graham's Tire.**—This is a "tubeless" tire with mechanical interlocking of the meeting edges. One side of the tire is secured to the wheel by cementing a flexible flap to the rim. From the same edge of the tire but on the inner side extends another flap made of soft rubber, with a strip of canvas inclosed. The flap also contains a wire which is designed to be tightened by a ratchet arrangement, but the inventor does not specify how



this is to be done. The opposite inner edge of the tire has a similar, but thinner, canvas-reinforced soft flap. Interlocking devices made of aluminum and of the shape shown in the illustration are secured along the edges of the intermediate canvas fabric of the tire, projecting on the free side of the tire beyond the loose edge of the outer tire covering. The inflation valve extends through the tire just beyond the edge of the wheel rim, so that creeping of the tire will not affect it. The inventor says that the wire in the inner flap is tightened before inflation, but how the interlocking of the tire edges may then be accomplished seems difficult to comprehend. The wiring is not included in the patent claim, however. The inventor is W. A. D. Graham, of Toronto, Can.

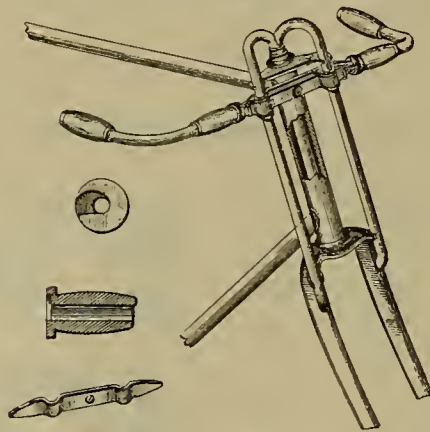
**Roller Gearing.**—The general arrangement of gear-wheels is similar to that of bevel-gear bicycles. The front driving wheel and the rear driven pinion are alike in construction and are provided with rollers. The shaft-pinions have milled teeth. Both of the roller wheels have concentric flanges on their working faces and pins are inserted at equal in-



tervals connecting the two flanges. The inner ends of the pins are conical and fitted on conical sockets in the inner flanges. The outer ends are cylindrical and reach through holes in the outer flange flush with the same. A band encircling the flange holds them all in position. On the pins are placed roller sleeves. Each pin is grooved longitudinally to provide for lubrication by plumbago or other means. The conical sockets in the inner flange extend through the flange so that

the pins can be driven out by striking their inner ends when the band surrounding the outer flange is removed. This serves repair purposes. The pinions on the shaft are adjustable, being placed on between two nuts and splined to the shaft. The key for splining is as long as the bore of the pinion and slides with the pinion in adjusting the same. The patent claims have reference to the construction of the roller-wheels only. The inventor is Charles A. Hennitke, of Buffalo.

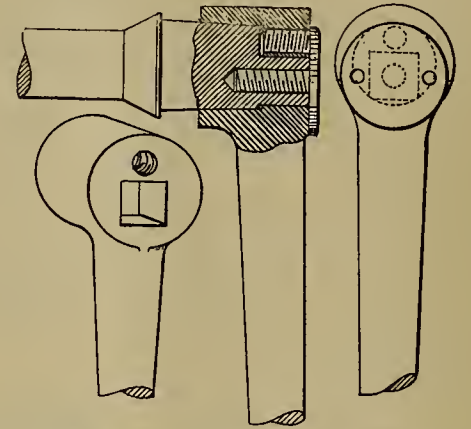
**Spiker's Handlebar.**—For the purpose of providing a handlebar which may be adjusted up or down by the rider without changing the inclination of the grips, the inventor proposes the construction shown in the illustration, which consists in a pair of guide tubes brazed to the fork sides at their lower end and gathered in a socket at the upper end, the socket in turn to be secured to the forkstem. A distance plate secures the position of the guides in advance of the head tube, as shown, by which position a wider angle is obtained for steering than with the usual "triple steering head," so-called, of the "Referee" or "Lyndhurst" type. The middle portion of the handlebar is flattened and has seats or eyes for the guides, and to this portion is secured at one point a clamping plate with seats



adapted to be pressed against the guides from the front. The ends of the clamping plate are free and reduced to form lugs which extend into sockets in the ends of sleeves, shaped like grips, mounted on the adjacent tubular portions of the handlebar. The sockets are turned to form eccentric cam faces, so that a twist of the sleeves will squeeze the lugs tightly against the bar and the latter against the eyes or seats in the flattened portion of the handlebar. Thus the rider may, by taking hold of the sleeve-grips and twisting them, release the bar from the guides, lower or raise it, and again fasten it without removing his hands. Whether this desirable object is sufficiently important to call for so elaborate an arrangement as proposed will probably be doubted, but the suggestion of employing an eccentric cam socket for quick fastening and unfastening may be a hint for makers of grips, tool boxes, pumps, lamps or anything else which it is desired to secure removably to any one of the frame tubes. The possibility of accidental loosening by vibration should probably be considered when the cam face is of metal and contacts with metal. The inventor of the handlebar illustrated is W. C. Spiker, of Cadiz, O.

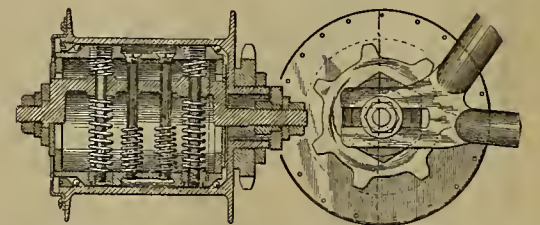
**Crank and Axle.**—The axle has a reduced square extension eccentric of its

axis, and this extension fits in a square hole in the crank boss. The eccentric portion is preferred mainly because thereby torsional stress on the axle is reduced. The axle is further provided with a screw-threaded hole into which screws a screw with a head large enough to extend over the face of the crank boss and operate to draw the crank tightly on to the axle, crank and axle being tapered correspondingly. The screw head has holes for applying a spanner. The crank has a screw-threaded hole of the same diameter as the hole in the axle extension, and this leads up to the shoulder on the axle. If the crank is to be removed from the axle, the headed screw is removed



from the hole in the axle and is screwed into the hole in the crank, where by impinging against the shoulder on the axle it serves to drive the crank off its taper seat. The inventor is Albert J. Perks, of Springfield, O.

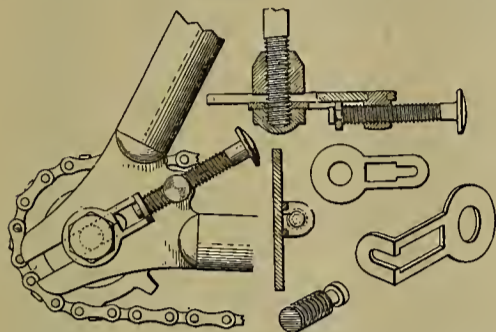
**Spring Hub.**—The hub is enlarged beyond the usual size of bicycle hubs and revolves around an inner drum upon adjustable ball-bearings. The ends of the drum are closed by plates which have slots extending across the central portions without reaching the edges. These slots are normally vertical, as described by the inventors, but in practice should probably be placed at an angle corresponding to the average direction of jolts, say at an angle of 45 to 60 degrees. The axle is cranked so that the cranked portions slide in the slots and the central portion of the axle, which is broadened, is normally above the axis of the drum. This arrangement is for the purpose of providing room for longer and more yielding springs within a given size of hub. The flattened portion of the axle has four holes for the passage of guide bolts. Two of these bolts have large screw-threaded heads which are screwed into holes in the drum. At their outer ends internally and externally screw-threaded collars are fitted. Being adjustable, these collars serve to adjust the tension of the helical springs bearing upon them, so as to make the axle ends extend from the center of the drum plates on both sides when the rider is seated. It seems that the range of adjust-



ment would not be large enough to offset great variations in the weights of different riders, but it may be sufficient to offset accidental variations in the strength of the two springs so as to insure a horizontal position for the axle. The helical springs between the axle and the collars absorb the jolts of ordinary riding. Rebound-springs are placed around the same bolts between the axle and the bolt heads. The two central bolts are surrounded by springs which come into ac-

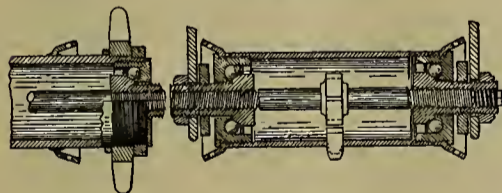
tion only in case of unusually severe jars when the axle may approach the lower limit of its movement. To the cranked portions of the axle, outside of the drum plates, are attached plates for excluding dust from the slots, and flanges are secured to the hubs to protect the ball-bearings against dust. The inventors are Teodor Kierakowicz and Joseph Lucas, of Chicago.

**Chain Adjustment.**—The construction of this device is so plainly shown in the accompanying illustration that verbal description is unnecessary. Being arranged



wholly on the outer side of the fork end fitting it does not interfere with access to the wheel hub and bearing cones. The inventor is Leo Melanowski, assignor to the Crosby & Mayer company, of Buffalo.

**Adjusted Hub.**—The main object of this invention is to provide a bicycle hub which may be properly adjusted in the factory where it is made and afterwards sold and handled and attached to a bicycle frame without interference with the adjustment given to it. The illustrations show a horizontal cross section of a front hub and the sprocket end of a rear hub. In the front hub the barrel has at each end a flaring flange for spoke attachment and the barrel ends are internally screw-threaded to receive ball-cups. Ball-retaining spring washers are used in these cups and have notches in the periphery designed to facilitate the access of lubricating oil to the balls. The cones are turned outwardly and have screw-threaded extensions to which are applied nuts that serve as shoulders against which the fork stems are stemmed tightly by the holding nuts, which are screwed to the cone extension and not on the axle, as customary. The cone when adjusted is secured in position by a screw-plug with a square head which is screwed into the end of the cone extension abutting against the axle end. The middle of the axle is provided with a notched collar and a key piece is held in a hole in the barrel by means of a flat spring, so that by press-

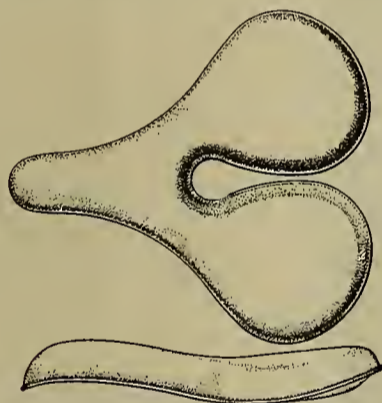


ing the key piece in against the resistance of the spring a tooth on the key piece will engage one of the notches and lock the barrel to the axle. The assembling of the hub is described as follows: Antifriction-balls have been placed in the cups, one of the said cups is screwed into the end of the barrel solidly. Then the shaft, having the cones screwed on to its ends, is inserted into the barrel from the end in which no cup is yet screwed, and the threaded end of one of the cones is projected out through the central holes of the bearing-cup until the bearing-surface of the cone comes in contact with the friction-balls of the inserted cup. The other cup is then screwed into the opposite end of the barrel, allowing the threaded portion of the other cone to extend out through the central opening in it. On the threaded ends of the cones

the inner nuts are then screwed tightly, after which the hub may be placed into the bicycle fork, to which they may then be tightly secured by screwing on the holding nuts. The cones are kept from turning in the bicycle fork by means of two flat sides, so that by revolving the shaft when the cones are thus held the cones are driven outwardly or drawn inwardly of the hub, according to the direction in which the shaft is turned, the threaded ends being provided, respectively, with right and left threads. The revolution of the shaft or axle is effected by locking the barrel to the shaft, so that the shaft may be revolved with the barrel of the hub in either direction required. When the cones are adjusted in this manner to the positions required, the plugs are screwed into the respective ends of the cones until they set against the respective ends of the shaft firmly enough to prevent the shaft from turning in the cones. This adjustment may all be effected before the hub is inserted into the vehicle; but when it is thus done it is evident that the cones should be held from revolving by an appliance which would take the place of the fork of the bicycle to which the hub is adapted to be attached. The inventors are Walter D. Snider and Albert G. Snow, of Scranton, Pa.

**Pedal Tread.**—Into a tread of lead or other soft metal such as aluminum is rolled a gritty substance such as emery, carborundum, etc., which will prevent the tread from wearing smooth and slippery. Instead of rolling the grit in it may be molded in. The inventor is Elbert B. Phillips, of Cleveland.

The saddle design shown in the accompanying illustration has been patented



for the Garford Mfg. Co., of Elyria, O., on application filed October 29, 1898.

**WHAT SPECIFICATIONS ARE**

As Now Written They Are Only Such in Name—Cover Many Sins.

In many cases specifications have been called upon to cover a multitude of sins, both sins of omission as well as "commission." Specifications, if drawn intelligently and compiled correctly, are of great assistance to both the purchaser and the manufacturer, by expediting business transactions, and also in preserving friendly relations between those parties, through avoiding misunderstandings, etc. But if drawn with a view to favor certain articles under the pretense of being fair to all, they often lead to disagreeable consequences and serious disputes, says a writer in Riehle's Digest of Physical Tests.

The definition of the word specifications, as given by Webster, is "A written statement containing a minute description or enumeration of particulars, as the terms of a contract." Many specifications, especially those sent out by manufacturers, are in reality only descriptions of their particular productions, and have no right to be honored by the term specifications. For instance, the descriptions sent

out by some bicycle manufacturers and by them called specifications—their only claim to the name lies in the fact that they have the different paragraphs headed by type of different color and of larger size.

**METALLIZING WOOD**

After Long Immersion in Chemical Solutions Wood Can be Polished to a Metallic Lustre.

In the French Journal Les Mondes, a process for metallizing wood, invented by one Rubennick, is described as follows: The wood is immersed for three or four days, according to permeability, in a solution of caustic lime, at a temperature of from 75 to 90 degrees Centigrade. From there it is placed at once in a bath of hydrosulphate of calcium, to which, after 24 or 36 hours a concentrated solution of sulphur and caustic potash is added. This bath lasts about 48 hours, at 35 to 50 degrees. Finally the wood is treated for 30 to 50 hours to a bath of acetate of lead, also at 35 to 50 degrees. It will be seen that the process requires considerable time, but the result is surprising.

After having been dried to a moderate temperature, the wood thus prepared shows, when polished, a brilliant metallic lustre. This lustre can be heightened still more by rubbing the surface with a piece of lead, tin or zinc, and then polishing it with a glass or porcelain burnisher. The wood surface then assumes the appearance of a genuine metallic mirror, and is very solid and strong.

**Fibrous Puncture Repair Material.**

One of the puncture mending methods shown at the English Stanley show is attracting attention. It is designed to be used for double tube tires, and it is the idea that punctures shall be mended without removing the tire casing, but its adaptability to single tube tires is obvious. The tire manufacturer's co-operation is required, for the inner tube is supposed to have been filled at the time of manufacture with a specially prepared fibrous material which loosely fills the entire air tube, but weighs only one ounce. Being fibrous, the material does not interfere with inflation or deflation. When a puncture is located a small quantity of rubber solution is injected and the tire is depressed against the rim at the point of injection, so as to make the fibrous material, combined with the rubber solution, stick to the punctured spot. By proper manipulation it is said that the fibrous paste which is formed will adhere only to one side of the tire.

**Hardening Cast Iron.**

The following is published as a recipe for hardening cast iron. We are not responsible for it: Take a half pint of vitriol, one peck of common salt, half a pound of saltpetre, two pounds of alum, a quarter of a pound of prussiate potash, and a quarter of a pound of cyanide potash; dissolve in ten gallons of water. Be sure that all the articles are dissolved. Heat the iron to a cherry red and dip it in the solution. If the article needs to be very hard, heat and dip the second, and even the third, time.—American Machinist.

**Tires Kept Dark in Winter.**

It is asserted that light does more to injure tires during the winter than anything else. A chemist who has made some experiments in this line says tires will not harden during the winter months if kept in the dark.

One-fifth of the 30,000 patents taken out in England in 1897 related to cycles and cycle accessories.

## PIPER & TINKER WAGON

### Steam Vehicle of the New England Group—Automatic Regulation of Water Feed

Piper and Tinker, of Waltham, Mass., began the construction of steam wagons in 1895, and so far, November, 1898, have built three vehicles, one of which has been sold.

This wagon has two simple engines, working on 90 degree cranks on the same shaft. The cylinders are 2½-inch bore by 3-inch stroke, and are supplied with steam by a water tube boiler, Piper and Tinker's patent. The peculiar feature of this boiler lies in the introduction of flues or fire tubes, ½-inch diameter, inside the vertical members of the water tube sections. These water tube sections are made up of copper tubes, 1¼ inches outside diameter, both horizontal and



Fig. 1—Latest Piper & Tinker Steam Wagon.

vertical, the vertical tubes containing 1½-inch vertical fire tubes, as mentioned. The separate water tube sections are all brazed together, and the 9 sections are connected to each other by copper tube headers, 1¼ inch diameter. The thickness of all the boiler tubes, flues, and headers is No. 20 B. & S. gauge. The vertical height of the water tubes over the headers is 21½ inches, hence the ½-inch vertical fire tubes are 43 diameters in length, which is very much longer than some other makers consider the extreme useful limit for vertical fire tubes. The fuel is gasoline, admitted to horizontal burner tubes through independently adjustable needle valves, the valve adjustment being shown in part in Fig. 3. The fuel is passed through the needle valves in liquid form, and is vaporized by the heat of the burner tubes, which have a head at the end opposite the needle valve, and are imperforate on the under side. The upper half of each burner tube circumference is pierced with holes 1-64 of an inch in diameter—spaced ½-inch, c. to c., and staggered; the draught is natural, and the fire is silent. The fire is automatically regulated by the steam pressure acting on a diaphragm. The boiler is tested to 500 pounds hydraulic pressure and is fitted with a pop safety valve, set at 165 pounds, and the regular working pressure is 160 pounds. The wagon which was sold weighed 900 pounds, had wheels 28 and 30-inch diameter, with Newton tires, 1⅞ inches diameter in front and 2 inches diameter in rear, inflated to about 90 pounds air pressure. The gauge of the wheels was 48 inches, and the wheel base 60 inches. The engines were vertical, and arranged as shown in Fig. 2. The valves are plain D-slides, operated by link motions of ordinary form, and hence, of course, the engines run backward the same as forward.

The Piper and Tinker wagon shown in the accompanying engravings is of later manufacture. It has the boiler and burner as described. The total weight is given as 700 pounds. The wagon body is very peculiar in appearance and has a very discomposing effect on horses. It may be taken as proved that it is not the spectacle of a wagon running without horses which alarms the equine mentality, but the peculiar shape of the wagon. The Stanley and the Whitney wagons are of ordinary forms, and but very few horses pay any attention to them. The Cross wagon, of Providence, is of peculiar shape, and produces temporary insanity in almost every horse that it meets; the Piper and Tinker is also of unusual form, and affects horses in the same way. If it is true, as these four instances agree in showing, that it is the strange outlines of automobiles which so dangerously alarm horses, then designers should keep close to ordinary vehicle forms, in spite of the loud and often repeated demands for "originality" made by some of the automobile journals.

#### Metal Construction and Shapes.

Undoubtedly the wagon which alarms horses least will have one great point in its favor, as it is one of the most annoying things in the whole round of automotor vicissitudes to have about all the horses in sight standing on their hind legs and pawing the air with their fore feet, or else making mad efforts to run away with the much perturbed occupants of the vehicles to which they are attached.

The Piper and Tinker wagon body owes its unique appearance to the fact that it is constructed of aluminum, having the panels painted black and the retaining strips nickel plated. The dash board is greatly thickened to make it serve as a water tank and the great length of the

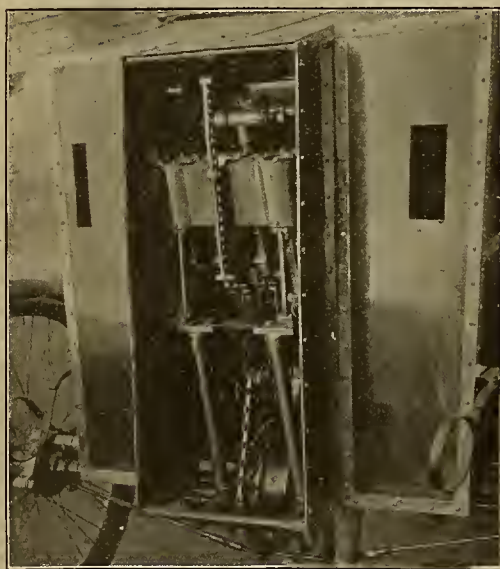


Fig. 2—Rear View, Showing Engine Uncovered

boiler tubes causes the passenger seat to be placed high. The use of aluminum undoubtedly secures lightness of construction, but it would require a very large outlay for dies and forming tools to establish the manufacture of carriage bodies in ordinary shapes in any sheet metal.

The wheels of the last Piper and Tinker wagon are 28 and 30-inch diameter, with Kangaroo tires of 1⅞ and 2 inches diam-

eter, with 90 pounds air pressure; gauge, 48 inches; wheel base, 60 inches.

The arrangement of the engines is pretty well shown in Fig. 2, which is a rear diagonal view, with the vertical cover of the engine casing removed.

The cylinders are 2½-inch bore by 3-inch stroke, and the crank shaft is directly above the rear axle, a short vertical chain leading from the crank shaft sprocket to the large sprocket secured to the compensating gear case; the gear reduction is 4 to 1. The engine frame appears to be carried directly by the rear axle support, without intervening springs, and there appears to be no means of adjusting the chain tension. The valves are D-slides, face each other, are in independent steam chests, and are moved by ordinary links, controlled by a latched lever and notched quadrant in front of the seat. The throttle valve is handled by a short horizontal sliding bar, just in front of the link quadrant. The steam gauge is just beyond the quadrant, and there is another gauge at the rear of the tank-dash board. The brake treadle is above the foot board and operates two band brakes, one on each rear wheel hub.

Piper uses an original form of body carrying spring, made of one single piece of flat steel, twisted into full circles at the ends, and offset sidewise, so that the up-



Fig. 3—Needle Valve Burner Adjustment.

per and lower parts can pass each other, all as shown in Figs. 1 and 2.

The weight of the water tube boiler is said to be 100 pounds, with 65 square feet of heating surface, and a water capacity of 4 gallons.

Fig. 3 shows the burner regulators; the notched wheels, attached to the screw-threaded needle-valve stems are retained in place after adjustment by spring plunger dogs, which catch into the notches of the valve stem wheels; the numerous short open-ended horizontal tubes, located in two rows, one above the other, between the needle-valves, serve to admit air to the closed casing which contains the boiler and the burner tubes. All of this work is covered up by a removable door, as shown in Fig. 1.

#### Feeding of the Boiler.

Fig. 4 shows the well known but very seldom used gravity water feed, which Piper and Tinker employ for feeding their boilers. As a matter of course water finds its level, so long as the whole mass of water is under the same pressure. Hence, suppose the horizontal cylindrical gravity tank, T, T, Fig. 4, is connected with the boiler at the proper level, by a pipe on top, marked P, and by a similar pipe, not shown, leading from the bottom of the gravity tank to the boiler, both these pipes from the tank to the boiler being fitted with valves, so that communication between the tank and the boiler can be opened and closed at will; suppose, also, that a supply hose, H, is led from the bottom of the higher water supply tank to the gravity tank, T, this hose connection being also through a valve which may be opened or closed at will; with these connections, let the valves in the pipes leading from the gravity tank to the boiler be closed, and the hose valve be opened; water will then enter the gravity tank and condense the steam if any be therein, and completely fill the gravity tank, T. Then if the hose valve be closed, and the boiler connection

# KNOCKING AT YOUR DOOR

## Prosperity

is knocking at your door.  
Will you let her in?  
She comes with

## The Claus Bar

==the Bar the People Want.

Thousands of people have opened their hearts to the Claus Bar.

When the proper time comes they will open their pocket books.

We are teaching thousands more that the Claus Bar is:

The only bar that can be adjusted without a wrench.  
The only bar that retains its width at all adjustments.  
The only bar in which all parts interlock.  
The only bar with an adjustment that will not wriggle.  
The only bar that can be adjusted while you ride.  
The only bar that marks the high grade wheel.  
The only bar with a guarantee that never expires.

People will insist upon receiving the Claus Bar.

They will turn away from a wheel that is not equipped with it.

You can't afford to turn away customers—turn away prosperity.

Tell your manufacturer that you want the Claus Bar—that you will take no other.

Write for our prices and open your arms to prosperity.

The

## Claus Handle Bar Mfg. Co.

Milwaukee, Wis., U. S. A.



valves be opened, the water in the gravity tank, being uniformly exposed to the boiler pressure, will run into the boiler, if the water level in the boiler is below the bottom level of the gravity tank, and the gravity tank, T, will be filled with steam. Then suppose the boiler communication valves to be both closed, and the water admission valve to the gravity tank, T, to be opened, water will again run in and fill the gravity tank. Piper and Tinker arrange a slowly revolving cam to open and close these three valves properly, and thus keep the water at a constant level in the boiler, provided that the valve operating cam is revolved rapidly enough. It is impossible with this arrangement of parts to over-feed the boiler, and as the boiler feed has its valves actuated by positive mechanism it is more likely to operate than the ordinary force pump, which has its valves moved one way by gravity. While this boiler feed

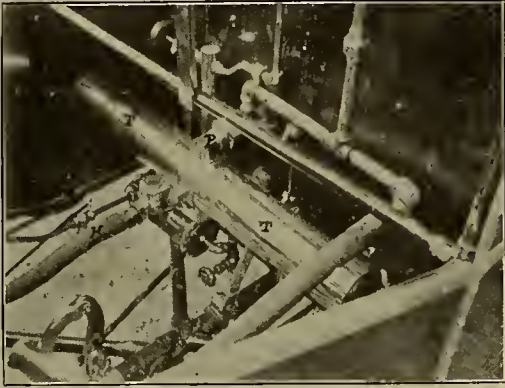


Fig. 4—"Gravity" Boiler Feed.

takes much more steam to operate it than is required to do the same work with a force pump, it has the merit of requiring no attention from the driver to keep the water level in the boiler always the same, which is the first requisite in steam production and use.

The Piper and Tinker wheels are on ball bearings. All other bearings are plain. The compensator sprocket appears to be exposed. The chain sprocket on the crank shaft has six teeth, working to 24 teeth on the compensator sprocket. The downwardly opening tube, E, Fig. 2, is the exhaust pipe, and the bottom open end of this tube, which appears to be flexible, is carried to within a few inches of the ground.

The young men who are constructing this vehicle are doing wholly original work, and will undoubtedly reach practicable solutions of many of the difficult problems of the mechanically propelled vehicle very soon. HUGH DOLNAR.

### CARE OF FILES

#### Re-Sharpener Clogged Files by Chemical Solutions - Handles Secured by Long Ferrules.

If files have been used for working on iron and are clogged with iron-filings which helps the natural wear on the file in the work of making the tool smooth and worthless instead of rough and useful, the file should be immersed for a short time in a dilute solution of sulphate of copper. The solution will completely remove the objectionable iron filings without affecting the file itself. Zinc filings can be dissolved with dilute sulphuric acid. Files which have been used in filing copper or in filing the spelter from around frame joints, may be cleaned and sharpened by dipping in dilute nitric acid. It must be understood that, before the files be immersed in the acid, as much of the coarser filings as possible be removed with a file cleaning brush, and that the files be cleaned so that there shall be no grease of any kind present to hinder the action of the acid. Grease can

be best taken from the files by treating them in a dilute caustic alkali.

The frequent breaking of file handles and the regularity with which files pull out of their handles while being used makes any scheme which will lessen these evils very acceptable to the users of files. It has been discovered that if the brass ferrules on the file handles be made from twice to three times as long as those commonly found on commercial handles, there is much less liability of the handles breaking, and that the files do not have as much tendency as commonly to pull out. The long ferrules cost more than the short ones, but the saving on account of fewer broken handles much more than balances this, while the security of the files in the handles makes the long ferrule very attractive to the workman.

### POWER OF VEHICLE ENGINES

#### Figures Indicating Unprecedented Proportions Between Dimensions and Power.

The following particulars in regard to the powering and gearing of the Stanley steam wagon, which took part in the Charles River Park contest, may be of interest to steam engineers:

Boiler shell, 14 inches diameter by 13 inches high; material, copper; No. 20 Brown and Sharpe sheet metal gauge in thickness; 306 tubes, copper, 1/2 inch diameter, 13 inches long, No. 20 B. & S. gauge; fuel, gasoline; cylinders, a pair of simple engines, 2 1/2 inch bore by 3 1/2 inch stroke, plain eccentric valve motion, plain side valves, no link, fixed cut-off at about 9-16 stroke. The speed reduction from the engine shaft to the compensating gear box is 2 1/2 to 1, 12-tooth sprocket on engine shaft, and Baldwin separable chain to a 30-tooth sprocket on the gear box. The driving wheels are 28 inches in diameter, with suspension, laminated wood-rims, and 2-inch Hartford single tube tires.

Running a mile in 2:11, the engines made 720 by 2 1/2, or 1,800 revolutions, and the number of exhaust was 7,200. The

engines made a little under 837 turns per minute. The boiler pressure was probably about 140 pounds, and as all the connections are very direct and short, it seems that the mean effective pressure on the pistons should be little short of 80 pounds. However, the combined piston area is 9.8 square inches, and the piston travel was 487 feet per minute, going something like 11-horse power nominal. This seems incredible for a boiler of the dimensions given, and it seems therefore probable that the mean effective pressure must have been much below the 80 pounds assumed.

### Cellular Acetylene Gas Generator.

An acetylene gas generator, invented by John Sharp, of Ottawa, Canada, is claimed to be a distinct advance beyond other generators. Safety, economy, convenience and freedom from odor and general control over calcium carbide are said to be insured by it. The gas is generated from small cells in which the carbide is placed. These cells are connected with water-tanks. The apparatus is so arranged that the supply of water and calcium carbide is automatically regulated. By the mere turning of a tap the whole may be shut off and the generation of the gas instantly stopped. Nor is any gas wasted, no exhaust pipe being necessary for the carrying off of surplus gas. An indicator shows which of the seven cells the gas is being produced from, so that persons occupying the room lighted can tell by simply looking at this register whether the cells are empty or not. The generator may safely be opened in the light of a lamp or candle. It is to be placed on the market as soon as arrangements can be made for its manufacture.

### Motor Vehicles in Spain.

Motor vehicles are making their way into conservative old Spain, and there are now twelve motor bicycles and four motor cars in use in Madrid. An automobile club is about to be formed in the capital, and this will publish a bi-weekly paper devoted to motorcycle topics.

### REMARKABLE GROWTH OF OUR EXPORT TRADE.

The remarkable growth in our exports of manufactures is illustrated by the following table which has been prepared by the Treasury bureau of statistics, showing the exports of leading articles of manufacture at ten-year intervals during the past thirty years. This table shows the exports of each class of manufactures whose value exceeded \$1,000,000 in the year 1898, comparing that year's exports with those of 1888, 1878 and 1868. The total export of manufactures in 1898 was more than five times that of 1868, that for 1898 being \$288,871,449, while that of 1868 was in round numbers about \$60,000,000, expressed in the depreciated currency of that date, and when reduced to the gold standard by which our manufactures are now measured would be less than \$45,000,000. In those calculations it must be borne in mind that values of nearly all articles are now less than at the earlier dates considered, so that these statements of the exports of great groups of articles, while necessarily expressed only in values, doubtless represent in 1898 a larger quantity for each dollar or million of dollars than in 1888 or 1878, and especially more than in 1868 when the values were expressed in depreciated currency.

	1868	1878	1888	1898
Iron and steel.....	\$ 8,352,466	\$16,052,709	\$17,763,034	\$70,367,527
Refined mineral oils.....	20,020,016	43,561,869	41,260,401	51,782,316
Copper and mfrs. of.....	479,488	2,329,901	3,127,798	32,180,872
Leather.....	1,414,372	8,080,030	9,583,411	21,113,630
Cotton and mfrs. of.....	2,971,054	11,438,660	13,013,189	17,024,092
Chemicals.....	2,757,732	3,414,694	5,633,972	9,441,763
Wood and mfrs. of.....	2,088,154	3,963,823	4,733,104	9,098,219
Cycles.....				6,866,529
Agricultural implements.....	673,381	2,575,198	2,645,187	7,609,732
Paraffin.....	47,395	155,998	2,168,247	6,030,292
Paper and mfrs. of.....	524,188	1,086,994	1,078,561	5,494,564
Tobacco.....	3,100,084	3,681,317	3,776,846	4,818,493
Fertilizers.....	35,404	1,208,049	1,255,028	4,359,834
Scientific instruments.....		27,929	714,514	2,770,803
Books.....	349,993	586,355	1,734,571	2,434,325
Flax and mfrs. of.....	592,617	1,202,752	1,391,216	2,557,465
Sugar and molasses.....	348,579	4,920,094	3,255,679	2,111,658
Carriages and horse cars.....	404,072	979,003	1,381,201	1,946,231
Spirits.....	1,416,121	1,149,272	871,377	1,850,353
Oils (vegetable).....	186,703	323,341	381,990	1,843,011
India rubber and mfrs. of.....	170,689	305,767	866,867	1,723,838
Clocks and watches.....	536,700	936,003	1,529,606	1,727,469
Zinc and mfrs. of.....	68,214	216,580	18,601	1,339,669
Marble and stone and mfrs. of.....		597,356	644,544	1,792,582
Gunpowder, etc.....	546,182	3,459,749	618,616	1,395,461
Stationery.....			425,091	1,005,016
Musical instruments.....	173,341	756,477	908,540	1,383,867
Glass, etc.....	609,008	869,682	881,628	1,211,014
Brass and mfrs. of.....	16,841	589,451	308,124	1,320,003
Starch.....	205,481	605,521	202,932	1,371,549
Soap.....	626,994	658,139	815,864	1,390,603
Railway cars.....		532,840	826,465	1,478,188
Paints, etc.....	131,923	239,075	492,709	1,079,518
Wool and mfrs. of.....	206,879	449,084	471,353	1,089,632



# Quick Action

May secure you the  
Columbia and Hartford Agency.

# Quick Sales

Are what you will gain thereby.

---

The best bicycles at prices but little  
more than the cost of the poorest

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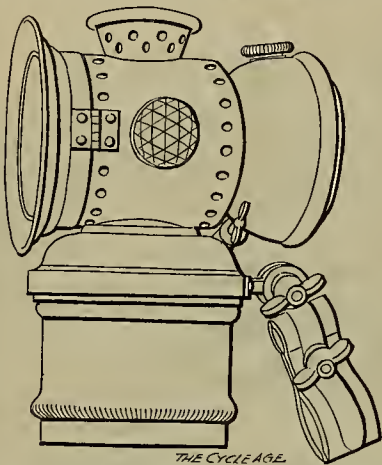
Write to or call at once upon the  
Columbia Distributing Point in  
your territory. You will be sorry  
if your competitor gets the agency

POPE MANUFACTURING CO., Hartford, Conn.

# INFORMATION FOR BUYERS

## THE WHEELER GAS LAMP.

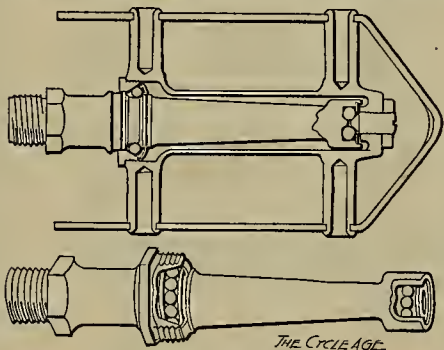
Acetylene gas will give perfect combustion and produce a pure flame only when all the moisture naturally present in it at the moment of its generation has been wholly extracted. In perfecting the many other details of acetylene lamps few makers have as yet given much attention to this requirement. The Wheeler Lamp Co., 220 Broadway, New York, however, is just placing in the market the Wheeler acetylene lamp, which it claims is the only lamp in the market that burns dry gas. The external form of the lamp is shown herewith, but details of the internal construction and especially of the method of filtering the gas, in which



much interest centers, have been withheld. The filtering of the gas removes all impurities as well as moisture, so that there is no accumulation of tar and lime to clog up the burner, thereby overcoming one of the common sources of annoyance with this class of lamps. The Wheeler lamp does not require a specially prepared charge, but burns any carbide; is simple in construction, easily controlled, and claimed to be absolutely safe. It is 5½ inches high, weighs 12 ounces, is made of brass, highly nickeled and has an aluminum reflector. It is strongly made, compact and graceful, as shown by the drawing. Lamps will be ready for shipment December 15. The makers intend to push the Wheeler lamp energetically and by offering a superior article at a moderate price make it the popular lamp of the coming season. Electrotypes of any size are now ready and will be furnished to jobbers for insertion in their catalogues.

## THE VELOX PEDALS.

In these days of cut-throat competition, when cheapness takes precedence over all other factors in bidding for trade, it is a pleasure to bring to notice an article designed to win favor strictly upon superiority of quality. The Velox pedals, made by the Velox Machine Works, 315 Dearborn street, Chicago, make no bid for favor in competition with cheap goods, but are designed as a suitable fitting for the very best class of bicycles. The body is forged from high grade steel. Axles are turned from the bar,

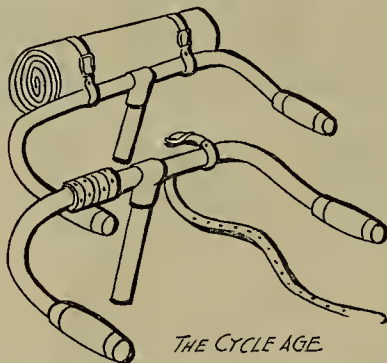


and are vertically suspended during the process of hardening, to overcome all tendency to warp and give certain and uniform results. The cups and cones are hardened by an improved process which produces superior results. To produce a finished bearing in which the line of travel of the balls will be a perfect circular path all bearing surfaces of cups, cones and axles are accurately ground in specially constructed machines designed and built by the Velox Machine Works. These machines are fitted with delicate micrometer adjustments, and grinding operations are regulated to the 1-10,000 part of an inch as to degree and size. The bearings on the axle are ground with reference to the concentricity of these bearing sur-

faces with the axis of the pedal pin. The angles of the cups and cones are made true with reference to the pitch of the threads. No balls are used that vary from the given size (5-32 inch) more than 1-10,000. The finish has been carefully carried to the same degree of excellence that marks the design and workmanship. The bearings are of the three-point type. There are two points of contact at either end of axle; at the large end a two-point cone and a one-point cup; at the smaller end the cup is contained within the end of the axle, and presents two points of contact with the balls, with one point on the adjustable cone. The large cup is threaded into the end of the barrel. By unscrewing this cup, which is finished with a hexagonal flange, the axle may be withdrawn from the body, exposing both rows of balls retained on the axle, as shown in the illustration. The cups are threaded rights and lefts, a right threaded cup screws into the right pedal, and a left threaded cup into the left. The cup is removable over the small end of the axle by taking off the retainer and dropping the balls from the race. To adjust for compensation of wear the lock-nut on the other end of the barrel is loosened and the threaded cone turned in far enough to take up lateral motion of the axle. The construction of the Velox pedal provides a ready means of lubrication with the elimination of oil holes, spring covers and other complications, it being strongly recommended that the axle be removed from the body for the application of a thin oil direct to the bearings. A groove around the axle, opposite to and concentric with the cup, is filled with vaseline or other grease, acting as an efficient barrier to the entrance of dust or grit, besides eliminating the sliding contact of two surfaces, and materially simplifying the construction. The company reports a very fair demand for pedals of this quality through the central and eastern states; and has already booked sufficient orders to keep it busy throughout the winter.

## PHOENIX BICYCLE LUGGAGE CARRIER.

Experience has taught most cyclists who venture beyond the limits of their own county a wheel that one of the most convenient ways of carrying a small bundle on

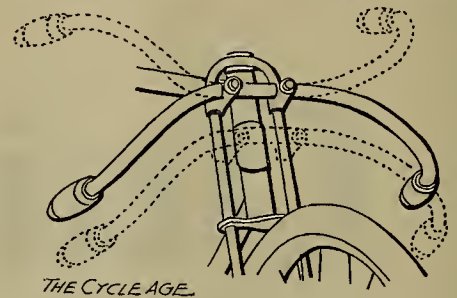


a bicycle is by means of straps buckled around both bundle and handle bars. But ordinary straps slip around the highly nickeled metal and allow the package to fall down against the head of the machine or to slip over to one side with the jolting of the machine. The Phoenix carrier made by N. H. Benjamin & Co., of Phoenixville, Pa., has a steel spring clasp riveted to each strap near the buckle to clamp around the bar and prevent slipping. These can be readily snapped on or removed. When there is no bundle to carry the straps can be wound around the bar, as shown in one of the accompanying cuts, and used as supplementary grips. The springs are of tempered steel, nickel plated and the buckles are also nickeled. Straps are of very strong and finely finished russet leather, 26 inches long. The straps complete with buckle and clasp, weigh 1½ ounces per pair and are neatly packed in a small box. More than a score of the Philadelphia jobbers carry them in stock, and they are handled by leading jobbers throughout the country.

## THE LYNDBURST ADJUSTABLE BAR.

Prices of the new Lyndhurst models are announced by McKee & Harrington, 175 Grand street, New York, to be \$50 for the standard road machines and \$60 for the racer. A prominent new feature in their construction is the patented Lyndhurst handle bar which is reversible and is adjustable up and down on the well-known triple front forks which have so long been a distinguishing characteristic of the Lyndhurst bicycles. Regarding this new bar, McKee & Harrington state that it is positive in action and rigid, and the steering power is applied

through it directly to the fork sides. Through it a wide range of adjustment and a well forward position of the hands without much curve of the tube are secured. As a bar in which stiffness and easy riding qualities are combined in the highest degree, this is claimed to be unsurpassed. The clamping mechanism is contained in the two short studs or braces that stand out at right angles from the fork sides, receiving the middle portion of the bar transversely, and is operated by a wrench applied to the nuts shown. Concerning the advantages arising from the use of the triple fork stem, the manufacturers say that the double crown enables them to lock the stem of the fork crown, so that the stress localizes at the top of the triple fork instead of at the lower end, insuring greater rigidity and power. The stresses caused by rough roads are carried in a direct line to the top of the crown, being distributed throughout the entire forks and frame. In turning corners or



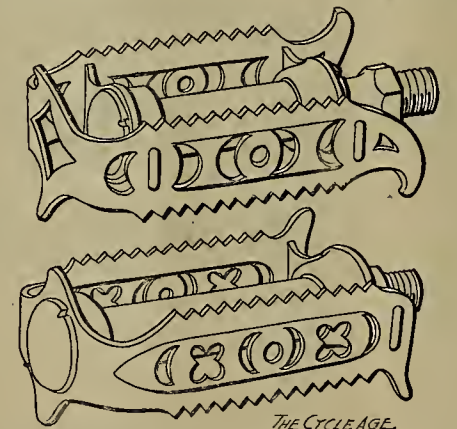
under severe twisting strains caused by ruts, great lateral stiffness is presented in opposition, and the wheels are kept in better alignment. With the rectangular truss formed by the forside extensions and the fork crown, much of the side play present in all drawn tubing bicycles is overcome by reason of the stiffening of the head and fork sides.

## WHIRLWIND PUMPS.

Four styles of Whirlwind tire pumps are catalogued in a little folder that is being distributed by the Lockerby-Washburn Mfg. Co., 913 Nicollet avenue, Minneapolis, Minn. Three of these are foot pumps and the fourth has a 22-inch cylinder and a heavy metal base to be screwed to the floor. Most of the Whirlwind pumps are made of seamless steel tubing, nickel plated, with black enameled handle. The tops are not pressed. Another style of inflater catalogued is a combined pump and tool case designed to hang from the top tube of the bicycle frame by means of spring clips. The Lockerby-Washburn company also makes the Universal Swivel K and the Monitor Swivel pump connections, the latter of which was described and illustrated in the September 15 issue of Cycle Age. All these goods are guaranteed of good quality. No prices are quoted, but will be furnished on application. Electrotypes for use in jobbing catalogues are ready for distribution.

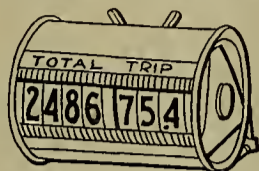
## U. S. CLYCLOMETERS AND PEDALS.

Herewith are shown two of the four models of pedals which the U. S. Mfg. Co., of Fond du Lac, Wis., is now putting in the



market for the first time. These are built the rear wheel can be readily removed without well tested principles and are guaranteed to be durable, serviceable, easy running and slightly. These two models differ in construction principally in width between ball races, the barrel and pin in the lower one being prolonged to meet the side plate at the end of the pedal, while the cone at the inner end of the pin is closer to the crank. The strength and attractive appearance are

apparent in the drawings. The U. S. Trip cyclometer registers the total mileage for the season and independently registers each trip. The figures are large and plain enough to be easily read from the saddle. Improvements in this instrument for '99 make it possible to set the single trip register back to zero without losing the fractions to the total. A new spoke stud has also been designed which will not move or turn on the spoke and damage the instrument or cause

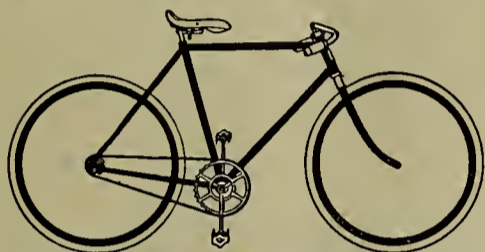


THE CYCLE AGE

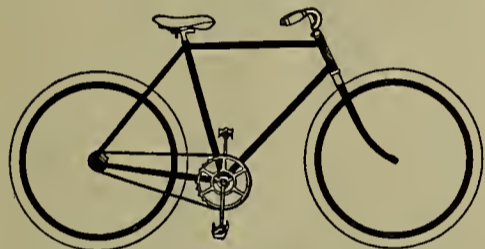
the loss of mileage. These cyclometers are made in sizes for from 20 to 30-inch wheels and are finished both in antique copper and polished nickel. Gold and silver plating are also furnished.

**WOLFF & CO.'S NEW MODELS.**

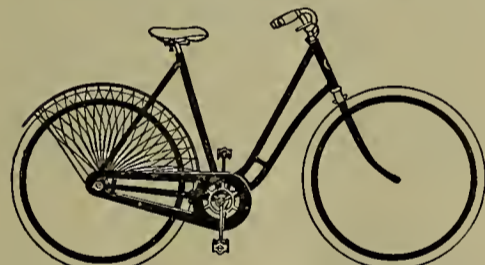
One of the handsomest lines for 1899 which has thus far been seen is that of R. H. Wolff & Company, Limited. The product of this concern has always been noted for its



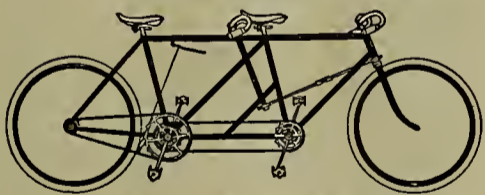
Model 29—Racer; Price, \$75.



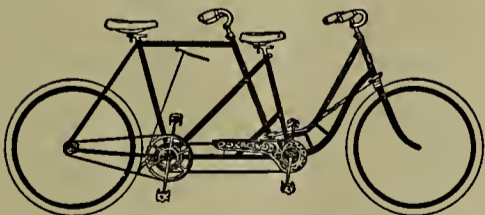
Model 30—Men's Roadster; Price, \$60.



Model 31—Women's Roadster; Price, \$60.



Men's Tandem—Price, \$100.



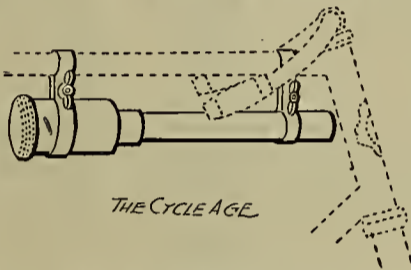
Combination Tandem—Price, \$100.

general excellence. Being one of the largest manufacturers of crucible steel and steel wire in America, the Wolff people are naturally past masters in the art of manipulating the article which forms a large part of their enormous product. Buyers of Wolff-American cycles not only have the satisfaction of knowing that they are getting goods built by a concern of more than a quarter of a century standing in the business world, and of the highest financial and commercial reputation, but they also have the added assurance that all that is best in steel, and the working of same, is embodied in their purchases. The Wolff-American is not and never can be a low priced wheel so long as its extreme high quality and excellent mechanical devices are retained. Price is subservient to quality, and quality with R. H.

Wolff & Company does not imply material alone, but workmen, methods employed, attention to detail, finish and equipment. The line is built to sell to that class of trade which wants the best at a moderate advance in the price of machines of inferior quality. Representative dealers handle them and continue the agency from year to year, which indicates that the line must be satisfactory. The many good features the Wolff-American line offers will be set forth in the 1899 catalogue, which will be ready December 1, and will be mailed on request. The finish of the racer is strikingly new and the handsomest finish ever applied to a bicycle. It is a fiery, translucent enamel of ruby tint, applied over nickel plate, and is called "salamander" by the Wolff people. It can also be procured on the road model at a slight additional cost.

**A FULL LINE OF PUMPS.**

The new '99 catalogue of the Heath-Quimby Co., of Minneapolis, Minn., has just been issued. It is a small affair, but it presents a most complete line of tire inflating apparatuses, including the new combination pump and tool case, here shown, which has room enough in one end to carry the necessary tools and tire repair articles, which do not have to be removed when the pump is in use; the Cachol parcel carrier, the Diamond cycle stand, the A. O. A. spring wire adjustable wall stand and the Little Giant repair stand recently described in this paper. The Heath-Quimby Co. also makes a specialty of doing punching and forming for others, from dies furnished or dies which the company will make to order. One of the latest productions of this concern is a dupli-



THE CYCLE AGE

cate bicycle check, one part of which is permanently attached to the bicycle while a smaller metal check bearing the same number is removed by the owner when he leaves his machine. Should anyone attempt to steal the bicycle others would notice at once that the duplicate check was missing.

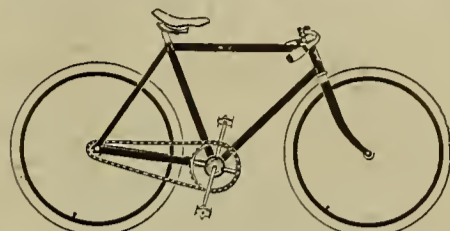
**THE '99 MANSON CYCLES.**

The Mason Cycle Co., 153 West Jackson street, Chicago, has its new models for next season out. They include a line of 28-inch wheel machines at \$50 and a 30-inch wheel model, No. 33, at \$55. These are all of three crown frame design, of which the Manson company was the originator. A great reduction in the weight of the three-crown construction with eccentric hanger has been effected in Model 33, which weighs only 21½ pounds with racing equipment and 23½ pounds with heavy road fittings. The specifications are as follows: Main frame, 1⅛ seamless tubing; lower rear forks, 1-inch tapered to ¾-inch; upper rear stays, ¾-inch tapered to ⅝-inch; front forks, 1-inch tapered to ⅝-inch. The three fork principle is used with drop forged connections, octagon pattern. The front forks and upper and lower rear stays are octagon D tube instead of the half round. These forks are heavily nicked on copper. The wheel base is 44 inches, with a 2¼-inch drop to the hanger, which is eccentric, allowing a further drop to 3 or 3¼ inches as desired. The hubs are dust proof. Sunbeam spokes are used, 32 front and 36 rear, in one piece rock elm rims, first quality. An expander is used for locking the handle bar. The cranks and shaft are of the two-piece pattern with the left crank and shaft in one drop forged piece fastened to the right crank by a slotted tapered joint under the sprocket nut. To detach, unscrew the bolt through the arm of the sprocket into the lug on the right hand crank and a few turns of the crank will cause the entire hanger to come apart. The bearings can be cleaned and reassembled without disturbing the adjustment. The sprockets furnished are 24, 28 or 30 tooth front and 8, 9 or 10 tooth rear, fitted with a 3-16 Baldwin detachable chain. The front sprocket is of pretty design, consisting of eight diamonds arranged on the cantilever principle, and is struck from armor plate steel. Octagon shaped cranks are fitted. The bearings are contained in an eccentric sleeve, which never having been heated, holds the cups in a perfectly parallel position to each other. The eccentric sleeve can be removed intact from the bracket by simply loosening a screw. The cups and cones throughout are turned from tool steel—oil hardened, then ground and polished perfectly accurate. The bearings are 3-point contact; all fittings are flush and the head is one-piece, heavily reinforced. The tread is exactly 4¼ inches. Machines will be furnished in three heights of frames—namely,

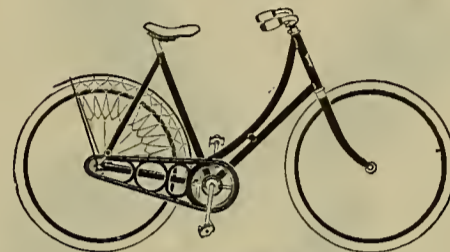
21, 23 and 25 inches. Finish is highly polished nickel and violet enamel, which includes grips and rims, all striped.

**TRIBUNE MODELS FOR '99.**

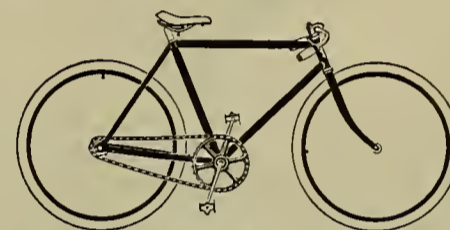
Following are outline drawings of the seven single models which, together with a double diamond and combination tandem and a trip-



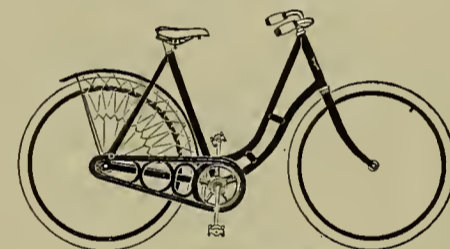
Model 40—Weight, 23½ lbs. Price, \$40.



Model 41—Price, \$40.



Model 42—Weight, 22½ lbs. Price, \$50.



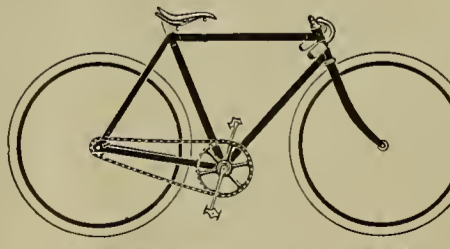
Model 43—Price, \$50.



Model 44—Weight, 23½ lbs. Price, \$50.



Model 450—Weight, 19 lbs. Price, \$75.



Model 460—Weight, 21 lbs. Price \$75.

let model, comprise the full line of Tribune bicycles to be marketed this season by the Black Mfg. Co. of Erie, Pa. Specifications of these were published in Cycle Age for November 10. Models 44 and 460 are fitted with 30-inch wheels. The regular finish of the whole line is robin's egg blue, ornamented, with nickel trimmings. The combination tandem is convertible, having a re-

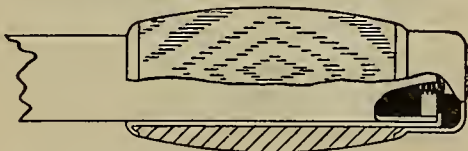
movable top bar in front. Height of frame is 24 inches, with 20½ inches in front when the bar is out.

#### CONSTRUCTION OF STEARNS BICYCLES.

In a previous issue of this paper the 1899 patterns of bicycles manufactured by E. C. Stearns & Company of Syracuse were described. It is worth noting that this company realizes the advantages of light-weight construction, as shown by the specified weight of only 21½ pounds for the leading standard pattern diamond frame, the Stearns Special. In the models which are \$10 cheaper, the weight is increased to 24 pounds, thus showing the only correct relations between price and weight that can be maintained when the durability of the various models shall be kept up to about the same standard. It is the removal of 2½ pounds of material which costs the money, if it is done in such a manner as not to impair strength and durability. The return for



the additional cost comes to the rider in the form of increased elegance of contours and that ever-present feeling of luxuriousness that is the charm and comfort of light-weight construction. That the principle of saving weight only when it can be done without encroaching on the proper limits of safety is carried out consistently, is shown by the weight of the Stearns Ladies' Special. This model weighs 23½ pounds, although the firm of course is perfectly well aware that lightness is quite as desirable in ladies' bicycles as in men's. It is simply a mechanical impossibility to make a drop frame of the required strength as light as a diamond frame, to say nothing of the weight of guards. This is the penalty that lady cyclists must pay for wearing skirts; or else they must renounce the safety that goes with a well-constructed bicycle. The Stearns Racer weighs only 20 pounds, and in this particular the firm is acceding to the almost universal demand of racing men for light weight, while conforming also to better founded ideas by effecting the saving in weight chiefly in the accessories and not in the frame in which none of the requisite rigidity has been sacrificed. Among new details of construction in Stearns models the firm in its pocket-size advance catalogue calls attention to those shown in the accompanying illustrations. The engravings used are of the same style as herewith shown, a style which has been almost monopolized by the Stearns company and which is especially well adapted to reach the understanding of the average rider. The first engraving shows the method of locking the crank axle bearings, a point on which many good companies have gone wrong in the past. The crank axle and crank axle cones are in one piece, the cones being turned up on the axle, the center of which is left just soft enough so that it will not



twist; the cones are deeply hardened and the ends of the axle over which the cranks fit have the temper drawn to a point where they will not break, yet will not twist. Each axle is tested at one hundred pounds. The ball cups screw into the crank hanger, and are held firmly in place by a binder bolt and nut which passes through a forged lug underneath the crank hanger on each side. In each ball cup is a small screw which may be taken out and the oil introduced directly to the balls through the screw hole; the screw is then replaced and entirely fills up the hole. Three-eighths-inch balls are used in all crank axle bearings. In the chains, which are all made in the company's own completely equipped chain plant, and of unusually attractive appearance and irreplaceable strength, the usual form of chain bolt and nut has been entirely discarded and in its place is used a square head bolt held rigidly in position by a most effective spring fastening device. In the new handle-bar grip a steel sleeve, outwardly flanged at its inner end to provide a

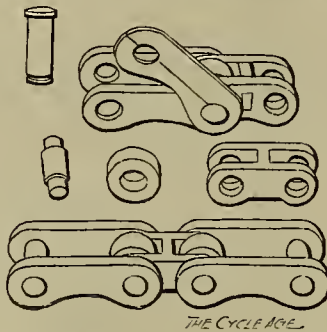
bearing for the inner end of the grip center, and inwardly flanged at its outer end to provide a bearing against the end of the handle-bar, slips over the end of the handle-bar. Encircling this sleeve is a shell of buckskin fiber firmly held in place by a steel cap at the outer end. This steel cap is fastened to the handlebar by an oval head machine screw which screws into a metallic plug pinned and brazed in the end of the



bar. The outer flange of the sleeve is notched, and this notch fits into a corresponding one in the end of the handlebar, thus effectually preventing the sleeve from turning on the bar. The device provides a perfectly firm grip without the use of cement to hold it in place. The parts are interchangeable and renewable. Anyone can take it off or put it on. When specially ordered the Stearns company fits the Morrow Automatic coaster and brake to its \$50 models at an extra cost of \$10.

#### THAMES NICKEL STEEL CHAINS.

Among the first to recognize the value of nickel steel in bicycle chains was the Thames Chain & Stamping Company of Norwich, Conn., who in 1895 and 1896 made tests of this material with the result that they adopted it for their best chains in 1897. They make four styles of this unusually light and strong and highly finished nickel steel chain and four styles of case-hardened chains of standard quality and made with properly hardened blocks. Each style is made in different widths. In place of bolt and nut the company offers to equip any of its patterns with the special connection device which is shown in the accompanying illustration and which requires no tools to operate. This consists of a special rivet, headed on one end and grooved on the other, and a spring pivoted to one of the outside links of the connection link. The rivet is slipped in position like the ordinary bolt and having no thread is held in



place by the spring, which catches in the groove. To disconnect the chain, the spring, which is split at one end, is merely pressed apart, turned to one side and the rivet is withdrawn. The spring is the same shape as the outer link and is made of special steel tempered so that it cannot be bent out of shape or broken. The special roller block chain which is manufactured by this company is also shown in the illustration. It is made under Linnell's American and British patents, and has been tested at Cornell University, showing under a tension of 600 pounds an efficiency of 98.6 percent. It has also been used extensively during 1898, giving excellent satisfaction. It can be constructed more accurately than an ordinary block chain, and is stronger and will remain true to pitch longer, says the company. The center block is rigid, preventing side play, and keeping the rollers free to work. The principal friction comes on the rolls and rivets, both of which are hardened. It has found that the roller chain gives the best satisfaction when lubricated with machine oil. The oil should be allowed to remain on the rivets and the outside of the chain wiped clean.

#### THE RARITAN TIRE.

The New Brunswick Rubber Company has something new to offer every year. Its new tire for '99 is the "Raritan." A great demand has sprung up for a good, service-

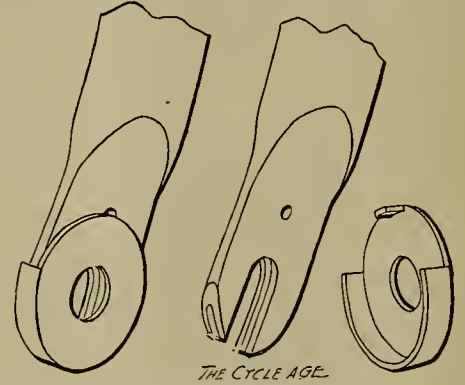


able, guaranteed tire at a price which shall not seem too much out of proportion with the prevailing bicycle prices. When people paid \$125 for a machine they did not object to pay \$16 for a pair of tires. But people no

longer pay \$125 for their mounts; and tires, to appeal to prevailing ideas, had to come down somewhat in price. And yet, never before were riders so insistent upon good riding and wearing qualities, and so capable of detecting their absence. To meet this universal demand for a tire that should be first-class and yet entirely popular in price, the New Brunswick Company has introduced this year the "Raritan." In quality of rubber and fabric and in workmanship it is an excellent tire. It carries a guarantee that covers 60 days' use.

#### FRONT FORK END DEVICE.

The object of the Webb fork end reinforcing disk for which patents have recently been allowed is to permit the instant and easy removal of the front wheel from the forks of a bicycle without springing the fork sides over the ends of the axle. Not only does it accomplish this but it takes the place of the usual axle nut washer and acts as a reinforcement to the fork ends. While riders will greatly appreciate the facility



with which the front wheel may be removed and replaced, leaving the nuts on the axle, the manufacturers should be pleased to use so simple and inexpensive a device which strengthens the fork ends, prevents broken fork sides and springing out of true, which latter has been a common occurrence with the crude methods universally used heretofore. As shown by the illustrations, the Webb disk is a steel washer machined to fit the fork end and leaving a flange extending about half way around its outer circumference. The fork ends are punched with a slot and a small hole drilled or punched as shown. A projection at the upper end of the disk engages the small hole in the fork end. By loosening the axle nuts a few turns the projection on the disk is released from the fork side and the front wheel slips out, leaving the disks and axle nuts on the shaft. And the wheel can be replaced as quickly and as easily as it has been removed. The inventor, George S. Webb, of Aurora, Ill., has given an exclusive license to Modern Cycle Co., 313 First National Bank building, of Chicago, to manufacture and sell this device, and this company is now preparing to turn them out in large quantities for large and small bicycle manufacturers.

#### FEATURES OF NORMAN BICYCLES.

On the subject of weight of bicycles, which has been discussed to some extent of late, the Norman Wheel Co., 2120 West Susquehanna avenue, Philadelphia, Pa., makes some remarks explanatory of the apparently unnecessary heft of machines which are applicable to the whole trade. "It has been demonstrated," they say, "that one pound of bicycle will carry ten pounds of rider for all ordinary work and last for years, where the rider understands and appreciates the high class of material and mechanism in a really first class machine. But, as the finest machines are liable to the abuse of unmechanical or ignorant people, all bicycles must necessarily be made of considerable greater weight and strength than would be required if proper usage were insured, and hence while we are advocates of light weights our inclination to build even lighter than we now do, is checked by the lack of appreciation such delicate machines would generally receive." The Norman company has been engaged in manufacturing bicycles since 1892, and during these years has made only a special, high class of bicycles for retail trade. It owns its own factory and warehouse and has done a conservative but growing business. The New Norman is the only regular machine produced. The principal features of construction are: Flush joints, two-piece crank axle with invisible connections, 4¼-inch tread, cantilever sprocket wheels made perfectly flat and reversible, oval fork crown, and patent chain adjustment entirely covering the slot in rear fork ends. Seamless taper gauge tubing is used in the smallest and lightest machines, which are made up from 22 gauge tubing of 1 inch diameter for top tube, 1½-inch for bottom tube and seat mast, 1¾-inch head and 5/8-inch rear stays. The heavier machines are made of 22 gauge 1¼-inch tubing for the lower reach and seat mast, 1-1/8-inch for top tube, 1½-inch for head, and ¾-inch stays. The lower rear stays of all machines are made

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This means that your customers are  
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AUTOMATIC COASTER AND BRAKE

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over this device. It will be a great seller.  
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it. Nothing but a complete line will do. He must  
have something for everybody—anybody. He must  
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plate—a sign of quality. The prices you are after  
can be had by writing us to-day.

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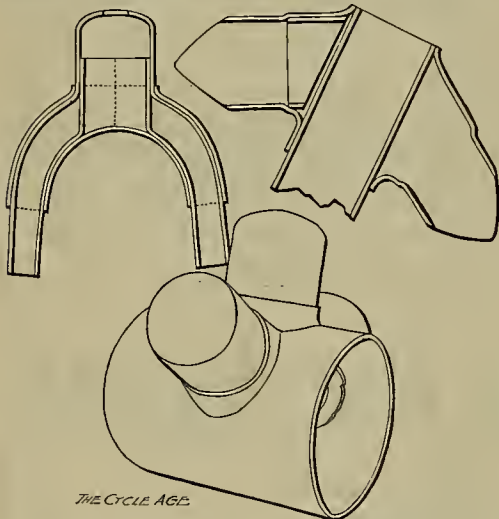
MILWAUKEE, WIS.

Mention The Cycle Age

of flat oval tubing tapered toward the rear end. The hubs are of the company's own design, first introduced in '97. They are of the usual barrel pattern turned from bar steel, but are unusually short, causing only  $3\frac{1}{2}$  inches spread of rear and  $2\frac{3}{4}$  inches spread of front forks. This is made possible by placing all the cone ends, locking washers and nuts usually found outside of the flanges, inside of the hub, permitting the flanges to run extremely close to the forks. The flanges are left somewhat thicker than usual and bored radially to take straight tangent spokes. The bearings are disc adjusting, the cones being turned integral with a steel sleeve, which forms a rigid connection between them. The axle is removable without disturbing the adjustment, so that out interfering with the adjustment of the chain or any of the bearings. Up to '96 the company used the two-point bearing system; then, responding to the popular demand, changed to the three-point system. But after one season's experience with this type, the makers felt convinced of the superior running and wearing qualities of the former and reverted to the use of the two-point type. By having the front ends of the rear forks and the back end of the lower front bar of the frame join the crank hanger 1 inch below its center, the ends of these tubes apparently connect and form a cradle for suspending the crank hanger. By this construction, the drop in all frames is made to appear 1 inch greater than it actually is, so that an actual drop of  $2\frac{1}{2}$  or 3 inches appears to be  $3\frac{1}{2}$  or 4 inches in all, without further lowering the crank hanger or reducing the clearance between the pedals and the ground. The Watson Automatic seat post forms part of the regular equipment of the Norman line.

#### THE SMITH CO.'S LATEST DESIGNS.

In the accompanying illustration is shown the interesting construction of the crown, seat cluster and crank hanger fittings designed by C. J. Smith & Sons Co., of Milwaukee, especially for three-crown frames. These fittings are now being made in quan-



tity and the crown, which seems as well suited for any other as for three-crown design, is a remarkable specimen of sheet steel construction, being unusually light and strong where strength is required, besides providing for ample brazing surface and accurate fit in fork sides and fork stem.

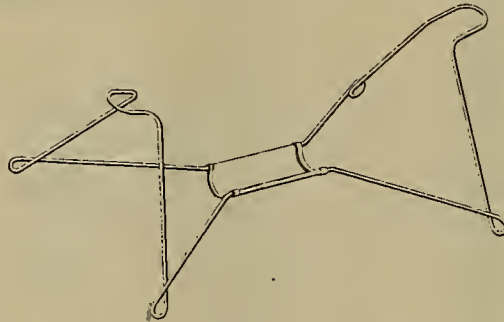
#### HUDSON AND LENAWEЕ MODELS.

The Bean-Chamberlin Mfg. Co. of Hudson, Mich., has issued a second edition of its advance catalogue for 1899, describing five Hudson models, three Lenawee models and a new "competition killer" baptized The Noxall and designed especially for agents who carry the company's full line. The three crown frame design which the company was among the first to adopt is again used in the Hudson patterns for men and one of the patterns for women, and an improved internal expander of slightly appearance is employed for seat post fastening. For securing the handlebar stem the external clamp is considered preferable and is therefore used. Model 30 which is equipped with 30-inch wheels is the most expensive, commanding a retail price of \$60, from which top notch the scale runs down to \$40 for one of the Lenawees and a "competition price" for the Noxall. Flush joints are used in all the machines and the crank shaft mechanism in models 30, 40, 41, 28 and 29 is of the one-piece style made under Fauber patents but of the company's special design. The hubs are turned from the bar and provided with tool steel cups, ball retainers, dust caps and a special oiling device. The Sanger handlebar is specified for models 30, 40 and 41.

#### HAUBS' SELF-ACCOMMODATING STAND.

"A bicycle stand comprising in its construction a resilient base with a central raised wheel-rest, and resilient supporting standards at each end of the base provided

with wheel-retaining loops." This is the first of four claims allowed in the patent granted on October 18 to George C. Haubs of St. Louis, Mo., for the stand shown in the accompanying illustration. It is the principal characteristic of the stand that it will automatically accommodate itself to wheels of various sizes, such as 26, 28 or 30 inches, and will support them at three points against lateral movement. Ordinarily the receiver or trough is not depressed to the floor by the weight of the machine supported thereby, and therefore the only resistance to a sliding movement over the floor



is the slight friction of the rounded surfaces of the feet. This friction is in practice so slight that the machine may be easily moved about for exhibition purposes or for changing its location, the stand following the machine without turning up or over with the wheel resting therein. Having obtained his patent Mr. Haubs announces that he will prosecute infringers to the full extent of the law and will collect damage and royalty from those who manufactured the stand while his patent was pending.

#### ANDRAE'S NEW HUB.

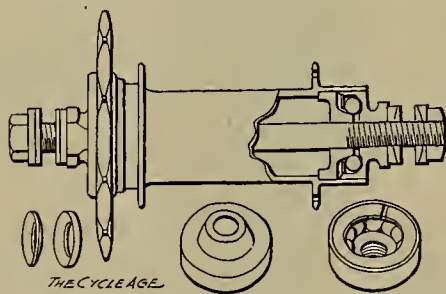
F. T. Andrae, superintendent of the Andrae factory at Milwaukee, has perfected a new direct spoke hub, which will be used exclusively on the Andrae high grade roadsters and racers. The hub is said to possess a new feature which is an improvement on the ordinary direct spoke hub. It will be thoroughly covered by patents. John C. Schmidtbauer has returned from a two months' trip among the principal Andrae agents between Chicago and Boston. He reports that present indications point to 1899 as a very promising year for Andraes in the east. In the Andrae announcement published several weeks ago, the prices of the Andrae track and road racers were made to read \$75. This was a mistake, as these two models will list at \$60.

#### TRADE IN CLAU BAR GROWS.

The Claus Handle Bar Mfg. Co., Milwaukee, Wis., makers of the Claus Adjustable bar, has doubled its force of workmen and the plant is now running to the full capacity of the machinery. The company will endeavor to keep up with orders throughout the entire season, and, if necessary, will increase the capacity of the factory so that shipments can be made on receipt of order. The Claus bar is being received favorably wherever presented and will be used exclusively on several lines of high grade bicycles in '99.

#### TUGWELL CO.'S SCIENTIFIC HUB.

The Tugwell Manufacturing Company, 32 South Market street, Chicago, make the hub shown in the accompanying illustration, which has several well-considered features to recommend it. The cones revolve with the hub instead of the cups and as the circumference of the ball path on the cone is only one-third of the circumference of the



ball path on the cups this arrangement is believed among machinists to have the effect of reducing the distance of ball travel to one-third, thereby reducing the friction proportionately. The hub shell is turned from a solid bar and cups and cones are turned from tool steel and oil-tempered. The cones are ground after being placed in the hub to insure them running true with each other. Axles are made of best Bessemer steel with threads cut in lathe on centers so as to make the threads true with each other. A feature which is not plainly shown in the illustration is the reversible sprocket. Being slightly dished, the sprocket may by reversing it be made available for either  $1\frac{1}{2}$  or  $1\frac{3}{8}$  inch

chain line. This covers the principal widths of tread used on modern bicycles. The interesting claim is made for this hub that its construction, having the cone cavity turned outwardly, creates a tendency for dust to work out instead of in, thereby making the hub practically dust proof.

#### MATTHEW STRAUSS RETIRES.

The Strauss-Hanna Cycle Material Co., of Buffalo, has been succeeded by the Hanna Cycle Material Co., which will conduct the business the same in the future as in the past, at the same location, 120 East Genesee street. Matthew Strauss has retired from the business, having sold out his rights, titles and interests therein. The successors are now preparing their annual advance sheet of '99 fittings, and their annual bargain sheet, which will be mailed to customers within a few days. This will be shortly followed by the '99 illustrated catalogue.

#### SOLE MAKERS OF BAND REPAIR TOOL.

The Call repair tool mentioned among the Recent Patents in the last issue of Cycle Age is manufactured in the United States solely by the J. H. Burt Mfg. Co. of Springfield, Mass., which has already closed contracts for 1,000 gross, and states that the outlook for the tool is more than bright. Anyone using clasps or any device on the side of a similar tool for throwing off the bands will be considered an infringer of the patent. The Burt company also makes the Ridgway adjustable handle bar.

#### STATE AGENTS WANTED.

The American Trading Company, 100 William street, New York city, are desirous of appointing one good house in each state, except Illinois and Indiana, to handle their cycle specialties, hard cement and liquid gutta-percha. Both articles possess superior merit. The trade in Indiana will be supplied by H. T. Harsey & Co., of Indianapolis, and the trade in Illinois by Hibbard, Spencer, Bartlett & Co., of Chicago.

#### TRADE NOTES.

L. H. Porter, who has been cycle and good roads editor of the L. A. W. Bulletin, has severed his connection with that paper and is now open for engagement. He has been active in cycling matters from their inception in this country as agent, dealer, manufacturer, correspondent, editor and League worker, and is author of two successful books, "Cycling for Health and Pleasure," and "Wheels and Wheeling." He may be addressed at Newtonville, Mass.

The Peerless Mfg. Co. has arranged with Messrs. Geo. F. Kehew & Co., 129 Pearl street, Boston, to represent them in New England. Mr. Kehew has associated with him Mr. Clark. Both are well known to the trade and the new arrangement should be advantageous to all concerned. The store on Pearl street will be Peerless headquarters and the distributing point for the New England states.

The Olive Wheel Co., of Syracuse, N. Y., has just secured an order from Australia for 1,000 bicycles of '99 pattern, 200 of which will be delivered at once. The force in the plant will soon be increased to 250 workmen, and the company reports a decidedly encouraging outlook for a successful season.

Fred J. Titus, who won many pursuit races and lowered a number of unpaired records with the Ramsey swinging pedals, has gone on the road to represent them to the trade for a five weeks' trip, after which he will go to Europe to further the interests of the Ramsey Swinging Pedal Co. abroad.

The I. W. Bollinger Co., of Chicago, iron and steel factors and manufacturers' agents, announce that after December 1 it will have offices in the Monadnock building, Jackson and Dearborn streets, where it will be more centrally located and easier of access to the trade.

A. R. MacDonald, formerly with the Wood Mfg. Co., will soon start on the road for the E. G. Eager Co., placing sundries and Elfin and Viking juvenile bicycles. The Eager company recently purchased the sole right to handle "Salamander," W. T. Nettleton's chain lubricant.

George B. Colton, of the Colton Cycle Company, recently secured an order for 2,000 machines from one Chicago dealer for early delivery.

American Cycle Company, now of Akron, O., has opened a Chicago Office at room 605, 56 Fifth avenue in charge of John B. Perrine.

# The Barnes Cycle Company

## HERE THEY ARE:

“If the river of life freezes over, put on skates;” in other words, meet your competitor by over-matching any line that he can produce.



Mention The Cycle Age

Model 20.....Barnes Special.....	\$ 50.00
Model 23.....Barnes Superba .....	50.00
Model 21.....Barnes Road Racer.....	65.00
Model 22.....Barnes Track Racer.....	65.00
Model 29.....Barnes Road Racer, 30-inch.....	65.00
Model 27.....Barnes Chainless Special.....	75.00
Model 28.....Barnes Chainless Superba.....	75.00
Model 24.....Barnes Diamond Tandem.....	100.00
Model 25.....Barnes Combination Tandem.....	100.00

Register your application before it is too late  
Our salesmen are out, and will call if you  
will write us. ❀ ❀ ❀ ❀ ❀

**The Barnes Cycle Company,**  
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1899 Models  
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Mannesmann Tubing

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**STERLING**

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**Sterling Cycle Works, ❀ Kenosha, Wis.**

# THE PASTIME AND SPORT

### An Anti-Potter Ticket.

Philadelphia, Nov. 28.—An important meeting was held here yesterday to lay pipes for the next presidential battle. Elliott, Keenan, Gideon and other Pennsylvania managers were present. As a result of the conclave the probabilities now are: Keenan for president, a Massachusetts and a western man to get the vice-presidencies, New Jersey the treasurership, and the west the racing board chairmanship. The feeling is general that Potter, realizing that his chances are small, will also swing into line. Elliott

while Lamberjack ran third in the latter and second by inches to Wachkewitch in the three-vestas scratch event. Lamberjack and Meyers won the 1½-vestas tandem heats against time and also won the 4½-vestas pursuit race.

### Electric Tandem of American Make.

John Lawson, the "Terrible Swede," claims to have perfected an electric tandem capable of running forty miles an hour. The machine is an ordinary triplet equipped with thirty-six batteries and a motor of one and one-half-horse power,

### Will Be a Memorable Winter.

New York City, Nov. 28.—Etienne Stephane, the veteran French plugger, and Ulysses Monachon, the Swiss rider, arrived by the St. Paul last Saturday to compete in the six-day race, which begins at Madison Square Garden next Sunday night. These will complete the foreign brigade, whose other members are Frederick, the Swiss; Joyeux, the Parisian; Cistac, the Australian, and Hale, the Irishman. The entire outfit, with Edouard Taylore and Fournier and Ricard, the French petroleum tandem pacing team,

LAYING PRESIDENTIAL PIPES IN PHILADELPHIA



JACQUELIN'S LIGHT TRICYCLE CARRIES HIM TO VICTORY IN PARIS



OUTLAWS CALLED TO ARMS



MOTT'S CHAMPION JOINS THE A.R.C. UNION



LAMBERJACK AND MEYERS WIN IN MOSCOW



LINTON, FRESH FROM AMERICA DEFEATED BY PROTIN

and Gideon assert that Keenan will have the solid support of the Massachusetts and Pennsylvania delegations at Providence. New Jersey will probably support that ticket which elevates the man of her choice, Kireker, to the highest position. A combined west, with Massachusetts and Pennsylvania, could, however, beat a New York ticket supported by New Jersey and the New England states.

### Lamberjack and Meyers in Russia.

A big race meet was held in Moscow, Russia, November 13 and 15. Lamberjack of France and Meyers of Germany competed with the Russians, Meyers winning the two-vestas scratch race by three lengths and running second to Wachkewitch in the 1,000-meters scratch race,

weighing in all twenty pounds. The new machine has been tried on the Chicago boulevards with success. Lawson asserts it will run at the rate of forty miles an hour for three hours without recharging.

### An Index to Development.

As speed is recognized as an index of the quality of a bicycle, a comparison of the latest track records with those of 1884 may serve to show at a glance the rapid development of the machine. The times of fourteen years ago were of course made on the "ordinary"

	Times in '84.	Times in '98.
1/4 mile .. .. .	:35 2-5	:22 2-5
1 mile .. .. .	2:41 2-5	1:31 4-5
5 miles .. .. .	14:18	8:22 4-5
10 miles .. .. .	29:30 2-5	17:11 2-5
25 miles .. .. .	1:10:41 2-5	44:18 4-5
50 miles .. .. .	2:48:55	1:33:29 3-5
100 miles .. .. .	5:50:05 2-5	3:11:01 1-5

left Saturday night for a week's practice at the twelve-lap indoor track at Troy, built by Harry Elkes' father. These races will open an indoor racing season which promises to be memorable. Most of the crackajacks with the exception of Bald will be on hand, and there will be amateur and professional championships at one mile. Elkes and Taylore are to meet in an hour paced race, and Tom and Nat Butler and Watson Coleman, who have been taken from the blacklist by a mail vote of the A. R. C. U., under whose sanction the races will be run, will also compete and formally join the outlaws. A feature of the winter's racing will be middle distance matches with motor pacing.

Brady and Powers have a project on foot to secure a suspension of the Illinois

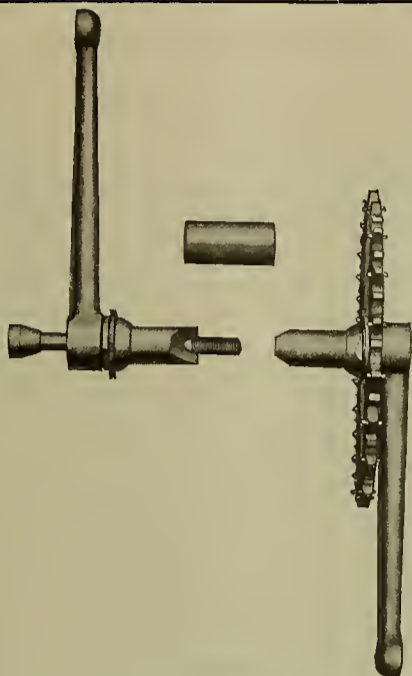


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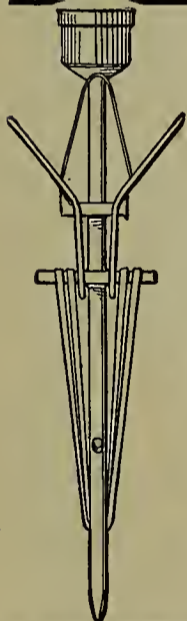


A divided  
shaft  
that has no  
superior



ALL THE CRACKS  
RIDE IT 

Waltham Mfg. Co., Waltham, Mass.



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Cures punctures quicker and better than any other device on the market. CAN BE CARRIED IN THE VEST POCKET. All you need besides the tool is a common rubber band, push it through the puncture and pinch the little clips, the rubber band slips off and tire is mended. We wish to call particular attention to the fact that **Calls Instantaneous Repair Tool does not enlarge the puncture.**

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Infringers will be prosecuted.

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## Pneumatic Hub Wheels for '99

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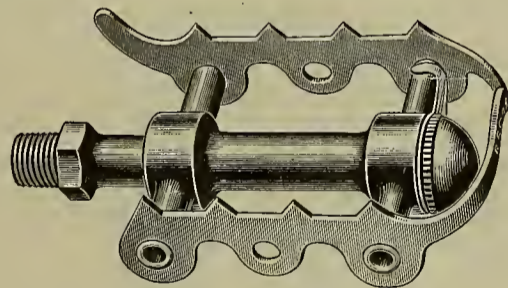
NO PUNCTURES NO BROKEN RIMS  
NO WALKING HOME

Send for Catalogue and Prices.

The Collins Pneumatic Hub & Wheel Works, Sayre, Pa.

# RECORD

Notice No. 1.



RECORD PEDAL No. 9.

You can tell at a glance the idea we had in mind when we devised the above pedal. It is good for ROAD or TRACK.

FINISH IS USUAL RECORD STYLE.

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WESTERN AGENTS:  
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18 Lake St., CHICAGO, ILL.

Boston, Mass.

Mention The Cycle Age

anti-six-day racing law by injunction and run a continuous 144-hour grind in the Windy City.

**BICYCLES NOT BAGGAGE**

**English Court Decides Test Case Between Railroad and Cyclist—An Interesting Decision.**

A decision has just been handed down by a London judge in the first test case that has been brought in England to determine whether or not bicycles are personal baggage and whether or not railroads can be compelled to carry them free as such according to act of parliament. The plaintiff sought to recover the sum charged by the company for the transportation of a bicycle, which it declared was extra baggage. The counsel for the plaintiff contended that the wheel was clearly personal, as it was something which the traveler carried for his own personal convenience and use. There was no distinction, it was argued, between a bicycle and a gun-case, a case of fishing-tackle, an artist's easel or a pair of roller skates.

The railway company argued that a bicycle was not an article which a person ordinarily took about with him. If a bicycle were to be regarded as personal baggage, it was urged, then a boat forty feet long would have to be so regarded and carried free. The court held that a bicycle was not personal or ordinary baggage, and that the railway company was entitled to make charge for its carriage.

**Cycle Racing Craze in Berlin.**

Admittance to the recent grand prize meets in Berlin cost more than the choic-

est places in the opera house and boxes were auctioned off as high as \$5 a seat. On one of the days about \$15,000 was taken in, and altogether the owners of the race track are said to have made about \$50,000 thus far this season. The "prize of Berlin" (\$4,500) was raised by voluntary subscriptions among the lovers of the sport in the city.

**WILL MEET TO ORGANIZE**

**Call is Issued to Track Owners, Clubs and Racing Men—Plan of Government.**

New York City, Nov. 28.—Formal steps to organize a new body to control bicycle racing in this country, to be known probably as the National Cycling Association, and to be composed of track associations, amateur race-promoting clubs and the professional riders, will be taken in this city next week at a meeting to be held next Thursday morning. The reasons for the formation of such an association are set forth in a call to be promulgated this week, which is in part as follows:

Dear Sir:—For reasons hereinafter set forth, it is desired that your track association or club, whichever the case may be, send a representative to a meeting of track associations, race-promoting clubs and professional riders (the latter represented by duly accredited delegates from the American Racing Cyclists' Union), to be held Thursday, December 8, at 10:30 a. m., at the Fifth Avenue hotel, New York city.

The object of the meeting is for the purpose of considering the advisability of taking preliminary steps toward the formation of a body to assume control of cycle racing in the states east of the Mississippi river with the exception of Louisiana, such body to direct the sport as soon as organized or at such time as may be decided upon at the meeting. The signers of this call believe that the

time has come when the associations which have invested in tracks, the clubs which risk their money in promoting meets, and the professional riders who earn their livelihood in competition, should have something to say in the government of a sport in which they are all so vitally interested.

Necessity for a meeting of these interests is urgent for several reasons, and the future demands immediate action of some sort.

In the L. A. W., the anti-racing element, as represented by such leaders as Chief Consul Sterling Elliott, of Massachusetts; Chief Consul-elect Milo M. Belding, Jr., of New York; Secretary-Treasurer P. S. Collins, of Pennsylvania; Chief Consul M. C. Rotier, of Wisconsin, and many other prominent members, is becoming so strong that the likelihood of the League's abandoning the sport is more than a probability.

The stand taken by the professionals, the attitude now apparent in the L. A. W. outside of those who are obtaining pecuniary advantages by the government of racing, and the fact that with the exception of the eastern states the sport in all other parts of the country has passed beyond League control, only illustrates the imperative need for a new body to be in readiness for any emergency.

Copies of this letter have been sent to all track owners and race-promoting clubs in the states east of the Mississippi with the exception of Louisiana.

Will you please signify your intention to attend this meeting by notifying J. D. Lasley, Washington, D. C., or will you kindly notify him at once as to whether you are in sympathy with and willing to join in forming this new organization.

J. D. LASLEY,  
For Park Bicycle Track, Washington, D. C.  
JOHN C. WETMORE,  
Chairman Race Committee, Quill Club  
Wheemen of America.  
E. C. BALD,  
President American Racing Cyclists' Union.

The constitution and by-laws to be submitted for discussion, amendment, and adoption declare the objects of the association to be:

This Association shall have for its object the direction of bicycle racing; the prevention, detection and punishment of frauds

**THE WORLD'S BEST RECORDS TO DATE AS ACCEPTED IN FRANCE**

The following is a list of the world's records for 1898, as recognized by the Union Velocipedique de France. Nearly all the figures which appeared on the list published last year at the same time have been altered. In a general way the times of all the performances accomplished on what one may call the classic distances have been lowered, that it to say, as far as the 200-kilometer mark. From that point up to the 1,000 kilometers, or say from four to twenty-four hours, the times remain unchanged.

One of the most remarkable features in the record hunt this year has been the keen competition against England by both France and the United States. Last season, thanks to the famous Crystal Palace teams, England held the majority of records. This year, the enormous progress made by the Americans in their pacing methods, and the rapid development of mechanical pacing in France have resulted in England losing the greater part of her supremacy. Another detail worth noticing is the more general

use of wind shields, which have allowed Huret to accomplish some really wonderful performances.

To satisfy all, the list includes records accomplished with and without the now famous shields, as some people are of the opinion that records established with the help of these instruments should not be allowed. The majority, however, reason that the shield offers but little more shelter than that afforded by the man on the rear of those triplets and quads where he is seated directly over the rear wheel.

Paced Records Against Time.				
MILES	TIME	HOLDER	PLACE	DATE
*1/2	:21 3/4	Megson	Sydney	Mar. 14, '98
1/2	:28	Johnson	Independence	Oct. 3, '93
*3/4	:29 1/2	M. Taylor	Philadelphia	Nov. 14, '93
*1	:45 1/2	E. Taylore	Philadelphia	Aug. 6, '98
*1 1/4	:58 3/4	Hamilton	Coronado	Mar. 2, '96
*1 1/2	1:08 3/4	M. Taylor	Philadelphia	Nov. 16, '98
1 3/4	1:18 3/4	Stocks	London	Sept. 11, '97
*2	1:31 1/4	M. Taylor	Philadelphia	Nov. 16, '98
*2 1/2	3:13 3/4	M. Taylor	Philadelphia	Nov. 5, '98
3	5:00 3/4	T. Linton	New York	Sept. 5, '98
4	6:40 3/4	T. Linton	New York	Sept. 5, '98
5	8:22 1/4	T. Linton	New York	Sept. 5, '98
10	17:11 1/2	T. Linton	New York	Sept. 5, '98
20	34:02	Elkes	Philadelphia	Aug. 6, '98
25	42:42	Elkes	Philadelphia	Aug. 6, '98
30	51:41 3/4	Elkes	Philadelphia	Aug. 6, '98
40	1:14:52 3/4	Palmer	London	Oct. 27, '97
50	1:33:29 3/4	Bouhours	Paris	Nov. 8, '98
†50	1:32:13 1/4	Huret	Paris	Oct. 6, '93
100	3:24:41	Gould	London	Aug. 11, '98
†100	3:11:01 1/2	Huret	Paris	Oct. 11, '98
200	7:20:27	Cordang	London	Sept. 15, '97
300	11:20:20 3/4	Cordang	London	Sept. 15, '97
400	15:18:47	Cordang	London	Sept. 15, '97
500	19:17:28	Cordang	London	Sept. 15, '97
600	23:26:34 1/2	Cordang	London	Sept. 15, '97

KM.	TIME	HOLDER	PLACE	DATE
*1	:56	Champion	Paris	Sept. 22, '98
1	1:08 3/4	Lombard	London	Nov. 5, '97
2	2:14 1/2	T. Linton	Paris	Oct. 9, '98
3	3:14	T. Linton	Paris	Oct. 9, '98
4	4:15	T. Linton	Paris	Oct. 9, '98
5	5:17 1/2	T. Linton	Paris	Oct. 9, '98
10	10:51	Chase	London	Aug. 22, '98
20	21:54 3/4	Chase	London	Aug. 22, '98
25	27:48 1/2	Stocks	London	Sept. 27, '97
50	55:48	Chase	London	Aug. 22, '98
†100	1:57:19 1/2	Bouhours	Paris	Nov. 8, '93
†100	1:54:24 3/4	Huret	Paris	Oct. 6, '93
†1000	24:12:21 1/2	Cordang	London	Sept. 16, '97

HOURS	DISTANCE	HOLDER	PLACE	DATE
1	34 m. 1220 yds.	Elkes	Philadelphia	Aug. 6, '98
†2	63 m. 440 yds.	Bouhours	Paris	Nov. 8, '98
†2	65 m. 185 yds.	Huret	Paris	Oct. 6, '98
3	88 m. 590 yds.	Walters	London	Aug. 30, '97
†3	94 m. 880 yds.	Huret	Paris	Oct. 10, '98
†5	139 m. 1056 yds.	Cordang	London	Sept. 15, '97
†12	317 m. 600 yds.	Cordang	London	Sept. 15, '97
†24	616 m. 340 yds.	Cordang	London	Sept. 15, '97

Unpaced Records Against Time.				
MILES	TIME	HOLDER	PLACE	DATE
*1/4	:26 1/4	Gardiner	Denver	Dec. 3, '96
1/4	:28 1/2	Davidson	Waltham	Oct. 3, '95
*1 1/2	:34 1/4	Hamilton	Coronado	Mar. 2, '96
1 1/2	:37 1/4	Lee App	Louisville	Sept. 18, '97
*1 3/4	:55 3/4	W. Martin	Indianapolis	Aug. 4, '98
1 3/4	1:00 3/4	Barden	London	Apr. 19, '97
*3 1/4	1:32 3/4	Tyler	Springfield	Sept. 4, '94
*1	1:55 3/4	Hamilton	Denver	July 9, '98
1	2:03 3/4	Van Heering	Johannesburg	Apr. 30, '98

KM.	TIME	HOLDER	PLACE	DATE
*1/2	:21 1/4	Jacquelin	Bordeaux	May 10, '96
1/2	:26 1/4	Buisson	Bordeaux	Sept. 27, '98
*1 1/2	:34 1/4	Pessoa	Geneva-Junc.	Apr. 11, '98
*1	1:13 1/4	Dufaux	Geneva-Junc.	July 7, '98
1	1:16 3/4	Jaab Eden	Bordeaux	May 14, '98
10	14:36 1/4	Yorel	Paris	June 8, '98
50	1:20:02	Capelle	Dijon	Oct. 14, '98
100	2:49:58 3/4	Capelle	Dijon	Oct. 20, '98

Road Records with Pacing.				
DISTANCE	TIME	HOLDER	ROUTE	DATE
50 km.	1:09:31 1/4	A. Linton	Salon-Arles	June 17, '96
100 km.	2:19:16	Bouhours	Arleens-Vierzon	Sept. 21, '98
500 km.	18:45:16	Rivierre	Blois	May 12, '96
1000 km.	58:35:03	Corre	Paris-Brest	Sept. 8, '92
50 miles	1:55:55	Walters	Birmingham	Oct. 15, '95
100 miles	4:11:25 3/4	J. Dubois	Blois-Tours	Nov. 14, '97
1000 miles	105:19:00	T. Edge	England	Aug. 24, '96

\* Flying start; all others stalling.

† Pacing machines fitted with wind shields.

‡ With motor pacing.

# STEARNS BICYCLES

Yellow, as the predominant color of a wheel, has to-day a sharp, distinct and attractive meaning to the whole bicycle world.

A wheel may be enameled in any color without increasing its efficiency; but in the process of selection the eye and judgment are powerfully influenced by the appeal made to the imagination through the senses.

This element—weakness, if you will—in human nature, is keenly touched by color; by red, or blue—or yellow.

It is thus obvious that one may come to rate excellence, or its absence, by colors; turning instinctively from some productions that are bad in spite of tint or blazonry, and with equal eagerness seeking others that are immediately known to be perfect, simply, for example, because they are yellow.

All yellow bicycles are either Stearns bicycles or imitations.

The trade on the Pacific Coast supplied from our branch store, E. C. Stearns & Co., 210 McAllister Street, San Francisco.

**E. C. Stearns & Company,**  
Syracuse, N. Y.

The trade in the Dominion of Canada supplied from our Canadian factory, E. C. Stearns & Co., 67 Adelaide St. West, Toronto, Ontario.

therein; uniformity in the government of the sport, method of conducting race meets, and all other interests which would mutually benefit this Association, the racing men, and the public.

The association will control racing in the states east of the Mississippi and will form alliances with the Southern Cycling Association, the Western Cycling Association and the California Associated Cycling Clubs. The territory will be divided into five districts, practically as follows: A to consist of New England, B of New York and New Jersey, C of the other Middle States, D of the South, and E of the West.

The fees for active membership will be, \$100 for track and \$50 for clubs, and for associate membership, \$25 for tracks and \$10 for clubs. The A. R. C. U. will pay no fee, but will have a voting representative for each district.

Each district will have a district board and its chairman will be a member of the board of control. The chairman of this board and the district chairmen will be elected at the annual meeting of the association and each district chairman will name his own four associates. Handicappers will be appointed by the district boards. The A. R. C. U. will also have one member in the national board and one on each district board.

The powers of the board of control are set forth as follows:

The board of control will have power at all times when the Association is not in session to make such rules for the government of the sport as it may consider necessary; but it cannot involve the members of the association in the expenditure of money. Whenever necessity arises the national chairman is empowered to inflict punishment and act upon direct evidence for infractions of the racing rules; he can also, at his discretion, if he believes that there is injustice and illegality in any penalty imposed by members or officials at race meets, reverse such decisions. At his discretion the chairman may

call special meetings of the board of control to consider matters affecting members, either in their relations to each other, or in connection with the racing men.

A board of appeals is provided for as follows:

At the regular meetings of this Association, three members from each district, to be elected for such purpose by each district board, shall constitute the board of appeals. The proceedings of this board shall be limited to hearing appeals of racing men who desire opportunity to adduce evidence showing error in the decisions or rulings of officials of a race upon any track within the jurisdiction of this Association. This board may reverse the decisions or rulings of the officials of any race, providing error is proven.

Tracks not members of the association will have to pay a fee of ten dollars for holding a race meet under the rules of the association and riders competing at meets not recognized by the association will be subject to suspension.

Professionals and trainers will pay a registry of two dollars, and amateurs one dollar.

## CLOSING MEET IN PARIS

Protin Wins Match from Linton—Jacquelin Rides in Tricycle Race—Southern Circuit Formed.

Paris, Nov. 18.—The French racing season of '98 can now be said to be at an end, and all the leading velodromes are closed, including those of the Parc des Princes and the Seine, both situated at the gates of Paris.

A sort of winter circuit on the American plan is being organized and will include several prominent racing men, Banker and Grogna representing the foreign talent. It is the intention of the team to visit the south of France, Algeria, Italy and several cities in Spain. Each man is to pay his own expenses and to have the right of leaving the circuit at

any moment should he feel inclined to do so.

A race meet was given at the Parc des Princes on November 14 by the Syndicate of Riders for their own benefit, among the prominent riders present being Jacquelin, Protin, Linton, Bourotte, Courbe, Deschamps, and Gougoltz. The 1,333 1-3 meters scratch race was won by Courbe in 2:25, with Brecy second and Contenet third. A scratch tricycle race at the same distance was won easily by Jacquelin, from Courbe, second, and Loste, third, in 3:30 2-5, Courbe and Loste riding heavy road machines. Protin and Tom Linton rode a series of match races, man paced. The first heat of 1,000 meters went to Protin by twenty yards; in the second at 5,000 meters Protin lost his pace twice and was passed by Linton riding like a demon, who won in 5:53 3-5. The last heat at 1,000 meters was won by Protin, 30 meters to the good, in 2:30 3-5, the Englishman's pacing quad having let the opposing team steal 50 meters before it got into full action. Deschamps and Louvet were the victors in a 2,000 meter tandem scratch event, with Fossier brothers second and Carman and Boulay third. Time, 3:03 3-5.

## Paquin Breaks Waller's Road Record.

"Chic" Paquin, of Fall River, Mass., broke the 200-mile Norwood course record, held by Frank Waller at 13:04:47, on November 23, covering the distance in 12:55:00. His time is claimed as the American record, but in August of '95, A. W. Evans rode 200 miles at New Brunswick on a standard course in 12:20:00. Paquin's time, however, is state record. He rode a Columbia bevel-gear chainless, and the conditions were unfavorable.

**NEWS IN BRIEF.**

Tom Butler, whom Chairman Mott declares to be the L. A. W. Champion, has entered for the indoor races in New York. This must be a severe blow to "Uncle Jerry," who, quite contrary to the racing rules, sanctioned the payment of expenses to Butler, Coleman and Dreher to the New Haven meet to ride for much less than a \$150 first prize in the increased points championship race.

E. A. McDuffee has just had a difficult surgical operation performed on his nose in Atlanta, Ga., and will not be able to ride again until all danger of a hemorrhage is passed. The trouble had been a menace to his riding for some time. It entirely stopped up the nasal organs and forced him to breathe through his mouth when struggling hard.

Chicago wheelmen representing the Associated Cycling clubs, League of American Wheelmen, Northwest Cycling Association, Cook County Cyclists' Association and Chicago consulate are making preparations for an onslaught on the state legislature in behalf of the bicycle baggage bill and the good roads bill.

Chairman Hibberd B. Worrall, of the State Highway Improvement committee of the Pennsylvania division, is working vigorously on the bill to be introduced at the next session of the state legislature, asking for an appropriation to make the Hamilton good roads bill (passed the last session) operative.

The annual election of the Pennsylvania division of the League has resulted in the return of Chief Consul Boyle, Philadelphia; Vice Consul Thomas J. Keenan, Jr., of Pittsburg, and Secretary-Treasurer P. S. Collins, of Philadelphia, to their several positions.

The executive board of the L. A. W. has passed a resolution calling for a mail vote by the members of the National assembly, as fast as elected, to decide where the National meet shall be held in '99, invitations having been received from Boston and Buffalo.

Frank Starbuck, who is now at Lewisburg, Pa., has announced his intention of going to Australia within a month. He thinks his ability as a pace follower may enable him to defeat any of the native flyers against whom he may be matched.

W. F. Sager and Charles Hadfield, who did yeoman service in Major Taylor's pacing artillery, have issued a sweeping challenge to ride any tandem team in the country, any style race, any distance and for any amount of money as a side bet.

Al Weinig is busily engaged in arranging for the construction of a coliseum in Buffalo which is to be entirely covered. It is hoped by the projectors that this will become the winter quarters of the indoor racing men until next spring.

The election of the Indiana division L. A. W. resulted in the selection of the following officers for the ensuing year: Chief consul, Wallace Sherwood; vice-consul, Walter B. Hassen; secretary-treasurer, James A. Allison.

Henry E. Ducker, manager of Charles River Park track, has plans under way for the building of an indoor track in Boston this winter.

J. E. Wing, of San Francisco, established a new hour paced Pacific coast record No-

vember 20, covering 28 miles 1,089 yards as against 25 miles 978 yards made by Mussey, of Los Angeles.

Tom Cooper was planning to take a rest this winter, but the attractions of Madison Square Garden have proved too great and he is now preparing to enter indoor races for the first time.

**MISCELLANEOUS.**

Advertisements under this head 5 cents per word first insertion, 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received.

**WANTED**

**WANTED**—Agents throughout the United States and Europe to sell the Best Double Roller Chain on the market; large commission; every chain warranted. THE AETNA HARDWARE CO., Unionville, Connecticut.

**WANTED**—A 2-horse power electric motor, power lathe and filing vise. PETER TIERNEY, Bay City, Mich.

**WANTED**—Agents for chain and ball lubricators should address. Box 349, Williamsport, Pa. 1

**WANTED**—New \$75 Ariel. Gent's, for Regina music box, typewriter or telephones; must be new goods. Want agency for bicycle using Sager gear. W. H. KELLEY, Bicycle Dealer, Newark, Wayne Co., N. Y.

**WANTED**—Bicycle salesman to sell a leading line of wheels on the road; familiar with the trade in Nebraska and Western Iowa, with headquarters at Omaha. Address, M., care Cycle Age.

**FOR SALE**

**MAKE your own Tire Fluid**—Five formulas for fifty cents. Costs 80c. per gallon. DAN ANTHONY, San Antonio, Tex. 2

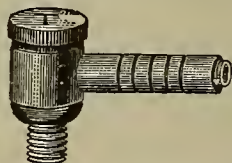
**FOR SALE**—Bicycle Chain Plant; in use two seasons; capacity, 200 chains per day; Gas Generators, Sprocket Miller, Hub Machinery, Wheel Truing Stands and other bicycle machinery; owners retiring from business. For particulars and prices, address THE MOORE CYCLE FITTINGS CO., Harrison (Newark), N. J.\*

**FOR SALE**—Chainless bicycle patents; increased speed 50 per cent save 50 per cent in driving; simple and practical gear; particulars from—GOWER, 7 Brightland Road, Eastbourne, England.

**NEW Novel Bicycle Cuts.** Write for catalogue. WILLIAM STRONG, Cincinnati, O. 3

**WE Build Frames** or stripped wheels in any quantity for the trade; correspondence solicited. S. G. MORRIS FITTINGS CO., Cleveland, O. 3

**FOR SALE CHEAP**—One 6-horse power upright boiler, one new M & W. vulcanizer complete, and one 2-horse power Raymond gasoline engine complete with shafting, pulleys, friction counter shaft and belting. JENKINS BROS., Sumter, S. C.



**JOBBERS**

Everywhere will sell the Monitor Pump Connection in 1899. AIR TIGHT. PRICES RIGHT. ELECTROS READY.

An inquiry from you will be appreciated. Sample mailed any dealer for 6 cents. HARRAH & STEWART MFG. CO. (Dept. A), Des Moines, Iowa.

\$18.75

\$18.75



**COMPLETE LESS TIRES**

WITH ALL MODERN EQUIPMENT.

**DEALERS! Here is Your WORLD-BEATER.** All Flush, 1 1/2-in. tubing, short tread, lathe turned head parts. Superb enameling, heavy coppered nickeling; rims to match frame; large Star sprockets. Strictly a high grade \$50 seller. **Sample shipped Subject to Inspection.** Equipped with guaranteed tires, \$22.50. Manufactured and guaranteed by

GRAHAM CYCLE CO., 601 to 605 Madison Street, CHICAGO.

Men are judged by their associates...

**Why Not Saddles?**



Dealers and riders can obtain the famous 12-ounce

**Hollenbeck**

**Rawhide Saddle**

Without extra charge on the following high class bicycles:

- |                |                |
|----------------|----------------|
| Andrae         | Orient         |
| Ariel          | Pierce         |
| Barnes         | Peoria         |
| Ben-Hur        | Rochester      |
| Carlisle       | Stearns        |
| Day on         | Sterling       |
| Eclipse        | Viking         |
| Envoy          | Wolff-American |
| Hudson         | Yale           |
| Lovell-Diamond | Snell          |
| Olive          |                |

Write us, if you want a very light, attractive, up-to-date bicycle saddle of the highest grade.

**Hollenbeck Saddle Co.**

Syracuse, N. Y., U. S. A.

# THE CYCLE AGE

## AND TRADE REVIEW

VOL. XXII—No. 6.

CHICAGO, DECEMBER 8, 1898

NEW SERIES No. 55.

### RIVAL SHOWMEN IN NEW YORK LOCAL EXHIBITION IN MARCH

Dealers are Said to be Opposed to the Holding of a Trade Show in January.

New York City, Dec. 5.—There is another showman in the field. He is bidding for the favor of the dealers in this city. Of course, he is ambitious to stimulate the trade, which with regret he has seen decline till it appears to utterly lack vitality. The extent of his solicitude for the welfare of the dealers is expressed in the following valuation put upon the spaces for rent:

19 spaces at \$30 .....	\$ 570
28 spaces at 40 .....	1,120
26 spaces at 50 .....	1,300
5 spaces at 60 .....	300
26 spaces at 75 .....	1,950
12 spaces at 100 .....	1,200
2 spaces at 150 .....	300
15 spaces at 200 .....	3,000
2 spaces at 250 .....	500

Total .....\$10,240

Dealers Opposed to January Show.

The exhibition will be held from March 23 to April 1 in the Grand Central Palace—the theater of the last national show held in this city. In announcing the enterprise, the following circular was sent to the trade:

After a thorough canvass of the trade it has been determined to hold a local cycle show at the Grand Central Palace building during the latter part of March, 1899. More than 60 per cent of our replies to inquiries favored the idea, and a large majority favored this date.

The arguments advanced by most of our correspondents was that it is already too late to hold a trade show—i. e., one to reach the jobbers, and that a show properly conducted late in the spring should be of intense interest to the public.

This is our plan, and no effort or expense will be spared to make the show worthy of the second city in the world. We are assured in advance of the hearty support of every daily paper in this city, and there is no reason why the result should not be satisfactory to every one concerned, both in re-awakening the interest of old riders and in creating new riders.

The prices made for space are less than half what they have been at any previous cycle show in this city. These prices include platforms and railings.

The price of extra electric lighting will be one-third less than the rates charged at the last show in this building.

Parlors will be set apart without charge for the meetings of any organization in the cycle trade.

B. E. GREENE,  
Secretary.

Note the argument said to have been advanced by the local dealers—that it is already too late to hold a trade show.

### Trade Flourishing on the Coast.

The past season has been the most profitable by far that any of the local dealers have ever experienced, notwithstanding the disastrous drought that has caused the loss of thousands of dollars to

the farmers throughout California. From present indications the bicycle business of 1899 promises to be all that could possibly be desired, so far as the Pacific coast is concerned. With the early rains that are now promised, abundant crops are assured for the coming year, and with the country once more in a flourishing condition, the trade for '99 should nearly double that of 1898. Many of the California houses have already received new models and have begun active preparations for the coming season.

### Bell Makers Organize.

The bicycle bell makers have formed an association for the purpose of preventing the sale of their goods below cost. For some time past bells of the cheaper grades have been sold at very low prices. It was to remedy this state of affairs that the association, which in no manner resembles a trust or seeks to establish monopoly prices, was established. A minimum price at which cheap bells will be sold has been agreed upon—from 10 to 15 cents a dozen according to the size and style, having been added to the prices now prevailing. Competition is and has been strongest on these goods. The price of the better grades of bells will not be affected.

### Frost Plant For Sale at Auction.

Under order of the court, Receiver Clarence K. Davis is offering for sale the assets of the Frost Gear Case company of Indianapolis, Ind., consisting of manufactured cases, stock and materials, office furniture, machinery, tools and fixtures. It is a well equipped plant for the manufacture of gear cases, and much of the machinery, tools and fixtures can be used in a stamping business. Until December 8 sealed proposals for the whole or any part of the property will be received.

### Public Barred In Germany.

The public was not admitted to the recent large cycle exhibition held in Leipzig. The show was exclusively a trade affair, intended to bring manufacturers and dealers together, and in this it was successful, more business having been transacted and important contracts closed than at any previous show.

### TRADE PROSPECTS IN CUBA AMERICAN ENTERPRISE NEEDED

Natives of Havana Show Interest in Cycling but Prices are High—Streets Well Paved.

Havana, Nov. 22.—The streets of this city are all paved with granite, and bicycle riding is very good—better, perhaps, than on many of the streets in the States. There is but one good road leading out of Havana. It is a fine pike for about fifteen miles, traversing a beautiful country.

The number of bicycles in use, however, can almost be counted on the fingers of the two hands, most of them being machines brought to the country by Americans; the others are of the old, solid-tire pattern of the vintage of 1890.

### Cycles Indifferently Handled.

There are a number of bicycle dealers in the city, most of whom handle English machines and carry American-made bicycles of doubtful origin. It is reported that several first-class lines are handled, but a patient search failed to discover them. The great trouble with the Spanish bicycle dealer is that, as with dealers in all other lines, it never occurs to him to advertise his wares, and he sits down in his house and waits for customers; and when his customers do come, he charges \$75 to \$100 in gold for machines sold in the States for from \$25 to \$40. In one store in Calla Obispo, the principal retail thoroughfare, the show window contained an old-style, solid-tire machine which had the appearance of having been sandpapered and varnished over the enamel, placarded at "\$37.50 Oro" (gold)—such a bicycle as the boys of the States would dub an "ice wagon." In many cases the dealer has relegated his stock to the rear of his store, and you would never guess that he had any unless you asked for them.

When asked regarding the high prices charged for bicycles, a native explained that the Spanish merchant never expected to get the prices at which his goods were marked and he always marked them up about 50 per cent in order that he might be able to come down.

### Low Priced Machines Would Sell.

There is no doubt that the natives are interested in cycling. This is evidenced by the fact that it was a daily occurrence for a young man who owned an old, solid-tired machine to bring it out on the Prado and perform a few simple tricks in riding in the evening, when he was sure to have from 100 to 500 spectators of all ages, who seemed to enjoy and applaud the young man as if he had accomplished something wonderful. Another

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evidence of interest is that the bicycle thief has begun business. A young man left his machine on the sidewalk while he went into a store to make a purchase, and when he returned in about ten minutes his bicycle had disappeared, and he has not found it.

Cuba will take to the bicycle, because the interest is already here, and it will only need a few American dealers to launch the business with American energy, and with the expectation of spending a few dollars in judicious advertising, selling good machines at a fair profit, to ensure a fair trade at good returns.

Bicycles to sell at from \$35 to \$50 should find a ready market. It may take a whole season to introduce them, but in the end it is sure to pay. There are very many young men who are compelled to go errands about the city and who must now walk or pay 20 cents for a ride in a carriage. There is only one street car line, and that runs on but one street and out in the suburbs.

### THRIVING ON SIDELINES

**Christmas Toys and Roller Skates Help New England Dealers—Chainless Prospects Bright.**

Springfield, Mass., Dec. 3.—Main street dealers are doing a rushing business in sidelines. One house has laid in a large stock of Christmas toys, and another is exhibiting a phonograph and pushing the sale of winter sporting goods. There is a marked difference in appearance between the stores which carry sidelines and those which do not, and the more attractive appearance of the former at this season of the year undoubtedly has its effect on the summer trade in bicycles and sundries.

The chainless is being exhaustively discussed by the trade and riders generally. The reduction in the price has made many converts and a brisk trade seems assured in this style of wheel at the outset of the season.

The introduction of roller polo has caused a demand for roller skates and polo sticks. Two bicycle agencies carry these articles as sidelines. The game is having a big run in the Connecticut valley and a polo league has been formed by the large cities after the manner of the baseball leagues.

### One More Cycle Show.

The Detroit Wheelmen are going to give a cycle show and amateur photographic competitive exhibit, combined, at their club house during the week of December 12 to 17, and ask manufacturers to give some of the goods they make and in return they will allow reasonable wall space upon which to place an advertising card or banner, and will also distribute any cards, circulars, or small advertising matter in the shape of samples. The merchandise donated is to be disposed of for the benefit of the organization.

In addition they will place upon each article received a card calling attention to the goods and asking members to patronize you when in need of anything in the line.

### No Time to Visit at Shows.

Toledo, Dec. 5.—George H. Fisher, of the Gendron Wheel company, was asked if his concern would make an exhibit at the Chicago cycle show. "No sir, in big capital letters," he replied. "We're too busy getting out bicycles for bona fide customers to go around the country playing at bicycle shows and visiting."

Number plates must, by law, be affixed to cycles in France on and from May 1, 1899. They must bear both the name and address of the owner of the cycle.

## DEPARTMENT OF COMMERCE

### WILL PROMOTE EXPORT TRADE

**The Measure to Come Before Congress Provides for Jurisdiction Over Manufacturing and Commerce.**

Washington, Dec. 5.—One of the questions to be considered at the coming session of Congress is the proposed creation of a new executive department, to be known as the Department of Commerce and Industries. This subject commands attention now as never before, and the voice of the manufacturing and commercial interests of the country in support of the creation of this department will be heard stronger than ever. Our new territorial acquisitions emphasize the need for this new department, and the Frye bill to create such a department will undoubtedly have early consideration at the hands of Congress.

#### Functions of the Department.

Under the terms of this measure the proposed new department shall be at the seat of government, and there shall be a secretary of the same, who shall have a seat in the cabinet. This department shall have general jurisdiction over the foreign and internal commerce of the United States; it shall also have jurisdiction over all matters relating to the manufacturing interests of the United States, including the extension of foreign markets for the same, and the increase of trade and improvement of trade facilities with foreign countries. The bill also provides for the transfer of the several consular officers of the federal government, who are charged with the duty of facilitating and promoting the commerce of the United States with the countries to which they are accredited, from the jurisdiction of the State Department to the jurisdiction of the new department.

#### Special Investigations and Reports.

There is a provision to the effect that the secretary of the proposed department shall annually make a report to Congress, which shall contain an account of all acts done by him in promoting and facilitating the development of American commerce and manufactures, and such recommendations as he shall deem necessary to the further extension of our foreign and domestic trade. He is also charged with the duty of making special investigations and reports on particular subjects whenever required so to do by the President or by either house of Congress, or whenever in his judgment such special investigations and reports shall be required.

Probably few industries in the country are more interested in the extension of our foreign trade than the bicycle industry, and manufacturers will quickly recognize the need of urging the creation of this new department, whose chief function will be the promotion of our foreign trade.

### "Junk Dealer's" Appeal Filed.

Washington, Dec. 2.—An appeal from the decision of the lower court in the case of J. D. Lasley, who was recently convicted on the charge of being an unlicensed second-hand dealer, was filed in the Court of Appeals during the week and an endeavor will be made by counsel to secure an early decision in the case. A new phase of the situation has lately developed. It is held by the authorities that goods which have become shop-worn are second-hand goods within the meaning of the law of March 3, 1891, and that any dealer who sells such goods is liable to the tax. The fact has also been brought to light that any article left with a dealer

to be repaired cannot be sold by that dealer, if the owner fails to call for it, unless said dealer takes out a license. That the business men of the national capital are alive to the apparent injustice of this law is evidenced by the fact that the Business Men's Association, one of the leading organizations of this city, has tendered the services of its general counsel to the merchants who are affected by the law. Merchants in many lines of trade have given their active aid in an endeavor to defeat the law, and there is promise of a great legal battle when the case is called for final decision.

### LATE DATE SELECTED

**Philadelphia Chooses End of February for Local Exhibition—Talking Machines as Sideline.**

Philadelphia, Dec. 5.—The local cycle board of trade has again selected the Second Regiment armory, after a careful canvass of available buildings, as the best suited for its annual cycle exhibition, and has decided that the best time to hold the show will be the week of February 18-25, just before the retail buying season opens.

The managers are enthusiastic over the outlook, as up to last Saturday telegraphic and mail applications for space from out-of-town concerns far outnumbered the actual number of such exhibitors at last year's show, which the National Board of Trade refused to sanction. Included in the applications already received are quite a number from manufacturers of motor vehicles, which will be one of the leading features of the coming exhibition. The chainless bicycles will of course attract much attention.

The sentiment among local agents and dealers as to the advisability of or the necessity for a show seems to be equally divided, but all the principal machines will be represented—some, it is true, on the plea that "we'll have to go in if the others do."

Almost every local dealer has added some sideline to his business, but even these do not seem to be able to overcome the adverse combination of bad weather and the pre-holiday slackening of trade. It is surprising to note the number of stores on the "Row" which have selected phonographs, graphophones and kindred instruments to keep trade active through the winter. Those who have chosen them are decidedly hopeful. Some of the stores carry both incandescent lamps and graphophones, keeping at the same time a large selection of "records" for the latter. Business in new selections can always be depended upon after a sale of an instrument, for there is a natural desire in the purchaser to increase his collection of interesting selections of vocal and instrumental music as well as of recitations and famous speeches.

Among the announced changes in the local trade is the abandonment by the Union Cycle Mfg. Co. of its branch at 814 Arch street, and the placing of the Philadelphia agency for the sale of its output with Michael J. Costa, who is at present handling the machines of the Relay Bicycle Mfg. Co., of Reading, Pa., at 1003 Arch street.

Another important change is the placing of the local Stetarns agency, hitherto held successively by Wiese & Bowen and Hill & Lyster (both of which have gone out of business), with Roach & Barnes, 821 Arch street, who handle the output of the Indiana Bicycle company.

The bicycle tax of France yielded a revenue of \$812,160 during 1897. There were 408,869 bicycles in use, as against 203,026 in 1894, showing an increase of more than 100 per cent for the three years. There were 13,057 machines exempt from taxation.

**TUBE MAKERS ARE IN DESPAIR  
ENGLISH MARKET DEMORALIZED**

**In Two Years the Value of Investments  
has Shrank Over Eleven Millions  
of Dollars.**

The English tube trade is in a deplorable condition. Within the past two years the value of the investments in this branch of the bicycle industry has depreciated almost \$11,250,000. The amount invested by the British public in the various tube companies reaches \$13,750,000.

Its business—doubtless partly owing to the fact that the heavy capital required would keep small firms out of it—has been regarded as the most solid branch of the cycle and allied trades. But its high appreciation at one time is, doubtless, part of the reason of its phenomenal fall since. A large number of companies, some of them good, solid businesses at the time, were formed and floated. The high-sounding titles of some of them, compared with what they have accomplished since the boom, would be amusing if the gravity of the matter did not make it almost tragic.

**Cut-Throat Competition.**

During the period of inflation extra plant was laid down to such an extent that even the then phenomenal demand would have had to be doubled to employ the extra mills. Instead of which America, France, and Germany, by laying down their own mills ceased to buy tube from British makers, so that by the time the new mills were ready each company found the market restricted to scarcely more than half what it was previously, whilst the capacity of turnout was doubled. What is usual in all such cases followed: each company under-quoted the others in order to get business, and the price naturally tumbled down to the bare cost of production, leaving nothing for the poor shareholders, except the usual "deficiency to carry to reserve." In cases where a small profit has been shown on paper, and a dividend paid, it has weakened the company—in one case so as to produce failure within a few months of a 10 per cent dividend. This is, of course, exceptional; but the fact remains that, with weldless steel cycle-tube being sold at cost, companies who pay dividends do so at a considerable risk to their future position, and practically pay away a portion of their cash working capital, which is their life blood.

**An Association Proved Abortive.**

An association to regulate prices was attempted some time since, but through two or three firms refusing to join, it proved practically abortive. And so the investor who had shares in several companies was placed in the absurd position of having his securities warring with each other and cancelling themselves down to nothing, while he was forced to stand by and witness the wasteful process, which, by equation, meant self destruction of his property. The total result is that they all are reduced in value, and their profit-earning capacity is, for the time being, destroyed.

**No Hope is Left.**

The position has now been reached in which no profit is being made out of weldless steel cycle-tube at all, and it will naturally be forced forward to positive loss, in the hope that some of the firms may be crushed out of existence. Now, if this were readily done, some slight hope might be entertained that in two or three years' time the fittest only would survive, and that then the trade might be again profitable, if not to a great extent, still to some. But, unfortunately, even

this small hope cannot be justified, for these reasons:

(1) The demise of a company does not necessarily mean the destruction of its mill or splitting up of its plant.

(2) Many of the companies are wisely closing down, waiting for better times, which, by the very fact that others are doing the same, can never come, for the moment any profit is to be made, they will open up again, and down will come the price to losing level once more.

(3) This war of prices has been going on over a year, and although five small companies have been forced into liquidation, yet the plant of only one has been split up, and that company was the one which committed suicide by paying a dividend—several of these five practically never did any trade, and so their demise does not affect the market.

(4) There are still twenty-five weldless steel tube producing firms (and the plant of four others), and, with perhaps two or three exceptions, by shutting down when tube is sold at a positive loss, and paying no dividend, they can exist for many years to come.

From all this, it appears that the shareholders in cycle-tube companies have only a sentimental interest in their shares, and have no reasonable possibility of ever receiving any pecuniary return from them.

**GERMAN BANKS AND EXPORTS**

**Important Part Taken by Commercial Banks in Promoting Foreign Trade of the Fatherland.**

One of the most effective of German methods in the promotion of export trade is the direct indorsing of commercial paper on the part of the banks, so that these themselves form a component force in commercial activity.

The German commercial bank is in fact one of the chief cornerstones upon which the imposing structure of German commerce stands. The bank is very often the organizer of a syndicate of manufacturers or exporters, whose drafts it converts into cash. Especially is this the case in London. Then agencies are established and maintained the world over. A client of the bank receives, for example, a concession in China or a large order from some South American government. He then goes to a branch of the bank in the place, or instead of this to one of its agents, and is certain that his draft will be accepted, because the bank is a sharer in the undertaking. The growth and activity of German competition are very much accelerated through the facilities which Lombard street gives to German commercial paper. If Lombard street should November 1 refuse to cash German commercial paper of the kind under consideration, Germany's exports for that month would show such a decrease that the commercial world would be astonished.

**W. B. Mendenhall Deceased.**

Col. W. B. Mendenhall, president for thirty years past of the American Sewing Machine company and president of the American Traveller Bicycle company, died in Atlantic City November 27 of heart disease. He was seventy years old and lived in Philadelphia. His wife died in Atlantic City nine weeks ago. He was paymaster in the army from 1862 to 1866 with the title of lieutenant-colonel, and was stationed at Fort Leavenworth, Harrisburg, St. Louis and Washington. He was a member of the Union League, Philadelphia; Post 2, G. A. R., and the Loyal Legion. Three children survive him—Howard L. Mendenhall and Mrs. W. M. Baldwin of Philadelphia, and the Rev. H. G. Mendenhall of the First Presbyterian Church, Kansas City. Burial took place November 30 at Coatesville, Pa.

**SHY OF CHICAGO CYCLE SHOW  
MAKERS ONLY RESERVING SPACE**

**With but Seventy-Two Booths the Promoter is Advertising a "National" Exhibition.**

For reasons best known to themselves the manufacturers do not seem to be tumbling over each other in a mad effort to take space at the Chicago cycle show, which is billed to take place in a disused store building and is being impudently advertised as assuming the proportions of a national exhibition. Reservations of space are far more common than actual contracts, a fact which is deeply significant of the watchful mood of the makers and the suspicion they entertain that all is not so well with the promoter of the show as he so flamboyantly asserts. Tempering his greed to the shyness of the trade and public in supporting the exhibition Van Sicklen looks forward to fingering only about \$8,000, which puts him in a class of showmen which is content with crumbs because they lack encouragement to aspire to more fattening food.

**Only Seventy-Two Spaces.**

Here is Van's layout:

49 spaces at \$ 75.....	\$3,675
3 spaces at 90.....	270
20 spaces at 100.....	2,000
Total ..	\$5,945

It is bound to be a starved affair with only 72 spaces. Souvenir hunters will be welcomed with warmth. They will be needed in order to heighten the illusion that it is the goods on exhibition which attract attention. No official catalogue will be printed; it would cost too much money.

There will be no "hold-up" by construction companies, for Van has reformed.

**Space is Reserved, Not Taken.**

Following is a list of firms which have "reserved" spaces:

- H. A. Lozier & Co.
- Fanning Cycle Co.
- Sager Gear Co.
- Carlisle Cycle Works.
- Iven-Brandenburg Co.
- Oakman Motor Vehicle Co.
- Fowler Cycle Works.
- Naber Saddle Co.
- A. J. Gray.
- The Stockton Co.
- L. Rastetter & Son.
- Baldwin Chain Co.
- P. & F. Saddle Co.
- Peacock Chain Co.
- Mfrs. & Merchants' Warehouse Co.
- David Bradley Mfg. Co.
- Manson Cycle Co.
- F. S. Waters & Co.
- A. Featherstone & Co.
- Monarch Cycle Mfg. Co.
- W. H. Fauber.
- League Cycle Mfg. Co.
- Snell Cycle Fittings Co.
- Jenkins Cycle Co.
- Pope Mfg. Co.
- A. D. Meiselbach.
- Wheeler Saddle Co.
- American Tube Co.
- Peterson & Hastings.
- J. B. Thorsen.

**No Offer for Warwick Plant.**

Springfield, Mass., Dec. 5.—The opinion is expressed in trade circles that the factory of the Warwick Cycle Manufacturing company will be sold at auction. The assignees have been unsuccessful in disposing of the plant at what they consider an equitable figure and there seems to be no way of selling it other than under the hammer. The price of the plant has been held at \$100,000 by the assignees, but this amount will hardly be realized if it is sold at auction. It is said that several parties have refrained from making the assignees an offer, preferring to take their chances at a forced sale.

Many of the small makers and repairers in London are just now running fire-works as a side line.

# ADLAKE BICYCLES

"THE WHEEL OF HIGH DEGREE."

Prices Reduced for 1899, but  
Quality Remains the Same.

COMPLETE LINE NOW READY FOR DELIVERY. \*\*\* TRAVELERS ARE NOW ON THE ROAD AND WILL CALL UPON ALL DEALERS.

## ADLAKE SPECIALS

Model A....	30 and 28-in. wheels....	22-in. frame.....	\$60.00
Model B....	30 and 28-in. wheels....	24-in. frame.....	60.00
Model C....	28-inch wheels.....	20-in. frame.....	60.00
Model R....	"Racer" 28-in. wheels....	22-in. frame.....	60.00
Model E....	Women's, 28-in. wheels..	21-in. frame.....	60.00
Model F....	Women's, 28-in. wheels..	23-in. frame.....	60.00
Model G....	Tandem, 28-in. wheels...	23-in. frame.....	90.00
Model H....	Tandem, 28-in. wheels...	23-in. frame.....	90.00
Model K....	Tandem, 28-in. wheels...	21-in. frame.....	90.00

## ADLAKES

Model M....	28-in. wheels.....	22-in. frame.....	\$40.00
Model N....	28-in. wheels.....	24-in. frame.....	40.00
Model M....	30-in. wheels.....	22-in. frame.....	45.00
Model N....	30-in. wheels.....	24-in. frame.....	45.00
Model P....	Women's, 28-in. wheels..	21-in. frame.....	40.00
Model S....	Women's, 28-in. wheels..	23-in. frame.....	40.00

## ALASKAS

Men's.....	22-in. frame.....	28-in. wheels.....	\$30.00
Men's.....	24-in. frame.....	28-in. wheels.....	30.00
Women's.....	21-in. frame.....	28-in. wheels.....	30.00

**The Adams & Westlake Company,**  
**MAKERS, CHICAGO.**

ALSO MAKERS OF ADLAKE AND X RAYS BICYCLE  
LAMPS AND ADLAKE CAMERAS. \*\*\*\*



# THE CYCLE AGE

## AND TRADE REVIEW

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### FOOLING THE MAKERS

There is that difference between a rose and a "national" cycle show that the latter would not smell half as sweet by any other name. So long as the broad American public were still aglow with enthusiasm over the newly-discovered fact that they could do something else than walk without paying fare, the means by which this wonderful thing was to be accomplished truly did attract "national" attention. That a lumbering mortal, who never in his life could as much as turn a handspring, by saving a few dollars could become a glorious athlete and beat the noble horse in speed, could get the best of a street-car company, could mock the rail-bound locomotive in a new combination of freedom and swiftness, and that this mortal, if a female, could vault with impunity over several of the irksome traditions of her sex and improve her physique in the bargain—was the cheerful message of a new physical religion, of which the public press became the willing apostle and its readers fervent proselytes or croaking doubters.

Whenever and wherever a bicycle was mentioned or shown, it appeared in those days to be wrapt in a mist of semi-emotional thoughts that gave dignity to the most trifling contentions connected with its construction, its speed, its design, its strength. The scrubbiest racing man who had the impudence to claim speed was looked upon as a minister of the rejuvenating new gospel, and a cycle show was like a revivalist meeting, where personal testimony to the fruitful blessings of the evangel was freely offered and discussed with the ardor of sectarians. Manufacturers were demigods, agents were priests, and so long as cycle finance remained an unknown domain, enthusiasm waxed fat on its own exuberance.

It was this train of sentiment which made "national" shows the centers of the cycle mission, and the press were obedient to the ordinary rules by which the value of "copy" is judged, when they spread before the public the minutiae of cycle exhibits as thoroughly as they would the testimony in a celebrated murder case.

Everybody knows how much there is left of the enthusiasm, and it is idle to locate the blame for its disappearance. The seed of cynicism in cycle affairs was sown by the New York Herald in 1895, and has grown so rank that nothing but the fundamental and intrinsic merit of cycles now keeps them before the public eye. There are no more demigods. The worst cynics on cycle trade are in it and of it. There are a few robed priests left among the agents, but they are away out in the country and do not come to "national" shows. If they did, they would become cynics like the rest. It is chiefly among the broad, good-natured public that one still finds a few who cherish the bicycle as they would a horse, and take pride in the peculiarities of their mount as soon as they have paid their money for it. To disturb these in the good work which they are quietly doing in their various localities by spreading disillusioned press reports of pretentious shows staged in a chilling atmosphere of doubt and indifference is one of the propositions advanced by show promoters who are anxious to draw the last drop from the cycle trade milch cow.

Like the shrewd fellows they are, they see well enough that a new drawing-plaster is required to attract the city crowd, and they boldly announce the motor-vehicle as such, trusting that the cycle trade will not perceive that cycles will be dwarfed in

the public estimation in proportion as motor-vehicles are made prominent.

They call their projected exhibitions "national" in the vain hope that this word, even though its meaning has departed, will revive the fructifying enthusiasm that once gave it significance. They are trying to make the cart pull the horse, and a good part of the trade is looking on to see if it can be done.

As at one of the table-dancing seances of old, the trade holds its trembling fingers obediently on the table's edge—incredulous, but anxious for the miracle; and lo! the table moves. The promoter laughs in his sleeve. The public laughs when it hears of it. Only the trade has been fooled.

### SHOW SPACE SHOULD BE FREE

Should exhibitors pay for space at cycle exhibitions? Let the answer be made after careful study of the following authentic record of the receipts and disbursements at the last show held in Madison Square Garden:

RECEIPTS.	
Box Office.....	\$24,574.50
Coat Room.....	248.70
Rentals.....	44,520.00
Trade Tickets.....	4 032.25
Restaurant.....	1,265.93
	\$74,641.38
DISBURSEMENTS.	
Platforms, etc.....	\$ 2,751.22
Railings, etc.....	3,041.91
Architect's Service.....	150.53
Removing Seats from Arena.....	880.00
Painting.....	129.40
Decorations.....	300.00
Music.....	750.00
Catalogues.....	467.50
Restaurant.....	751.80
Printing.....	385.22
Postage.....	120.00
Trade Paper Advertising.....	1,236.25
Daily Paper Advertising.....	492.52
Bill Posting.....	695.79
Tower Signs.....	57.00
Signs Interior.....	61.45
Lumber and Paint.....	30.80
Electric Supplies and Help.....	1,040.21
Buttons.....	199.40
Tickets and Badges.....	128.75
Secretary's Expenses.....	200.00
Press Agent.....	250.00
Removing Rubbish.....	99.75
General Pay Roll.....	2,023.57
Petty Items.....	60.45
Taking Down and Storing Railings.....	400.00
Extra Light.....	480.00
	\$17,183.52
Balance.....	\$57,457.86
DIVISION OF PROFITS.	
Madison Square Garden Co., for Services.....	\$ 5,000.00
Balance.....	\$52,457.86
Board of Trade 50 per cent of first \$16,000.....	\$ 8,000.00
Madison Square Garden Co. 50 per cent of first \$16,000.....	8,000.00
	\$16,000.00
Board of Trade 75 per cent of \$36,457.86.....	\$27,343.40
Madison Square Garden Co. 25 per cent of \$36,457.86.....	9,114.46
	\$36,457.86
RECAPITULATION.	
Madison Square Garden Co.....	\$ 5 000.00
Madison Square Garden Co.....	8,000.00
Madison Square Garden Co.....	9 114.46
Board of Trade.....	8,000.00
Board of Trade.....	27,343.40
	\$35,343.40
Net Profit.....	\$57,457.86

In the last issue of this paper it was remarked that the projected eastern show would likely net its promoter about \$70,000. In view of the above figures, it is necessary to amend this statement. Allowing for a shrinkage of about \$12,000 in space rentals, and assuming that the receipts from other sources will not be diminished, Mr. Sanger has in sight a profit of \$60,000.

### ENGLISH TRADE CONDITIONS

Investors in English cycle industrial stocks are sullen or exuberant, according as the annual reports of the various companies are shaded with expressions of disappointment or lightened with evidence of hard-earned success. There is no consolation for the losers—they gambled, or were bedeviled by the arch Hooley, and in either event paid the forfeit for gaming or indulging in licensed roguery. As the usual earning power of money is very low in fair Albion, it is doubtful

if the moderately successful operators feel any such keen sorrow at being cheated of their expectations as would be manifest in a people more accustomed to large rewards in commercial enterprise. The heavy winners are, as usual, not more envied by the class they distanced than they are hated by those they have spoiled.

These company reports are highly instructive. They disclose the precise causes of disaster and success, expose to view many a hidden skeleton, give expression to future policies, and, when compiled with care, present a tolerably accurate picture of the present state of the industry. They are not composite in character, but special. Here, for example, is the heart of a report of a large saddle-making house:

A report was presented showing a clear profit of £30,119, giving, with the £256 brought forward from last year £30,375. Out of this it was proposed to carry £15,000 to the reserve fund (which would then stand at £35,000), and to pay a dividend of 10 per cent per annum. The chairman pointed out that the profit for the year was £6,000 more than that for the year in which the company was inaugurated. The profit shown was all in actual cash, and they had some £5,000 in addition. The difference between the profits of the year just closed and those of the previous year was due to the extraordinary demand of 1896. In proof of the soundness of their trade, it was pointed out that on the very large turnover their debts amounted only to £250. The chairman stated that the reserve fund was invested outside the business. A director thereupon said that it would be better in a trading concern to have the reserve fund invested in the business where it would be making 10 per cent instead of the beggarly 3½ per cent they could get outside.

In the following report the calamitous history of a stamping concern is recited, and reconstruction is urged in order to avoid ruin:

The meeting was called to consider a scheme for the reconstruction of the company by the formation of two companies, one to carry on the stamping business, and the other to make a patent lift. It was proposed as part of the reconstruction scheme to offer to each holder of five shares in the old company one ordinary and one preference share of £1 each with 17s. paid up in the stamping company, and one share of £1 with 19s. paid up in the lifter company, the unpaid capital to be called up as occasion required. These calls would give a new working capital of £6,000 to the stamping company, which would pay all liabilities up to the present time, and £1,000 to the lifter company, which would start with assets only. The business was at the start primarily a stamping trade. During the boom in the cycle trade every stamp was fully employed at a good profit, but immediately the present company was floated the cycle trade dwindled down. The directors endeavored to extend their business beyond the cycle trade, and met with some success in that way. There were now unexecuted orders amounting to four or five thousand pounds, and the returns were nearly double what they were a short time ago. It was thought the stamping business should pay a good profit, if expenses were curtailed, and such savings could be made in that department as would suffice to pay the preference dividend, and a substantial dividend on the ordinary shares. The proposed new stamping company would have a capital of £40,000. It was decided to appoint an advisory committee to work with the directors in carrying out the scheme.

Loss of foreign trade forced the directors of a heavily capitalized cycle manufacturing house to make these pitiful disclosures:

Your directors regret that the year's trading has been, from a variety of causes, very unprofitable. The result is a loss on trading of £5,682, to which must be added certain exceptional charges for advertising and bad debts, and these, together with depreciations, managing director's remuneration, and debenture interest and bonus, make up the total loss to the heavy figure of £14,037. Against this can be set the amount brought forward from last year, £437, leaving a net loss to carry to the balance sheet of £13,600. Chief among the causes for this unsatisfactory state of affairs has been the complete collapse of the foreign trade. Some portion of this trade, however, your directors are sanguine of again securing. Again, the management and establishment expenses were arranged on the assumption that a large trade would be done, and the extended trade not having been secured, the existing expenses have told very heavily against a diminished turnover. During the last few months radical economies in the establishment and management expenses have been made, the benefit of which should do much to ensure a better result in the current year. In face of the figures shown, your directors have relinquished the whole of their fees for the year.

A firm of rim makers, in acknowledging the necessity for reducing prices, reported:

The chairman said the directors met the share-holders content with the past, and confident as to the future, notwithstanding the difficulties they had had to encounter by reason of competition, and the evil reputation of unsound cycle companies. They had more than held their own, but they had not been able to do this without some modification of prices. The price of tires had been reduced, and as the tire and rim were sold together, it was only reasonable that the rim should also be reduced. Their trading during the past year had been largely in excess of that of the previous twelve months, and the orders on the books were much more numerous than ever before. They had recently built works in Germany four times the size of the building in Birmingham, and they intended to extend their business into France and Belgium. As to the German works, they belonged to the present share-holders of the company, with the exception of a few shares which had been allotted to one or two German gentlemen who, it was expected, would bring native business.

Faulty construction, due to inexperience, cost the tire house making this report a pretty sum of money:

Coming to the question of the adverse balance upon the year of £19,606, the chairman said the reasons were the same as he gave last year, namely the difficulty of introducing a new article, and the extraordinary expenses which they had to incur in pushing the tire. As he told them last year, they found in the middle of that season a mistake had been made in the manufacture of the tires, and they had to call them all in, and he estimated that policy, which was absolutely necessary, was represented by £10,000 in the loss shown this year. As to the remaining £9,606, a large proportion of this was due to the expenses of travelers and advertising. Considering the conditions of the cycle trade this year, their business done was better than the previous year, and for each month since the end of January had steadily shown a profit. A director wondered who was responsible for making such a large number of faulty tires. The chairman replied that it was not so much bad work as want of experience, and the managing director was no more to blame than the whole of the board.

By the time the record is complete it will be discovered that the English cycle industry is in a much sounder state than one would have supposed after reading the fiction supplied by writers who studied only surface conditions and drew upon their imagination to conceal their deficiencies.

\* \* \* \* \*

The attention of agents is again directed to the slipshod manner in which country newspapers print advertisements. If the announcements are written with skill, they are almost certain to be composed in bad taste, inconsequential lines are unnecessarily accentuated in type, and their value is either lost or smothered. But it is in the handling of cuts that the papers and their customers give the greatest offense. There are but two kinds of cuts which are suitable for daily paper advertising. One is the outline form of work, which is neat and artistic in effect, and the other is the striking black and white work. If the former style of drawing is selected for use, it is essential that the fewest lines be employed. For example, the wheels of a bicycle need only the circles of tires and rims, and heavy dark frame lines passing through them. To sketch in the spokes is to mar the forcefulness of the picture and to invite the printer to clog the small openings with ink. Reference to the department of this paper entitled, "Information for Buyers," will frequently reveal model outline work. The solid black and white style of illustrating is so little practiced by daily paper advertisers that whenever it is employed it is certain to attract attention. It is not without its disadvantages, however, for imperfect inking often causes the cuts to assume a faded appearance. In outline drawings the frame lines should be heavy, while the saddle, handlebar, sprocket and chain reaches should be faint. Under no circumstances should a base line be used in outline work. Advertising is so sure a sign of character in a business house, nowadays, and is so closely studied by the general body of readers, that it is the duty of agents to furnish in illustrative work what is recognized as modern, artistic and business-like.

\* \* \* \* \*

In casting up accounts between the three chief factors in the cycle trade, it is seen that the maker has been squeezed harder by the dealer than the latter has been squeezed by the public. The discount to the trade on new goods is about the same as it was a year ago, though list prices have been materially reduced. In view of this, the agent owes it to the manufacturer that he shall sell for cash as often as possible, shorten the period of installment sales, expand his trade, and thereby secure himself and the firm from which he obtains his supplies. If these things are not done, and competition among manufacturers goes on increasing, there will be a thinning out of both makers and dealers. It is the current impression among makers that the period of greatest activity in competition is now at hand, and that all the trials which have been endured till this time have been mild in comparison to the severity of the ordeals which are yet to come.



# STEARNS BICYCLES

"That exquisite something called style, which, like the grace of perfect breeding, everywhere pervasive and nowhere emphatic, makes itself felt by the skill with which it effaces itself, and masters us at last with a sense of indefinable completeness."

Bicycle talk covers many subjects—but it always gets back to the style and quality of the wheel.

The intrinsic merits of different bicycles are important not alone to the dealer, but to the purchaser, who is, after all, the determining factor.

What has put the stamp of popular favor upon the Stearns?

It is a structural unity.

It is stiff, without loss of elasticity; its weight is in the parts that bear the rider; its lightness is in the parts that make the speed; its strength is in all.

The Stearns bicycle crystallizes in itself the best work, the best material and the best ideas of the times.

There is no agency more valuable.

The trade on the Pacific Coast supplied from our branch store, E. C. Stearns & Co., 210 McAllister Street, San Francisco.

**E. C. Stearns & Company,**  
Syracuse, N. Y.

The trade in the Dominion of Canada supplied from our Canadian factory, E. C. Stearns & Co 67 Adelaide St. West Toronto, Ontario.

## SNELL BICYCLES

—1899—

"STRICTLY HIGH CLASS"

New designs, valuable, up-to-date, exclusive features which attract the eye, satisfy the rider and merit the approval of the most critical.

**DEALERS!  
PROFIT**

by the merited popularity of the Snell and write us at once before desirable territory is all taken.

THE SNELL CYCLE FITTINGS CO.  
TOLEDO, OHIO.



## WHEELER SADDLES

HAVE ALWAYS BEEN MADE WITH THAT  
CURVE IN THE BACK.

OUR LINE FOR '99 COMPRISES BUT FOUR DISTINCT MODELS:

- "EXTRA" Woman's . . . Broad, Soft and Easy.
- "EXTRA" Men's . . . Hygienic and Durable.
- "SPECIAL" Roadster . . . An ornament to any wheel.
- "CORK-TOP" Racer . . . Light and Graceful.

These saddles are made and finished in the careful and stylish manner that has always characterized Wheeler Saddles.

Send for samples of the most popular saddle on the market.

**THE WHEELER SADDLE CO.**

1427-1457 Woodward Ave., DETROIT, MICH.

Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT,  
New York Distributing Agents: HARTLEY & GRAHAM.

## MAKERS SCORN CYCLE SHOWS

### Another Volume of Testimony in Support of the Uselessness of Such Exhibitions

If any doubt ever existed in the minds of individual manufacturers touching the temper of the general body with respect to national cycle shows it is by this time thoroughly dispelled, for the wholesale condemnation of such enterprises vented through the medium of the Cycle Age has crystallized a belief which the National Cycle Board of Trade held to be true, but which calumnious detractors of that expiring institution scorned to accept. The bicycle industry is even superior to show promoters—and that is saying much in the worshipful presence of Sanger and Van Sicklen.

In some inscrutable manner these show promoters have conceived the idea that the bicycle trade is sick—so sick that it is like to die if they are not called in to minister to its needs. The truth is, however, the trade was never so healthy as it is at this moment, and its robustness is plainly discoverable in the demonstration of scorn it displays at the approach of the promoters.

#### Superstition of Cycle Shows.

It is storied by the witty Lamb in his "Dissertation on Roast Pig" that the origin of that toothsome dish is traceable to the accidental burning of a house in which the grunter had his abode, whereupon the sorrowing owners devoured the animal and pronounced the flavor so delicious that whenever after they wished to feast on the same food they turned to incendiaryism. Similarly with some in the cycle trade. Their fortunes grew in the years when cycle shows flourished, and they are in the habit of ascribing all luck to such accidental sources.

Herewith are presented some more opinions concerning shows:

#### Will Not Exhibit at Any Show.

We do not take any interest whatsoever in cycle shows. We do not expect to exhibit any of our goods at any cycle show whatsoever. We think the time has gone by for cycle shows, and do not believe it will help the business in any way.

WESTERN WHEEL WORKS.

#### Will Not Spend Money on Shows.

We are not in favor of cycle shows, either local or national. We do not believe that they are needful to the industry, nor do we expect to be induced to spend our money for such advertising.

REMINGTON ARMS CO.

#### Ten Times More Harm than Good.

We believe that cycle shows should be local. Not one agent in a hundred attends a national show, and we think that national shows do ten times as much harm as they do good. Local shows in the latter part of February and March no doubt create an interest and help the business.

H. A. LOZIER & Co.

#### Money Better Spent on Traveling Men.

We are not in favor of cycle shows as conducted by the manufacturers, whether they be local or national, believing that the amount spent in conducting the exhibitions at such shows could be more remuneratively expended in placing their goods before agents by traveling men.

TRINITY CYCLE MFG. CO.

#### Wisdom in Abolition.

We are not in favor of shows, either as a local or national institution, and we think the old Board of Trade acted wisely when they decided to abolish them.

KEATING WHEEL CO.

#### Will Hurt the Exclusive Dealer.

In the writer's opinion, cycle shows, either national or local, will cause a general demoralization in the bicycle trade so far as the exclusive bicycle dealer is concerned. Such good wheels will be exhibited at prices that will not exceed \$25, that the general

public will refuse to pay more. As a bicycle dealer cannot live on those margins, naturally the customer will go where he can get the machine at the price he is willing to pay, and only those people who are handling bicycles as a side line can afford to do the business on that margin. Looking at the matter from the standpoint of taking an interest in the exclusive bicycle dealer, I cannot say that I am in favor of cycle shows.

C. S. DIKEMAN.

#### Big House Will Not Exhibit.

We do not approve of cycle shows, and do not intend to exhibit either at the New York or Chicago show. We are not in favor of national, local, or, in fact, bicycle shows of any kind.

AMES & FROST CO.

#### Wait for Developments.

The developments of the next few weeks will probably demonstrate whether the shows are to become a prominent trade factor or not.

A CLEVELAND MANUFACTURER.

#### One Way to Burn Money.

This country has passed through a terrible depression during the past five years, and being engaged in several other manufacturing industries as I am, I have tried to keep them all going, which has given me a large amount of experience and has cost a good many dollars. Now, if I had more money than I knew what to do with and wanted to throw it at the "birds," I might be in favor of holding shows in New York, Chicago, Toledo and every other place.

ALVIN PETER.

#### Responsible for Present Troubles

I have never been an advocate of cycle shows, believing that it was a detriment to all large manufacturers who employ their own travelers to solicit trade, as it enables the small manufacturers to attend the cycle shows and market their product without employing any travelers to visit the trade. Consequently, without an expense of that kind, they are able to quote prices that a large manufacturer who has a good traveling staff, would be unable to quote, as the expense of visiting the trade is quite an item, and I believe that the cycle shows of the past are largely responsible for the bicycle business being in its present chaotic condition.

OHIO MANUFACTURER.

#### Will Exhibit Under Protest.

On the whole we are not in favor of bicycle shows, either national or local, although we have taken some space in the forthcoming show at Madison Square Garden.

E. C. STEARNS & Co.

#### Opposed to the Expense.

I am, as a rule, opposed to the expense of bicycle exhibitions, but I believe that one exhibition can be held each year in the Madison Square Garden, under that prince of exhibition managers, F. W. Sanger, and be made a success. That exhibition should be for the buying public and not for the dealers. I do not favor exhibitions for dealers.

ALBERT A. POPE.

#### Shows Debauch the Industry.

We have not believed cycle shows needful or beneficial to the trade. We did not exhibit in '95; we did, however, in '96 and '97 at both New York and Chicago. Possibly in the very early history of the industry shows were helpful in calling the attention of the general public to bicycling, but we consider that the business has been so thoroughly established since '94 that national cycle shows are not necessary to legitimate manufacturers. We believe that instead of being beneficial, it lowers the standing of the industry among the large industries of the country. It has always been our policy to market our goods through legitimate channels of trade, and in the same way that other staple goods are marketed. A so-called national cycle show deters many of the retail dealers, in the territory adjacent to where the show is held, from placing their orders until after they have attended the show. When they reach the show they become confused from the multiplicity of machines which they see, and often make a selection more hurriedly, and with not as good results to themselves as they would have made with the traveler

at their own store. A national cycle show held at the present time would bring together, in our opinion, not the largest and most enterprising of legitimate manufacturers; but, on the other hand, certain jobbers of machines would exhibit, and a large number of the smaller manufacturers who have not the financial backing to enable them to put out a corps of travelers, and the so-called show would develop into a large auction house. As for ourselves, we shall not exhibit at any cycle shows this year. From conversation we have had with some of the standard makers of the country we believe that there are a goodly number that feel as we do. We have not a word of criticism to offer, or a word of objection to make to any one who desires to exhibit at a cycle show, thereby, in our opinion, putting their goods, as it were, into an auction house. These are questions of policy to be determined each for himself. In the matter of local shows, when properly managed, under the auspices of the local dealers where they expect to retail goods, in some instances they may be beneficial, although we very much doubt any benefit arising even from a local show.

THE GENEVA CYCLE CO.

#### No Need for National Shows.

Just at this time we are not in favor of the idea of holding shows, unless, indeed, they are purely of a local character. The trade generally is just emerging from a period of price depression and overstocked domestic markets. No manufacturer will say that the sales made at any of the so-called "national shows" were on a paying basis. Rather will it be admitted that the prices prevailing were forced ones, secured by visiting dealers through the processes of imagined competition. Again, the extravagant expense of the exhibitions is no small factor. So long as the Cycle Board of Trade was in control, a judicious restraint was exercised on this question. Now, however, that the Board is dissolved temporarily, these same "promoters" that called this restraint into existence by means of their exorbitant demands and larger personal profits, are again seeking to regain the confidence of the trade and impress on all the necessity of shows. There is yet a demand for an honestly made, fashionably designed bicycle. Even the cheaper wheels of the better class are in demand and appreciated. The day of the cheap trash, however, is gone. So the plea of "loss of interest by the public" cannot be adduced as an excuse for a "show." We believe that what the manufacturer wants is a year of rest and fair prices. Then, in 1900, when the new century smiles on our new America, we might be in favor of a show. Make it a grand one at that. Include motor cycles and carriages of all descriptions. Make it of a broad national character, under the control of the trade and absolutely removed from any connection whatever with any promoter or aggregation of them. Until then we are opposed to a show, either in the east or west. When it is held, some central point should be selected, and the opening date be January 1, 1900.

THE THOMAS MFG. CO.

#### Old Shows Held Too Early.

I believe that, properly handled, an exhibition in Chicago and one in New York for the bicycle riders is a desirable thing. Exhibitions in these two cities would draw the people from all over the country, as there is always a large number of people in these two cities at all times, so that they really become almost national exhibitions. Enthusiasm in bicycles can be kept up in no better way, it seems to me, than by exhibitions like this, and February or March I should think would be about the proper time. The evil of the old exhibitions was that they were held too early. They gave one manufacturer a chance to copy the models of others, and were too early for the rider.

NEW ENGLAND TIRE MAKER.

#### Hope Shows Will Reawaken Interest.

There are a great many different views on the show subject, and while some of them hold good in one locality, it is our opinion that they will not do so in others. We gave the subject of cycle shows this year considerable thought, and finally decided to go into the one to be held in Madison Square Garden. We do so, hoping that a show of this character will put new life into the cycle business and increase the interest among both riders and prospective riders. As for its delaying the purchase of goods by agents throughout the country, I think it will have no such effect as that upon the trade whatsoever, as the majority of agents throughout the country have learned that it is well for them to stand by the product that they have handled successfully in the past.

AN EMPIRE STATE BICYCLE CO.

#### Shows Overcrowded the Industry.

During the time that the national shows were in vogue, we were very much benefited by them, and we would have been more so had they been held in December instead of January and February. This, however, also has its drawbacks, on account of various dealers not being able to attend the cycle show on account of the holiday trade, as

there are very many dealers who have holiday goods besides bicycles. Our opinion is, that we should not have national cycle shows, but we believe that local cycle shows in the various cities would greatly benefit the local trade, to enthrone interest in bicycling; but as for a national show, with an aim of securing orders, etc., for the manufacturers, we do not think they would be desirable at this time, as we feel positive that the cycle shows have had a great tendency to interest other capital and increase the number of bicycle manufactories, as they are put on an equal footing with the large manufacturer, who employs salesmen to solicit the trade, and very little of this will be necessary if national shows are held; and the small dealers, on account of having no expense in marketing their goods, will be put in a better position to compete with the legitimate manufacturers. The result of so many manufacturers starting in the business is apparent.

PENNSYLVANIA MANUFACTURERS.

**Will Not Exhibit.**

We do not think that at this time that cycle shows are advisable, and cannot see our way clear to take part in any such exhibitions. While it is true they may result beneficially to a certain part of the trade, we do not think that the results will be in proportion to the expense necessary to make an exhibit.

GILLIAM MFG. Co.

**Want Nothing to do With a Show.**

Our idea of the cycle show is that it is a big nuisance, and we want nothing to do with it.

HUNT MFG. Co.

**Only Show Promoters Profit.**

We believe cycle shows have lost their usefulness. They have always been an extravagant method of advertising, and were profitable, in our opinion, chiefly to the promoters of the show. They amount really to a local exhibition, the percentage of those who come from a distance being too small to take into account. We shall not exhibit at any cycle shows should they be held.

KIRKPATRICK SADDLE Co.

**February the Month for Shows.**

We are in favor of holding cycle shows for the purpose only of stimulating the public interest. This method of advertising has two advantages—the impression made on those who attend, and the influence of the prominent reading notices given in all daily papers and in many periodicals. To get the full benefit without the disadvantage of having the agents wait to decide upon their lines, shows should be held at a time shortly preceding the riding season, say, the middle of February, and as it is a well-established fact that the population of all the states follow the fashions and doings of the largest centers, two or possibly three national exhibits in, say, Boston, New York, Chicago, would, we think, give the best returns for the money invested.

THE MESINGER BICYCLE SADDLE Co.

**Stimulate Sales of Sundries.**

We believe that shows are of benefit to the manufacturers of bicycles and bicycle sundries, not, however, as far as sales are concerned to the dealers or jobbers, but as they apparently have an effect upon the interest of the consumer and seem to arouse the enthusiasm of the purchaser in connection with the bicycle business. We believe that business in bicycle sundries would have been better last year had there been a cycle show. Possibly every other year may be sufficient to stimulate the interest of the consumer, and we think that the early part of February or the middle part the best time for the exhibition to be held. Possibly, however, a later date than this might be even better; not after the cycle season has actually opened, but at that period of the year when the consumer is beginning to think of looking over his wheel and taking an inventory as to what his requirements are going to be for the coming season.

EASTERN LAMP MAKING Co.

**January Shows are Too Late.**

We believe in national cycle shows, providing they are handled on a businesslike basis. We have already taken space at the New York cycle show and may decide to exhibit at the one to be held in Chicago. We believe that these shows should be held earlier, say, in November, or early December at latest. The question of holding local shows is one that in our opinion should be decided by local dealers, for conditions differ in various localities. We are, however, of the opinion that local dealers holding shows cannot expect much assistance from the manufacturers inasmuch as present prices and margins will not justify so large an expense.

THE VEEDER MFG. Co.

**Favor a Small Show in Chicago.**

We think that the cycle trade is ripe for some sort of an exhibit, and we think that it needs it. While we do not consider it nec-

essary for the bicycle people to go in so heavily and spend much money; still, an exhibit of this kind will benefit the trade, as it brings in the small merchants and allows them to see the goods which they intend to purchase, all in one place. We will be glad to have Chicago have a cycle show, and will do what we can to make it a success.

CHICAGO HANDLE BAR Co.

**Decidedly Opposed to All Shows.**

We are opposed to cycle shows at any time or place. It is our belief that the cycle trade has not been benefited by them in the least, and we think that the best thing the Cycle Board of Trade ever did was to discontinue the national shows. We note that arrangements are being made for local shows in New York and Chicago, but we shall not exhibit at either of them.

INDIANAPOLIS CHAIN & STAMPING Co.

**Object to Any Kind of a Show.**

In our opinion cycle shows do not pay for themselves from the manufacturers' point of view. They do no doubt stimulate trade in a general way to a certain extent, but we do not think sufficiently so to warrant the necessary expenditure. We are decidedly against them in any form.

THE NEW DEPARTURE BELL Co.

**Shows Prevent Even Distribution.**

Our opinion concerning cycle shows has been that they are a decided detriment to the trade, as they retard business and make the bicycle industry one grand rush to fill orders that should be distributed more evenly during the year. It may be, however, that a show stimulates interest that is otherwise lacking.

AN EASTERN TIRE HOUSE.

**Parts Makers Object.**

As parts manufacturers we are decidedly against cycle shows of any kind, as we have never found that they helped us in any way, but, instead, take up a great deal of time that could be spent to better advantage in other directions. As regards cycle shows for the bicycle manufacturer, that is a subject on which we are not in position to express an opinion.

C. J. SMITH & SONS Co.

**Absolutely Indifferent.**

We have no interest, one way or the other, in cycle shows.

BARDONS & OLIVER.

**Will Not Exhibit.**

We shall not exhibit at any of the cycle shows.

THE CLEVELAND MACHINE SCREW Co.

**Not Wanted by Chain Makers.**

We do not favor shows.

A NEW ENGLAND CHAIN Co.

**Do Not Want a Show.**

I am not in favor of holding a cycle show.

EUGENE ARNSTEIN.

IN FOREIGN MARKETS

Miscellaneous Information Pertaining to Honduras, Cape Colony and Syria.

In the markets of Honduras the United States leads all foreign competitors and secures the bulk of orders from importers. In some lines, however, the English have all the trade. The great drawback to imports is the duties. The published rates are so much a pound; but there are additional charges, which make the tariff about double. For instance, a party bought two and one-half kegs of nails in the United States; when the duty was paid, they cost \$11.20 gold. Another party bought \$78 worth of furniture, the duties per published rates being 26.32 pesos (the peso being worth about 43 cents); 5.04 pesos were charged for weight, plus 30 per cent, plus 20 per cent, plus \$10.50 for paper at custom-house, making the total 59.42 pesos, or \$23.76 gold.

In Syria there is no lack of appreciation of the excellence of American goods, but the cost of transportation adds heavily to their price. Our sewing machines are in strong demand. With direct steamship facilities, many lines of American products would find ready sale.

It is claimed by business men in Cape Colony that the English and French houses are poorly represented by their travelers. The English travelers are

generally young men who have worked in the office until they are run down in health and who go abroad for a change, with no knowledge of the business except that gained behind a desk. French firms are willing to accept as representatives abroad men who have failed in their own country. The United States manufacturers send out a high class of representatives—astute men, who have large and varied experience in their respective lines; men educated in the details of the business they represent; men of the age that brings wisdom and accuracy; men that earn and command large salaries; men of energy and vigor.

IN A FLOURISHING CONDITION

Commercial Report Says 1898 Will Be Banner Year in Commerce of United States.

The flourishing condition of our commerce at the present time, both interstate and foreign, which must have a marked effect on the bicycle trade next year, is strongly reflected in Bradstreet's commercial report for last week. It is as follows:

The business world enters on the closing month of the year with so many favorable and so few depressing features in sight as to leave little doubt that the year 1898 as a whole must hereafter furnish the basis for estimate when comparisons of large business are to be made. Nearly all obtainable statistics and reports as to the volume of business point to the present year having heavily exceeded any former year in the amount of business done, and though comparisons as regards prices are not so favorable as in earlier years, notably 1892 and 1890, when quotations of most staples were considerably higher, still the expansion in trade, due to increased population and enlarged foreign demand for our products, has resulted in an aggregate volume of business done considerably in excess of any former year. Strong confirmation of this latter view is found in recently compiled statistics of bank clearings, railroad earnings and other measures of business conditions.

Exports of Bicycles and Materials.

Exports of bicycles and bicycle material from the port of New York for the week ending November 29, are recorded as follows:

	Bicycles.	Materials.
Africa .. .. .	\$10,412	\$ 775
Belgium .... .	479	731
England .... .	2,221	3,006
Germany .. . .	5,349	8,548
Japan ..... .	1,000	.....
Sweden ..... .	.....	3,276
France ..... .	.....	225
Italy ..... .	.....	261
Switzerland .. .	45	.....
Holland ..... .	679	.....
Egypt ..... .	50	.....
Siam ..... .	895	.....
Hong Kong ..... .	450	400
British East Indies .. . .	.....	340
British West Indies .. . .	818	362
Cuba ..... .	17	.....
Porto Rico ..... .	210	.....
South American countries....	202	98
Totals .. .. .	\$22,627	\$18,022

Exports Largely Exceed Imports.

The following table shows the imports and exports of American manufactures since 1880:

	Imports.	Exports.
1880.....	\$268,333,432	\$102,856,015
1881.....	284,763,615	114,233,219
1882.....	322,036,663	134,794,346
1883.....	337,264,528	134,228,083
1884.....	304,352,393	136,372,837
1885.....	265,704,352	147,187,527
1886.....	285,050,564	136,541,978
1887.....	306,030,440	136,735,105
1888.....	324,823,601	130,300,087
1889.....	328,629,989	138,675,507
1890.....	346,638,654	151,102,376
1891.....	368,225,181	168,927,315
1892.....	316,092,469	158,510,937
1893.....	356,866,396	158,023,118
1894.....	234,139,173	133,728,808
1895.....	317,257,176	133,595,748
1896.....	328,937,528	228,571,173
1897.....	327,324,920	277,285,391
1898.....	226,212,635	291,208,358

The imports in the year 1898 were 30 per cent less than in 1888, although the population had increased 25 per cent meantime.

## AUCTIONS DEMORALIZE TRADE

### HIGH PRICES RULE, HOWEVER

**American Bicycles, Properly Handled, Hold Their Own in Australia—Opening for American Parts.**

Sydney, Nov. 5.—The state of the cycle trade in Australia at the present time is not satisfactory to the many agents, and if this coming season is not a particularly busy one with some of them, they will be compelled to close up. The Austral cycle agency, the largest retail concern in Australia, with branches in every colony, is among the number. At one time it had a monopoly of all the best English machines, but has lost them all, with the exception of The Swift and the Triumph, which it is now booming in a sensational manner. Recently the company held several auction sales in both Sydney and Melbourne, which were successful from its point of view, but there is not the slightest doubt that these auction sales do much harm to the trade. It is not likely that people will pay \$125—which is the lowest price a really first-class wheel is sold at—when they can go to the auction room and purchase a machine for about \$50.

There have been many auction sales in Sydney and Melbourne of late, and only on October 31 fifty machines of two leading American makers were sold in Melbourne without reserve. It is principally American wheels that figure at these sales, and some of them are not heard of until put up at auction, where they very seldom bring more than \$45.

#### Sales Spoiled By Mismanagement.

American goods up to date have not received fair play in Australia, and, with the exception of one or two agencies, are not properly handled. The following instance will give some idea of how business transactions are conducted. A New York state manufacturing company recently appointed a local cycle company sole agents in New South Wales for their line. This company did not push the machines at all, and of course did not sell many. They afterwards complained that they had not received any duplicate parts, and consequently repairs were effected with great difficulty. The agency was handed over to I. Phizacerly shortly afterwards, and he was sent fifty machines, supposed to be 1898 pattern, but on receiving them he found that they were 1897 pattern. He should also have received a box of duplicate parts, but instead they were sent to the cycle company which had relinquished the agency. To make matters still worse, about a week after Phizacerly was appointed agent Peabody & Co. put fifty machines of this make into the auction room for sale. Phizacerly complained bitterly, but he is now doing fairly well with the line at \$85 to \$100. American manufacturers should deal direct with the agent and leave the middlemen out of the running altogether.

#### Examples of American Successes.

American wheels of high grade, if properly handled, more than hold their own with the British product. As an example, the Sydney Cycle company is sole agent for the Cleveland in New South Wales and handles the Cleveland almost exclusively. It has nice premises, runs its house on up-to-date lines, advertises judiciously, and as a consequence is one of the busiest, if not the busiest, firms in New South Wales. It lists the Cleveland at \$125 and can sell them almost as fast as they can land them. Take also James Smith & Sons, of Brisbane, Rockhampton, and Charters Towers, Queensland. This firm holds the agency for two En-

glish machines and one American, the Stearns. It makes the American the leader, handles it properly, and is progressive, and the result is that the Stearns is the most popular bicycle in Queensland. Very few American wheels are represented in Western Australia.

#### Native Manufactures Growing.

There is a good opening in Australia for American parts. In every colony there are a lot of local manufacturers who build from English parts, principally B. S. A. and Perry's. These Australian-built machines hold their own with the imported article. The very cheapest make sells at \$62, while others run as high as \$125. The Dux is one of the best. It is built of B. S. A. parts by the Dux Cycle company, of Melbourne. Next to the Dux comes the Bell, built by a New South Wales firm from Perry's parts, and sells from \$85 upwards.

Of the American machines on the Australian market, the Cleveland, Columbia, Dayton, White Flyer, Stearns, Monarch, Rambler and Union are most popular. The Columbia chainless is the best of the chainless bicycles, but the price of \$150 asked by the New South Wales agents is almost prohibitive.

There are on the Australian market at present English, American, Canadian, Italian, German, French and home-made bicycles, so the Australian has a sufficient choice.

#### Pointers on Equipment.

Hickory handle bars are coming much into favor and hundreds of riders are to be seen daily with them fitted to their mounts. They are not likely to supersede the steel handle bar, however.

The appearance of a machine as it stands in an agent's show room has a great deal to do with its sale. Many of the American manufacturers do not seem to recognize this fact and send out the upturned handle bars, which do not add to the appearance of the machine, and the agent shows the machine with these bars, that are never used here except by aged gentlemen. If the samples were fitted with attractive bars and other equipment, the sales of American machines would be still larger.

The wood mud-guard should be discarded altogether. It is never used, for the simple reason that the average Australian does not bother about mud-guards at all; and such as do buy the rubber guards, that cannot be noticed when in use.

#### Gear Cases Not Popular.

Much has been written as to the desirability of fitting gear cases to American wheels. For the Australian trade American manufacturers need not bother about gear cases, as 90 per cent of the riders do not use them, and, if the writer is not very much mistaken, they never will.

The most popular style of machine at the present time is a 22-inch frame fitted with 28-inch wheels. Anything higher than 24 inches is not in much demand, although of course for very tall riders a 26-inch frame is desired, though very few are purchased.

#### Gendron Co. Adopts Union Label.

The Gendron Wheel company of Toledo has adopted the union label of the Bicycle Workers' International Union, and hereafter all machines turned out by the company will bear that mark. The representatives of the union are greatly pleased by the action taken by the Gendron company, and believing it to be a forerunner of future achievements in this line, will begin active work in other cities. President Mulholland says: "This step of the Gendron people shows them to be in advance of their competitors on this question, and is one that cannot fail to be recognized by organized labor."

## SINGLE TUBE TIRES IN FRANCE

### INTRODUCTION HAS BEEN SLOW

**Clement-Gladiator-Humber Support of Dunlops Discouraged Their Sale—Situation Now Favorable.**

The single tube tire has had greater obstacles to overcome in France, probably, than anywhere else. In addition to the fact that detachable tires were the first to come into use, and that the French people, like other Europeans, are slow to adopt new things, there have been some barriers to the introduction of the single tube tire in France which have not existed elsewhere, quotes the India Rubber World from George R. Ostheimer, of Paris.

In the first place, three of the leading French bicycle concerns formed a syndicate, under an agreement to use only the Dunlop tires on their machines. These were Clement & Co., makers of the Clement bicycles; A. Darracq, maker of the Gladiator, and Humber (France). When it is considered that these firms control more than half the bicycle trade of France—possibly two-thirds—and that their example doubtless has had an effect even upon that portion of the trade not under their direct control, it is easy to see how potential their action must have been in discouraging the sale of single tubes.

#### Reduction of Detachable Tire Prices.

The Dunlop people organized a company in France (Compagnie Francaise Pneumatiques Dunlop), with a capitalization of \$3,500,000. Their first step was to seize tires made by several French rubber concerns, against whom they brought suit for infringement. The defendants combined to protect their interests, the litigation ending in a decision against the validity of the Dunlop patents in France. As a result, nearly every rubber factory in that country began making tires of the Dunlop type, and generally at much lower price than is charged by the Dunlop company. Consequently, when a good single tube tire is offered in Paris today, its price is higher than that of many makes of detachable tires, whereas in England the lowest prices for tires of this class are still much higher than the single tube sort. While this patent decision gave the Dunlop company a setback, it still has the powerful support of the Clement-Gladiator-Humber combination.

#### Repairmen Unfriendly to Single Tubes.

The tire repair shops in France are still controlled for the most part by interests unfriendly to the single tube tires, and every attempt is made to cultivate a popular belief that the single tubes are hard to repair. But even when a favorable impression has been made by the single tube, it does not follow that the cyclist will at once invest in a pair. If his wheel rims have been channeled for Dunlop tires, as is most likely to be the case, he will feel like continuing to use the Dunlops until the need comes for a new wheel. The introduction of single tubes anywhere in Europe must come about through influencing the manufacturers of bicycles to use them as a part of their equipment, and it will be found easier to influence the producers on a small scale than the large manufacturers. As for American tires, it must be remembered that France has two schedules of import duties—a "general" and a "minimum" rate—and that the former is applied, as a matter of discrimination, to goods coming in from the United States. In spite of this formidable list of discouraging influences, Mr. Ostheimer expressed the firm conviction that single



TRADE MARK



**More Significant Opinions From Agents**



(From Cycle Age of Sept. 15th.)  
 "In the \_\_\_\_\_ bicycle the tires are not cemented on well, and invariably have to be re-cemented before the wheels can be put in use. With closer attention to better tires, etc., it would be a most desirable wheel for my trade."  
 GEO. W. ARSTIN, Central Lake, Mich."

"Tires cannot be repaired simply enough to suit the riders. The cheap single tube has injured the whole single tube family."  
 ROSCOE LANGLEY, Silverton, Ore."



"I prefer a good, guaranteed single tube tire to any other on the market; they will hold air better and are more easily repaired, and when they are beyond repair will then make a good casing that will outwear most of the ordinary casings, which are too light and thin."  
 THEO. H. BOLTE, Kearney, Neb."

(From Cycle Age, Sept. 22nd.)  
 "Tires are not, as a rule, well cemented onto rims at factory."  
 L. R. ADAMS, Demorest, Ga."



In other words, when it is no longer any use as a single tube tire its usefulness can be prolonged by converting it into a double-tube.

"My ideal wheel would be a \_\_\_\_\_ chainless, with detachable tires, etc., etc."  
 E. H. HINMAN, Atwater, O."



"One other thing is the Dunlop Tire fitted on Crescent wheels at the same price as the single tubes. This has been a great success as compared with any other tire, and I recommend it in every respect. We have had an unusual demand for cheap single tube tires, and they have given universal disappointment and trouble."  
 GARDNER R. HATHAWAY, Marblehead, Mass."

(From Cycle Age, Sept. 29th.)  
 "The cheap single tube tire has injured the whole single tube family to some extent, and next season will see the detachable tire more popular than in any season since the advent of pneumatic tires."  
 E. L. JENNINGS, Huntington, Va."



"We have always advocated single tube tires until this season, but will in future push some style of double tubes."  
 C. H. WHITMORE & Co., South Bend, Ind."

"I would like to see a single tube tire at any price that will take the place of a double tube clincher variety of good quality, with customers who have once used the latter. I find wonderful apostles for the single tube kind, but none that have once used the double tube clincher. Tires generally decide a dealer in the handling of his high grade wheel, and a mistake in that decides the fate of the wheel in the community."  
 GEO. A. HOOVER, Fayette, Ia."

**The American Dunlop Tire Company**

134 Lake Street, Chicago.

Belleville, (North Newark) N. J.

36-38 Lombard St., Toronto.



TRADE MARK



**WOULD YOU HIRE**

a one-legged salesman to show your wheels?

**Cheap tires are one-legged salesmen.** Always and everywhere, lifeless and slow, they are a positive injury to any decent wheel.

**Speed is not an accident, it's a result,** and springs invariably from the same cause—the right rubber in combination with the right fabric. And there aren't half a dozen right rubbers and fabrics; only one grade of each produces speed—Fine Para rubber and selected Sea Island fabric. The supply of both is limited, and the price ALWAYS HIGH. No manufacturer can afford to use either in cheap tires.

**Now, you want your wheels to run their best and look their best, don't you?** Then give them able-bodied tires, made of live, springy, Fine Para rubber and strong, elastic Sea Island fabric.

**These two go into Leagues—and nothing but these,** no soft rubber, no substitute, no cheap fabric. That's why "Get There and Get Back" Tires fairly bound with life and lightness.

**LEAGUEKIT**

the puncture doctor, mends single-tube tires. Makes quick and sure cement repair, or quick and sure plug repair—only tool that does the work of two kits at the price of one. Being catalogued by large dealers everywhere. Better drop us a line.

- New York.....25 Park Place.
- Philadelphia .....308 Chestnut Street.
- Chicago .....143-145 Lake Street.
- St. Louis.....411 No. Third Street.
- San Francisco.....509-511 Market Street.

**NEW YORK BELTING & PACKING CO. LTD**

Mention The Cycle Age

tube tires are winning favor in France and constantly finding wider use. He thought it not improbable that in the end single tubes might suddenly become adopted on a large scale, as was the case with the vehicle tires. Better facilities exist now than formerly for getting these tires repaired, while riders are learning to mend them themselves.

### CHEAP CYCLES AS LEADERS

Dealers Throughout Kansas Will Push Low Priced Goods Next Year—Money Plentiful.

Topeka, Dec. 6.—An extensive tour of Kansas discloses the fact that the average dealer expects the coming year to be characterized chiefly by a general demand for cheap bicycles. All indications point to this. There is more money in the state than there has been for twenty years, owing to high prices received for crops and cattle, and the people and land are marked by a general air of prosperity, but there has been within the past few years a revulsion of feeling against high-priced bicycles.

When the manufacturer of a well known high-priced machine recently knocked \$50 off the price of his leader, it did not create more than passing comment in this state. Even at the greatly reduced price, the prospective purchaser feels that he can satisfy his wants for less money.

One dealer in Hutchinson carried several lines at different prices, but one of his cheap machines, scarcely known at the opening of the season, had the best run, and he confidently expects to make much progress in a business way next season by pushing this machine as his leader. In Wichita, Arkansas City, Newton, Dodge City, Lyons, Sterling, Nickerson, Wellington, Winfield, Fredonia, Parsons, Pittsburg, Kansas City, Leavenworth, Atchison, Manhattan, Junction City, Abilene, Clay Center, Concordia, and Washington—all in Kansas—the feeling is the same, and the local dealers have hopes builded high on the cheaper lines.

### Safeguarding Against Accidents.

Any bicycle put on the market today which does not contain in its mechanism the practical improvements which have in view the safety of the individual rider and the safety of the public should be condemned by public authority, for they are a menace to limb and life, writes P. W. Pratt, of the Robert Malcomb Co., of San Francisco, to Cycle Age. Observations on the hilly streets of the Golden Gate have given him positive views on this subject. The law of common sense, he says, teaches the necessity for a brake and bell by day, and a lamp at night. Sooner or later the ordinances of every town and city will require all of the above appliances in their most improved form. The rider must have the power to stop his bicycle quickly and positively in any emergency, and must sound an audible warning by day and carry a visible signal by night of his swift and silent approach. As the use of the bicycle extends year by year, an effectual brake and a good lamp become indispensable necessities, which are more and more being demanded in progressive municipalities. Every precaution against accident should be taken by manufacturer, dealer and rider to prevent any indictment against the bicycle on account of danger, and to cultivate a general sense of utility and security in the widespread use of these invaluable aids to human transportation.

### More Para Rubber Will be Used.

"There is every prospect of coarse Para rubber keeping up in price," said a tire manufacturer recently. "Last year a lot

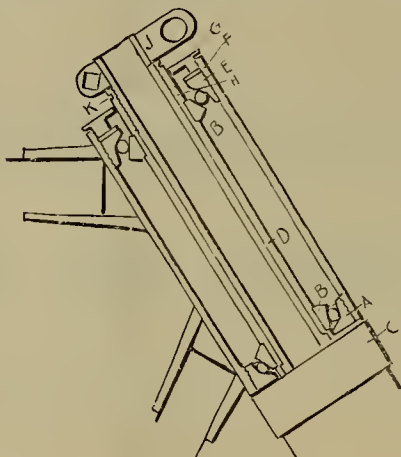
of manufacturers used African grades in tires, with the result that the demand for coarse Para seemed likely to become less pressing. But the African rubber did not stand the test of wear, and now some of those manufacturers wish they had stuck to Para rubber. And there was enough African rubber used by people in this class to make a difference in the cost of the other sort when the tire people come to filling their requirements for this season."

### PULL-OUT FRONT FORK STEM

Suggestion for Facilitating Front Fork Repairs—Also of Value for Tire Mending.

It is an annoying feature of front fork repairs that the steering head bearings must be taken apart and reassembled every time the front forks are removed from the bicycle. Steering head bearings are usually without ball retainers and some time and care must be given to handling these bearings, even though the occasion is merely a three-minute job of some kind on the forks. There being no need of taking steering head bearings apart during the riding season except for the removal of the front forks, it is obvious that a pull-out device on steering heads, by means of which the forks could be removed without disturbing even the adjustment of the bearings, would be as desirable as pull-out hub and hanger axles intended to make more handy the work of removing and replacing wheels and hanger parts. That a pull-out steering head stem is not common seems to be mainly because it has never as yet been publicly tried.

In the illustration is shown a form of steering head with the pull-out feature.



The design is not given as the best, but merely as a suggestion. It can be changed to suit any builder's tastes. As here shown, the steering head is of large diameter and all cups inside, leaving the outer surface flush. This feature has, however, nothing to do with the pull-out scheme. The lower ball cup, A, is inverted and screws into the lower end of the steering head tube, abutting against a shoulder to avoid the necessity of a lock nut. The upper cup, E, is also inverted, and screws into the head in the same manner as the lower, except that it is run down into the tube far enough to allow for a washer, F, and lock nut, G, above, the lock nut also screwing into the threaded end of the steering head tube. A cylindrical sleeve, D, is formed with seatings at its ends for the cones, B. The bearing is then complete when this sleeve, the cones, cups, balls, washer and lock nut are in place. The cups can well be fitted with ball retainers. The lower end of the sleeve is provided with serrations like the teeth of a saw and around the lower end of the front fork stem, which is turned to fit the interior of the sleeve snugly, is a shoulder, C, the upper face of which is provided with serrations matching those on the lower end of the sleeve. The upper end of the stem is threaded in the

usual manner and a long cylindrical lock nut, H, with spanner holes, K, around its upper end, is adapted to screw on to the stem after the latter has been slipped inside of the sleeve, and by being tightened till it bears firmly on the upper end of the sleeve, locks the stem and sleeve together, thus making the fork stem a part of the bearing. The handle bar may be fastened in any of the popular ways. In the illustration the bar is provided for by a clamp, J, which binds around the upper projecting end of the stem and which carries a forward extension clamp for the bars. As before mentioned, the minor details of design, such as cone and cup shape and arrangement, bearing locking device, and handle bar fastening, may be varied to suit the designer.

### NEW INCORPORATIONS, ETC.

Chapman Bearing Co. and Tire Inflating Co. Incorporate in Maine—Wilhelm Co. Reorganizing.

The Automatic Tire Inflator company has been organized at Portland, Me., for the manufacture and sale of patent tire inflators, with \$50,000 capital stock, of which nothing is paid in. The officers are: President, William Howard Paine of Providence, R. I.; treasurer, Mary Elizabeth Paine of Providence, R. I.

The Chapman Double Ball Bearing company has been organized at Portland, Me., for the purchase and control of an invention known as the Chapman double ball bearing, with \$500,000 capital stock of which nothing is paid in. The officers are: President, Chas. H. Chapman of Groton, Mass.; treasurer, Levi Wallace of Ayer, Mass.

The New England Tricycle company, which was burned out in Tyler City, Conn., recently, has taken new quarters in New Haven, where it will continue to make tricycles. The concern employs about fifty hands.

The Wilhelm bicycle factory in Hamburg, Pa., has been temporarily shut down pending a reorganization of the company and an increase of capital stock to extend the works and increase the capacity.

The entire outfit of the Gem Cycle Works of Toledo, O., has been purchased by Barnum & Shirley and moved to a new location.

Merriman Bros. & Co., of Ft. Atkinson, Wis., are adding the necessary facilities to their shops to undertake the manufacture of bicycles on a limited scale.

### CHANGES AMONG DEALERS

Dissolutions of Partnerships, Changes of Location, New Agencies Placed and New Business.

The bicycle firm of Van Horn & Davis, in Utica, N. Y., has dissolved partnership, G. Fred Davis retiring from the firm.

E. L. and A. W. Pequegnat, who conducted the St. Louis Bicycle Exchange in St. Louis, Mich., have dissolved partnership, the former retiring and the latter continuing the business.

Tufts & Thayer, of Palmer, Mass., have dissolved partnership, Thayer retiring and Tufts continuing the business.

Edward Brabner has opened a bicycle store in Auburn, Mass.

J. Allen Darnaby of Lexington, Ky., has bought out the "Cyclery" at 293 Lincoln street, Chicago, and merged it into the J. Allen Darnaby Cycle Works. He will deal in tandems, bicycles and all kinds of bicycle supplies.

W. F. Beachy & Co., who conduct a cycle store and livery in Johnstown, Pa., have removed to larger quarters and added a stock of novelties.

W. F. Ferman of Tampa, Fla., has taken the agency of the Cleveland line which was formerly handled in Tampa by the Tropical Wheel company.



# SHELBY STEEL TUBE COMPANY

THE LARGEST MANUFACTURERS  
IN THE WORLD OF

# SEAMLESS TUBING

## FOR BICYCLES

— ALSO —

Fork Sides

D Rear Forks

Round Rear Forks

Bent Tubes for Ladies' Wheels and

Continuous Forks, Front and Rear.

Fork Stems Complete

D Rear Stays

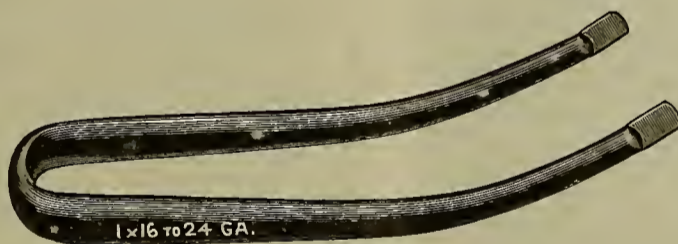
Round Rear Stays



BENT TUBES.



REAR FORK.



CONTINUOUS FORK.



REAR STAY.



FORK STEM.

# 1899

Catalogue of these specialties now ready for distribution, which will be mailed on application.

### OFFICES:

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NEW YORK, - - - 144 Chambers Street  
CLEVELAND, - - American Trust Building



### FACTORIES:

Shelby, O.; Toledo, O.; Ellwood, Pa.; Greenville, Pa.

FOREIGN OFFICE AND WAREHOUSE:  
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1/8 x 20 or 22 GA.

1/8 x 3/4 18 or 20 GA.

1/8 x 20 or 22 GA.

1/8 x 20 or 22 GA.

3/4 x 5/8 18 or 20

1/8 x 20 or 22 GA.

## GROWTH OF A REPAIR SHOP

### Expert Machinist Starts Without Money or Bicycle Experience and Builds up a Fine Trade

The excellent chance there is for a first-class mechanic with but little money to make a repair shop pay and to enlarge it, is well illustrated by a shop in a northern Illinois town of about three thousand people. The difficulties and disappointments of the repair business may be great and varied, but the actual experience of a shopman who has been successful can but show that these difficulties can be met and overcome by the right sort of mechanic who goes into the business to win.

#### Begins With Modest Equipment.

Up to 1894 the proprietor of the shop mentioned had never been engaged in any form of bicycle business. He was a first-class machinist and toolmaker and had worked in the toolrooms of such shops as watch factories and gas engine works. During the winter of '94-'95 he set up a little experimental machine shop in a spare room of his home. The outfit comprised mainly a few well selected bench tools such as had been his property while working in factories, and a small watchmaker's bench lathe that he managed to buy while working at the Elgin watch factory. A little model making carried him along during the winter and in the early spring some one suggested that there was a good chance for him to start a bicycle repair shop. Accordingly he built a small, cheap shop building about fifteen by twenty feet in size, and opened a repair shop. About bicycles he knew but little and his outfit comprised: a small assortment of machinists' tools, the watchmaker's lathe, a few appliances for making tire repairs, and a gas pipe post to hold bicycles on while work was being done on them.

#### Cycle Work Becomes Plentiful.

Along in the early part of May it began to develop that there was plenty of work in the bicycle line to be had, and as the proprietor of the shop had found that his mechanical ability was sufficient to enable him to pick up the bicycle end of the business readily, he determined to go into it a little more deeply. So a gasoline engine and an engine lathe were added to the equipment of the shop. The policy of putting in the lathe at a time when many other appliances of a more strictly bicycle nature were lacking was a doubtful one, but the shopman being a mechanic rather favored the machine tools in preference of the other necessities of a first-class shop. Lathe work came in fairly well, but bicycle work also came into the shop and proved more profitable than the machine work, and by the time that the riding season was fairly well started the shopman found it necessary to provide himself with more bicycle appliances. Nothing was purchased, however, such things as were deemed useful in the accomplishment of repairs being home constructed. By the middle of the summer the shop was equipped with as many tools and appliances as were commonly found in repair shops of that time and the repairer had come to be fairly proficient in performing the simpler repairs brought to him. There being no shops in that locality which were capable of doing a wider range of work, it was an easy matter to get custom and to hold it, 1895 being, as will be remembered, a good bicycle year from almost every trade standpoint.

Some time in August of that summer the shopman discovered while on a pur-

chasing trip to Chicago that there was money to be made with a brazer. He accordingly bought one and returned home ready to do work which no other shop at that time, within a radius of twenty miles from his town, was fixed for accomplishing. Previously to the purchasing of the brazer he had been doing as all small repairers were accustomed to do in the case of repairs that called for brazing work, that is, he had sent the jobs to the nearest large city, in this case, Chicago. A few weeks' use of the brazer developed the fact that most brazing jobs made necessary some kind of enameling afterward. The result of the discovery was the putting in of an assortment of air drying enamels. The course led to more difficulty than it did to profit, and so the repairer began to look into the baking enamel question. At this time there were few small repairers who knew anything about baking ovens or the work of applying baking enamel, so that this one was no worse off than those who had been in the business much longer. A traveling salesman from an enamel house gave him the general principles of enameling and of the construction of baking ovens. Taking the salesman's information for a basis and his own ingenuity for the other requirements the repairer built an enameling oven and started in to enamel frames. The oven was built of sheet iron and heated by a gasoline burner in much the same manner as are the small enameling ovens now on the market. The first frame enameled caused almost everything but tears, and though the workman persevered he did but little enameling work for his patrons that season. During the winter, however, when the traveling men began to come around in large numbers, a lot of useful information was collected, and this after being sorted out and what seemed to be practical put into experimental operation, led to fair success in the work. A home discovery was that for some reason or other it was impossible to keep the frames clean while working on them, and that dirt was sure to collect in the soft enamel and leave the frame specked after baking. A little study led to the conclusion that a separate room was necessary for good enameling purposes. From the time that the enameling room was boxed off in one corner of the shop the repairer began to give special attention to enameling with the result that before the next season was closed as good work was turned out of that little room as ever came from a factory. The enameling room is now an important part of that shop and any kind of fancy and decorative work is taken. The workman has yet to have his first view of the inside of any enameling room, large or small, besides his own.

#### Makes New Tools in Winter.

During the winter of '95-'96, while work was slack, much time was given to the further equipment of the shop. Numberless home-made tools were added, including a first-class polishing and buffing table and a grinder. A grinding attachment was also added to the lathe, thus making possible the accurate grinding of cups and cones after tempering. A forge was put in at little expense and during the winter months the proprietor practiced sufficiently to enable him to bend first-class handlebars by the heating process.

Early in the season of '96 the idea of building bicycles in the shop was con-

ceived, and the plan was put into limited operation. Never having worked in a bicycle factory and never having built a frame the repairer did not run the risk of going ahead before he was ready for the work, and so began to study carefully the various points concerning frame construction. The first bicycle frame built was as well aligned as though it had been erected by an old builder. The next addition to the shop was a frame vise, made desirable by the increasing business in the bicycle building line. The shop continued to run with practically this equipment till the winter of '87-'98, the only other thing added being a vulcanizer and a home-made assembling jack, the first model of which was made in the fall of '96. The jack was made with view to furnishing something on which a bicycle could be knocked down or assembled right side up, or on which some parts could be worked on without necessitating the removal of other parts. The jack was so successful that its first crude form was improved upon, and before the season of '97 had opened a commercially perfected jack was completed. The suggestion was then made to the repairer that he should market the jack, and figures on the cost of producing them in quantities were obtained from a manufacturing concern. The result was that a small lot of the stands were made and catalogues were issued and sent out. Since that time, though the inventor has not had sufficient money to properly advertise or push the stand, he has sold a fair number of them, and has the possibility of making considerable money in the near future. The stand was the result of a little careful thinking and a desire to spend all the time possible in perfecting the equipment of the shop and in such experimenting as might lead to future profit.

#### Becomes Pretentious After Four Years.

In the spring of '98 a good drill press was added to the shop, which in '97 had been rebuilt and enlarged. An office and waiting room was arranged at the front of the building, the room being nicely furnished and providing an attractive room where even the most fastidious lady customer might not feel timid about entering. The room has also been valuable in the way of keeping loafers out of the workshop room. Soon after the rebuilding of the shop a solid cabinet of drawers with a hardwood top was erected to take the place of the workbench before used. In the drawers of the cabinet all of the small tools are carefully kept, the top being always free from tools and available for the work at hand. The last home-made machine added was a handlebar bending machine on which any form of bar can be bent, the work being done cold.

The shop is now complete to do any work that can possibly be done in a repair shop, the only kind of work which is ever sent out being the nickel plating. The repair work for a section of country embracing about twenty square miles and four good sized towns is handled. Business has of course at times been dull, but all difficulties have been met in some manner or other, and the mechanic who started in business early in '95 with an outfit comprising a watchmaker's lathe and a few machinist's tools and without the slightest experience in bicycle work of any kind, now has one of the most complete repair shops in the country, is more than ordinarily well posted on bicycle construction, has a probable market for a sellable repair jack, and has never yet been inside of a bicycle factory.

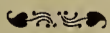
Australia boasts the only regular bicycle mail service in existence. Several long mail routes are covered by wheelmen, and a special postage stamp has been issued for that service.

# THE SIGN OF SUMMER



## Business Astronomers

in searching for signs of business have discovered, with the naked eye, the brightest star of all—the Claus Bar—the prosperity star. The Claus Bar is a sign of summer—of bicycle days. It makes cycling a pleasure—a healthful exercise. People know all about it. The bicycle dealer who tells them something else will do will lose their trade. That's all.



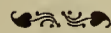
The Claus Handle Bar Mfg. Co.

• • • Milwaukee



## The Claus Handle Bar

moves in an orbit of its own. No other bar can be adjusted without a wrench. No other bar retains its width at all adjustments. No other bar is guaranteed forever. It is the only bar in which all parts interlock. And the only bar the people want. May we quote you prices?



The Claus Handle Bar Mfg. Co.

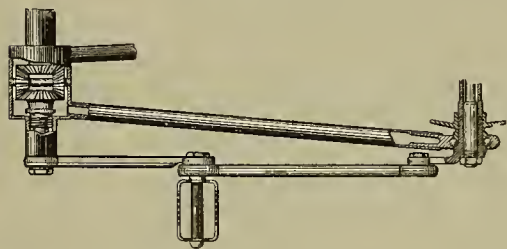
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## RECENT PATENTS

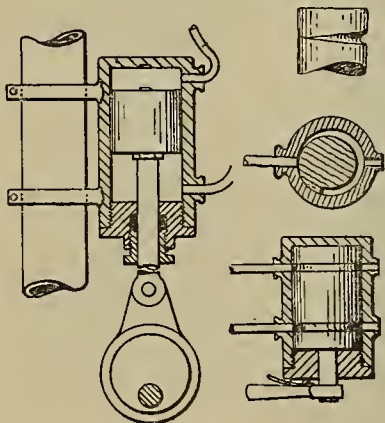
## Toggle Action Driving Mechanism — Bottom Bracket Pressed in Two Parts—Tricycle Frame

**Nordell's Bicycle.**—The reciprocating lever driving mechanism of which a plan view partly in section is shown has the rear wheel and axle mounted upon ball bearings in the fork ends by means of cone-bearing collars keyed to rotate with the axle. Each collar carries a crank, the end of which is journaled to a lever, which at its forward end carries a pedal. The pedal end is not free, however, but is journaled to form a toggle-joint, together with a crank which is fixed upon a shaft,



whose position corresponds to that of the crank hanger shaft in an ordinary bicycle. This shaft is in two pieces connected by bevel gear pinions in the manner usually employed for obtaining reciprocating action. The motion of the pedals, it will be noticed, is in an arc of a circle, the concave side of which is to the front—a somewhat unusual motion—and the lateral bending stresses to be borne by the rear forks, when the rider would bear down with his entire weight on one pedal as for example by dismounting, must be very great, the action being very similar to that produced on an ordinary bicycle by grasping the upper and lower reaches of the sprocket chain and pressing them toward each other. In order to secure speed the inventor proposes the use of a large driving wheel and a multiplying-gear between the pedal lever and the rear wheel. The patentee is Carl Nordell of Stamford, Conn.

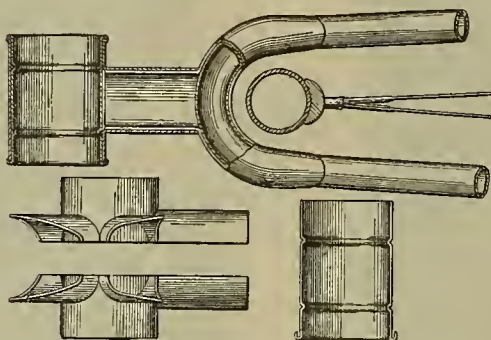
**Pneumatic Brake.**—An air cylinder is fastened to the lower portion of the seat mast. Within the cylinder is a piston connected to the driving mechanism of the bicycle by a piston rod, which is pro-



vided with a stuffing box. The connection may be that of an eccentric and strap of the usual order, operating on the crank shaft. Two tubes communicate with the cylinder, one at each side of the piston, leading to a valve casing attached to the handlebar or elsewhere, within easy reach of the rider. The valve casing contains two valves which are adapted to be moved together and thereby simultaneously open or close the tubes and confine or release the air on both sides of the piston. In the illustration is shown a graduated valveport, which will

enable the rider to slowly or partially close the valves so as to obtain a moderated brake effect as when descending long grades. If the valve is closed and remains closed, the air at one end of the cylinder will be compressed, while that at the other end will be expanded, and when the reverse stroke takes place the air previously compressed will be expanded with equal force less the energy lost by radiation of heat in compressing, and that portion of air previously expanded will be compressed. This order of events will not add materially to braking effort upon the motion of the machine; but when the rider, keeping time with the right-and-left pedal movement, closes the valve as the pedal moves down and opens it as it reaches its bottom position for a moment to let in free air and allow the compressed air to escape and immediately close it again, a new condition will be present which will give as much retardation as the original movement. The inventor is Charles Sears of Cleveland.

**Frame Stampings.**—The illustration shows the construction of a bottom bracket with frame lugs and stub for attachment of a rear fork crown. The bracket is formed in two symmetrical halves held together by an inner sleeve with beads for limiting the insertion of

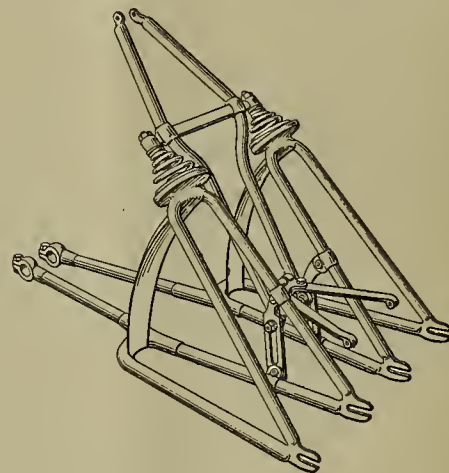


ball cups. The claim is for a "bicycle frame having a cross-head (bottom bracket) and a stub proceeding rearward from it, said cross-head and stub being formed of two parts so shaped that the seams of the stub will lie in a plane, which is transverse to the crosshead, and a fork having a crown-piece provided with a stem, which telescopes with the stub of the cross-head, said crown-head and its stem being formed of two parts so shaped that the seams of the stem and the stub will break joints." The patentee is Lee Sturges of the Chicago Stamping company.

**Tricycle and Carrier.**—It is the object of this invention to provide a tricycle of a simple, inexpensive, and strong, construction, adapted, by reason of the flexibility of those portions of the frame in which the driving wheels are mounted, to run more smoothly and easily than tricycles as heretofore constructed. The two rear driving wheels are journaled in the frame so as to revolve each independently of the other and each adjusted to have vertical movement independent of the other. There are consequently two sprocket wheels on the crank shaft, one on each side, and from these motion is ordinarily imparted to the rear wheels concurrently. In the operation of the machine, however, as is manifest, when the vehicle follows a curved instead of a straight course, as in turning a corner, the outer driving wheel will be caused to

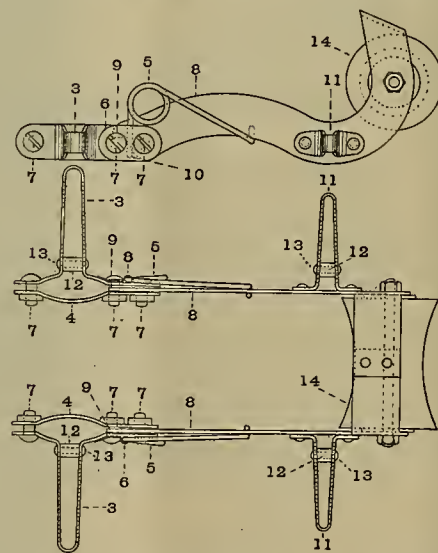
travel a greater distance in the same time than the inner wheel, and obviously if the ordinary solid sprocket wheels were employed this would cause the grinding or scraping of the tires upon the ground.

For this reason two-part front sprocket wheels are employed, on which the sprocket rim is allowed to slide on the spider to a certain extent determined by a projection which limits the movement. As the arrangement is described by the patentee the work of propulsion while turning a curve is thrown upon the inner wheel, and this will make a short turn difficult, if the tricycle carries a heavy load as seems to be a contingency kept in view by the inventor. The use of motor



power for propulsion of this style of tricycle is also among the possibilities considered in the claims. The two rear forks are connected by a flexible or spring device with the seat mast and the independent vertical movement thereby given to each wheel when either of them passes over an obstruction, is guided by lugs and guide plates which also serve to keep the wheels a given distance apart laterally. The inventor is H. F. Watson of Philadelphia, assignor in part to W. J. Channel of the same place. Patent No. 615,054, November 29, 1898.

**Holloway's Coasters.**—This is a brake and coaster foot-rest combined which may be attached to any ordinary bicycle, and the brake can be applied by a downward move of the heel of the rider while the toe is on the foot-rest. Referring to the illustration the attachment and operation of the device is described as follows: The screws 7 are removed and the toe-rest 3 and a plate 4 put on either side



of the bicycle-fork, and the screws are then replaced and the rest is clamped to the fork by tightening the screws 7, the brake extending toward the rear of the wheel. The springs 5 will then raise the brake up and the point 9 on the brake 8 will strike the screw 7 and prevent the brake from being raised too high. When it is necessary to put the brake on, the rider places the toe on the rest 3 and the heel on the rest 11 and bears down with the heel, thus pressing the spool 14 on

[ADVERTISEMENT]

## A RADICAL CHANGE

**A. G. Spalding & Bros. Inaugurate  
a New System of Conducting  
Their Business.**

### SELLING TO RETAILERS DIRECT

**The Object of the New Policy Is to  
Prevent Price-Cutting.**

### BOUND TO BE A SUCCESS.

**Reasons Which Induced the Firm to  
Make This Change.**

A. G. Spalding & Bros., the largest dealers in the world in the sporting goods line, have adopted a change in their business methods and will hereafter sell to retailers direct. A copy of their plan is given herewith:

NEW YORK AND CHICAGO,  
December 1, 1898.

We desire to call the special attention of the trade to a radical change that we have decided to adopt in the method of distribution of Spalding's Trade Marked Base Ball, Athletic and Sporting Goods.

Since the establishment of our business in 1876, the larger part of our athletic product has been sold through jobbers; but after Jan. 1, 1899, our goods can only be obtained directly from us, and all athletic implements manufactured by us and bearing our name will be sold at only one price to the trade and at one price to the consumer.

#### OUR REASONS.

In these days of close competition in all lines of trade, the questions that claim the consideration of all successful manufacturers are numerous.

The first, and most important is: *How to reach the consumer with the smallest cost of distribution.*

The second, and almost equally important is: *How to insure a fair profit to the retail dealer.*

The third, and vitally important one, when taken into consideration with the other problems is: *How to prevent unfair, demoralizing, "price cutters" from securing a quantity of well-known and largely advertised articles and offering same as "leaders," at about cost, or in many cases less than cost—all of which tends to degrade the quality of goods and ruin the small and legitimate retail dealer, who is entitled to a fair living profit.*

#### HOW WE SHALL DO IT.

After most careful thought and consideration we have answered these questions to our satisfaction in the following manner, and we have decided to conduct our business in future on the following lines:

#### SELL TO RETAILERS DIRECT.

We shall aim to reach the consumer through the medium of the responsible and legitimate retail dealer, to whom we shall go direct with our complete line of Trade Marked Athletic goods and other specialties that we manufacture and control. By doing away with the intermediate jobbers' profit, we are enabled to and will give a uniform net trade price on each article to any responsible and legitimate dealer carrying a stock of these goods—the same to large and small, regardless of quantity.

#### ONE PRICE EVERYWHERE.

As a condition of purchase by the retail dealer of our Trade Marked Athletic Goods, or other specified articles that we control, we shall insist that such goods be sold at a uniform retail price throughout the United States, fixed by us—no more and no less.

#### NO CUTTING OF PRICES.

We shall aim to prevent any unusually large purchases or an accumulation of stock by any price-cutting dealer, thus reducing to the minimum the opportunity of any such dealer continuing a sale of our goods at a cut price. We shall positively refuse to sell any dealer, directly or indirectly, large or small, who persists in cutting prices on any of our Trade Marked Goods.

#### NO INTERMEDIATE PROFITS.

In carrying out this new method of distribution, it becomes absolutely necessary to discontinue supplying our Trade Marked Goods to jobbers for jobbing purposes; for in order to carry out the general plan outlined above, we must control the source from which the dealer draws his supply, thus preventing "price cutters" from obtaining our Trade Marked Goods from a friendly jobber that cannot be obtained directly from us. This has been the trouble this season in several notable instances of price cutting.

#### HIGHEST QUALITY GOODS AT LOWEST PRICES.

It shall be our aim to furnish the public, at regular established prices, with standard goods of a grade or quality commensurate with the price. Our factory facilities are immeasurably greater than those of any other house in our line in the world. We now manufacture in our own factories, operated by ourselves, nearly everything bearing our name, which enables us to maintain the highest quality and at the same time furnish the goods at the lowest possible rates. The reputation of our goods for quality, which has been made in nearly a quarter of a century of successful business, has not been a thing of chance, but has only been acquired by manufacturing with the utmost care and giving to the public, Athletic Goods of the very best grade that could be manufactured.

#### A SURE AND STEADY PROFIT.

Our plan provides a fair and reasonable profit to the retail dealer on all our goods; a profit that will be satisfactory and amply sufficient for any business economically conducted. Dealers who are in search of "job lots" and profits of 100 to 200 per cent must look elsewhere. They cannot get it out of our goods, but they can make a fair, reasonable and sure profit and give the public the very best goods, with our guarantee behind each article.

#### AT FIXED PRICES.

There will be no "jockeying" allowed in quality any more than in price, and we think

the public in this age of circus advertising and "bargain days" will welcome the change to standard goods of absolutely fixed prices, in which their interest not only commences with the purchase, but continues by a liberal guarantee of the manufacturer, both as to quality of material and workmanship.

#### SUCCESS ASSURED.

We feel confident that this radical change in merchandising will be popular with the reputable and responsible retail dealers in Athletic Goods, in whose interest it is largely made, and with their support and co-operation we are confident of its success. We know it will be popular with the public, who will be getting the best goods for the money that have ever been made, and will be able to procure our Trade Marked line of goods cheaper than ever before.

#### PARADOXICAL BUT TRUE.

Athletic goods are made to abuse—not use. The batter tries to tear the cover off the ball every time he hits it; the golfer uses his club as a battering ram; and foot ball—well, we all know what a parlor amusement that is.

Under all these circumstances will it not pay you to sell the best, and cannot you satisfy your customers and hold your trade better by doing it?

#### THE SPALDING POLICY.

Every article bearing the Spalding Trade Mark carries with it not only our guarantee of quality, but also a confidence to a most critical clientage that it will satisfactorily serve the purpose for which it is intended. We will not call an article wool when there is cotton in it, nor will we use ingredients or material simply calculated to reduce the price at the expense of quality.

#### FOR QUARTER CENTURY.

And this policy consistently carried out for nearly a quarter of a century has given SPALDING'S TRADE MARKED ATHLETIC GOODS a standing and reputation that makes it possible to successfully carry into effect the general plan outlined above.

#### WE WANT YOUR NAME.

We would respectfully request such merchants as may be interested in this particular line of business to write to us, that we may place their names among our list of customers. This will insure their getting, without further request, all catalogue matter as soon as published, also notice of any change in prices, of new goods, and other information that may prove mutually beneficial.

#### FOR OUR CATALOGUE.

Early in January we shall issue our complete catalogue with revised prices, and we shall aim to have our *Confidential Net Trade Price Lists* fall only into the hands of legitimate retail merchants carrying a stock of Base Ball, Athletic and Sporting Goods.

#### WILL YOU HELP US?

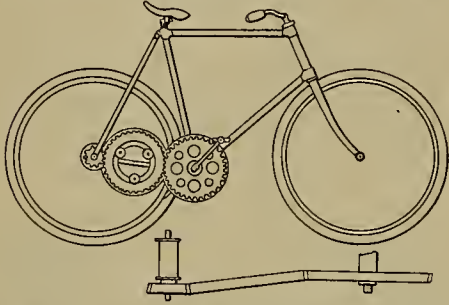
We respectfully ask the co-operation of all responsible and legitimate retail dealers in athletic goods throughout the United States, confidentially believing that by such co-operation the athletic goods business can be rescued from the present unprofitable and demoralized condition into which it has been placed by unfair and unbusinesslike methods of certain price-cutting dealers and quality-destroying manufacturers.

Respectfully,

A. G. SPALDING & BROS.,  
NEW YORK AND CHICAGO.

the bicycle-tire until the desired friction is secured. The inventor is W. H. Holloway of Brazil, Ind.

**Bevel-gear Train.**—The object of the construction is to provide a practical chainless power transmission for bicycles in such a manner that narrow tread may be obtained with gearing closely resembling straight-faced cam wheels. To this end slightly beveled gear on the crankshaft faces outwardly and the slightly beveled gear on the rear wheel hub faces inwardly, making the bevels of the two wheels parallel. Between them is arranged an annular gear, which may be made to revolve either upon three rollers



as shown in the illustration or on a stud-shaft. In either case some special form of motion or journaling must be provided for it, but on this point the patentee is silent. The claim is for "The combination of a bicycle frame, the driving-wheel, the crank-shaft, the bevel-gear union, and the bevel crank-shaft gear, having their greatest diameters at opposite sides of the intermediate gear, and the intermediate gear set at an angle with the planes of the crank-shaft gear and the pinion." In the illustration the angular relations of the three gear wheels is shown in a plan view. The inventor is Walter E. Taft of Providence, R. I., assignor to the Universal Mfg. company of Maine.

F. H. Murphy and M. R. Pierce of New York city have patented a change-gear mechanism for bevel-gear bicycles, by which a worm, rotated by means of a jointed rod extends through the lower frame tube to the upper end of the steering head, drives a lever which engages a clutch splined on the driving shaft. The clutch according to its position on the shaft engages one or another of two pinions on the shaft, or when midway between them leaves them both to revolve as idlers. The main driving gear has, of course, two concentric bevel-gear faces of which the larger one produces high speed.

Patents have been granted under date of November 29, 1898, to William H. Fauber of Chicago, for a lathe especially designed for turning crank axles in one piece with the cranks. The lathe comprised a peripherally supported and actuated chuck having central chuck-jaws and tool-carrying plates located adjacent to the side faces of the chuck and movable in a direction at right angles to its axis of rotation. The patent is No. 614,853.

W. E. Gerow of Newburg, N. Y. has patented a toe-clip with an adjustable counter-weight to hold the clip in position to receive the foot of the rider. No. 614,856, November 29, 1898.

#### Mixture for Waterproofing Tires.

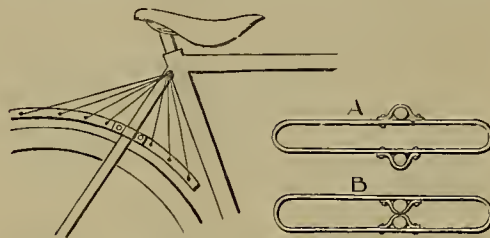
For waterproofing fabric tires, a writer in India Rubber World recommends the following process: Pound together in a mortar 12.4 ounces potash alum and 11.81 ounces acetate of lead until they are liquescent; then add 7.18 ounces of bichromate of potash and 7.18 ounces of glauber's salt (sodium sulphate); continue pounding and add 4.23 ounces of calcined magnesia and 1.32 gallons of water. When the mixture is well pre-

pared, it is poured into 13.2 gallons of water and stirred for twenty minutes, which effects a thorough dissolution of the solid substances. Dissolve in another utensil 5.28 ounces tannin, 1.76 ounces gelatine, 3.52 ounces yellow resin, and 13.2 gallons of rainwater; add 26.4 gallons of common water and stir well; pour into this the first mixture and brew the whole twenty minutes. Immerse the tires in this liquid, which should be constantly stirred until they are impregnated in the solution.

#### NEAT DRESS GUARD SCHEME

Protective Appliance for Diamond Frames Ridden by Women—Adds a Touch of Femininity.

A novel scheme for fitting dress guards to ladies' diamond frame bicycles and to lady-back tandems is that shown in the accompanying illustration. The prime need in a rear wheel dress guard is not to supply a mud guard, but to furnish a protection against the catching of the skirt of the rider in the rear wheel. It has been the common practice to put on short guards of the old circular mud guard type, which had side laces running to clips at or near the rear end of the frame. These guards kept the skirt from catching in the spokes of the wheel, but since the short riding skirt has become popular such guards have not offered sufficient protection against the lower end of the skirt being carried through the rear stays above the rear wheel and becoming entangled in the wheel and frame directly back of the seat mast and above the wheel. The guard in the illustration has been devised as a means of preventing the short skirt from being blown or carried between the rear stays at or near the upper side of the wheel. It consists



of a flat piece of mild steel, about one-eighth by three-eighths inch in size, bent into a long parallel-sided loop and also bent to conform to the circumferential curve of the rear wheel. The loop is drilled at regular intervals along its sides for the reception of the lacing cords, and is fastened to the frame in the manner illustrated, by small clamps binding around the rear stays. Instead of lacing to the rear end of the frame the cords run upward to some kind of a clip fastened on the seat cluster. The guard thus furnishes a dress protection above the rear wheel, where it is needed for short skirts. The metal loop being well made and nickel plated and the lacing being neatly and securely executed, the guard will appear neat and not at all clumsy. The side bars of the metal loop may be run either inside or outside of the frame stay tubes, according to the distance between the latter. If run between as shown at A, in the illustration, the joints formed by the union of the ends of the piece of bar metal may be brazed together and a flush invisible finish obtained. If the distance between the stays makes necessary the placing of the guard outside of the stay tubes the ends of the piece must be lapped, drilled and bolted or screwed together as shown at B. In either case ordinary mud guard clamping clips may be used to clamp the guard to the frame.

The guard has never been marketed and has as yet been used only in a few instances, but the satisfaction thus far obtained from its use would warrant its wider adoption. Not the least of its advantages may be found in the distinctive

mark of femininity by which it tones down the somewhat bold effect of a diamond frame in the hands of the gentler sex.

#### The Bicycle Saves Nickels.

The report of the Manhattan elevated railroad of New York city for the year ending September 30 has just been made public and shows the loss of more than 10,000 passengers a day as compared with the preceding year. From 1880, when the road was opened, the number of passengers carried steadily increased from 80,000,000 to 221,000,000 in 1893. Since then there has been an annual decrease, and last year only 179,000,000 were carried, notwithstanding the acquisition of a branch line, and the receipts have fallen off \$2,000,000. To what extent the bicycle is responsible for this does not seem to be known.

#### English Houses Prosper.

Reports from English manufacturing concerns still continue to arrive, and sustain the belief that the cycle industry over the water is in competent hands. Following are the late reports:

(a) Singer Cycle Co. .... \$135,265  
 (b) Lloyd's Cycle Fittings, Ltd ..... 10,720  
 (c) Swift Cycle Co. .... 169,725  
 (a) A dividend of 4 per cent was declared on ordinary shares and 5½ per cent on preferred shares. A balance of \$52,825 was carried forward.  
 (b) No dividend was paid on common stock.  
 (c) A dividend of 4 per cent was declared on common stock and 6½ per cent on preferred stock. The sum of \$25,000 was placed to reserve. The reserve fund now amounts to \$177,725.

#### Receiver for Punnett Co. Sued.

Anna E. Delp and John A. Bell of Pittsburg, have brought suit against Frank J. Hone as receiver of the Punnett Bicycle company of Rochester, N. Y., which failed about eighteen months ago, to recover \$1,400 as restitution for twenty-two Champion bicycles alleged to have been purchased of the Punnett company and ordered stored. When the company assigned the receiver levied on the machines. Defendant has entered a general denial.

#### Sol Heyman Co. Assigns.

The Sol Heyman company, dealers in furniture, carpets, household goods and bicycles, at 993 Third avenue, New York city, has made an assignment to Isaac Blumenthal, following the assignment of George Heyman, his brother, with whom he had exchanged paper. The liabilities are about \$50,000 and the assets are said to exceed that amount. It is expected that the business will be continued.

#### Austrian Manufacture Increasing.

In Austria the manufacture of bicycles is making rapid progress. The lowest estimate of the 1897 output is 70,000 machines, which is nearly double the number produced in 1896. Exports increased from 5,735 bicycles in 1896 to 8,690 in 1897, or 68 per cent, while the production increased 66 2-3 per cent (28,000 bicycles more than in 1896) and imports 37 2-3 per cent (815 bicycles).

Vance Prather, a well known Toledo newspaper man and a correspondent for cycle journals, is not dead, as was reported. He enlisted to go to the Philippines and word came that he had died at Honolulu. Prather took occasion to denounce the story as a pure fabrication, upon his return a few days ago. He has suffered from typhoid fever.

One who retains a note, or its proceeds, obtained by his agent by fraudulent representations is bound thereby, although he did not know, and had not authorized such representations.

# 1899—Crescent Chain Models—1899

HAVE FOUR LEADING CHARACTERISTICS

PERFECT DESIGN      RICHEST FINISH

HIGHEST GRADE      RIGHT PRICES

**\$35**



No. 15.

**\$35**

“The  
Wheel  
that  
Stands Up”

Of  
World  
Wide  
Reputation

**\$35**



No. 16.

**\$35**

### DISTINCTIVE 1899 FEATURES

Drop of Crank Hanger, 2¾ inches.  
The Correct Handlebars.  
Seven-Inch Cranks.

Rake of Truss Tube.  
Artistic Curve of Front Fork.  
Rosewood Finish on Rims and Mudguards.

**CRESCENT DUNLOP DETACHABLE TIRES.**

==== OUR FACILITIES ARE UNEQUALED ====

Next week we show the Crescent Bevel Gear Chainless.

**CHICAGO—WESTERN WHEEL WORKS—NEW YORK**

## ONE WINTON MOTOR VEHICLE

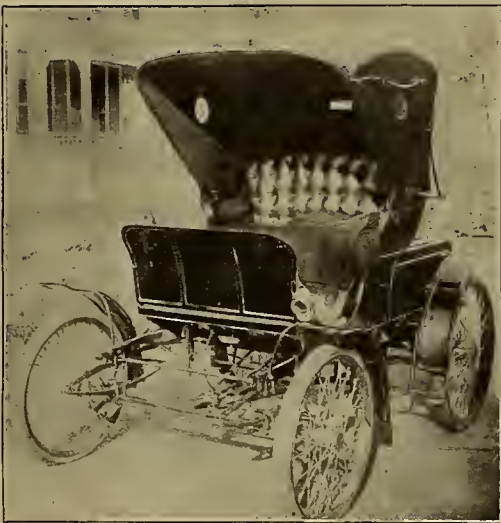
### SPEED REGULATED IN TWO WAYS

#### Gear Speeds Supplemented By Governor Which Graduates the Fuel Supply—Strong Driving.

The Winton motor vehicle company, of Cleveland, has adopted a policy of reticence in regard to details of their work.

The following information is therefore obtained through Dr. Zabriskie, who has purchased one of the Winton vehicles

This wagon was patented May 4, 1897, February 15, 1898, March 15, 1898, and two other patents were issued September 6, 1898. The principal features of novelty in the Winton wagon are connected with the fuel consumption regulation, which is under control of a governor operated by the driver's foot. This governor increases or diminishes the volume of explosive compound furnished to the cylinder for a working stroke, the composition of the explosive mixture remaining always the same. The operation of this governor alone is to produce a slow speed by a reduction of the power of the engine, or a high speed by increasing the power of the engine. This procedure does not fill the operating requirements of the motorcycle, which, in very frequently occurring cases, demand that the speed shall be reduced, while the engine works at its maximum power. The speed changing possibilities of the governor are therefore supplemented by systems of direct mechanical changes, which give two speeds forward and one speed backward, the governor being used to vary these gear



Winton Gasoline Motor Carriage.

speeds. Dr. Zabriskie finds the governor very useful, as it is far easier to change the speed of the wagon by pressing the governor treadle with the foot, than by changing the speed gear clutches through the operation of a hand lever.

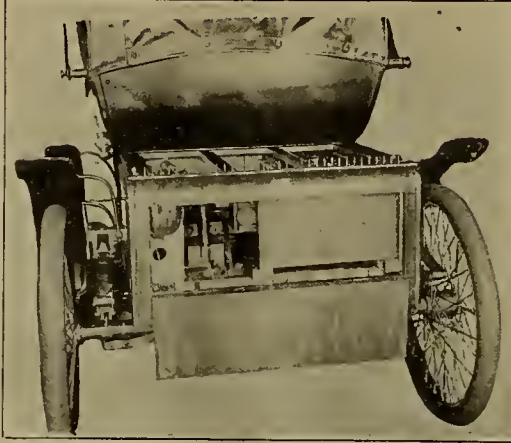
#### The Exhaust Effectually Muffled.

The Winton wagon motor has a single cylinder, resembling the Benz wagon in this respect, and carries a heavy flywheel. Dr. Zabriskie's wagon can make about 18 miles per hour, and the fuel consumption per hour is about one gallon of store gasoline, 74 degrees, at 10 cents per gallon. As the exhaust is at the rear of the vehicle, the odors produced by imperfect combustion are not offensive to the passengers themselves. The exhaust is quiet, an effective muffler being introduced. The framing is substantial, and the motor drives the wagon strongly. The writer rode with Dr. Zabriskie for a considerable distance over muddy dirt roads in the wilds south of Flatbush, Brooklyn, and the carriage was under easy control at all times, with an abundance of power.

The ignition is electric, from a wet battery; Dr. Zabriskie informed me that the Winton shop was perfecting a dynamo, driven by the engine, for producing the igniting spark.

#### The Oiling Problem Important.

The writer was present when Dr. Zabriskie prepared the wagon to go out in the morning, and the operation of oiling was the subject of unfavorable comment by its owner, as he was obliged to use special gloves and a special outer garment for protection against machine grease. Some of the explosion engine driven vehicles lubricate in bulk, with a sight-feed, from which pipes lead to every point where oil is needed. Such an oiling system could be readily applied to the Winton or any other motorcycle, and attention to all points looking



Rear View—Tailboard Down.

toward clean hands and clean garments of drivers, must be regarded as a strong favorable feature in motorcycle designing.

The wheels of this Winton wagon are wire spoke suspension, 32 and 36-inch diameter, with steel rims and 3-inch pneumatic tires. The steel rims showed signs of failure by crumpling, similarly as the steel rims of the New York Cab wheels. The total weight of this wagon is 1,400 lbs., and the price is \$1,000.

The owner expressed himself as very much pleased with it, as it carries him any distance he wishes over suburban roads just now being opened, and alternating in surface between the natural soil, fresh turned earth, mud, and newly laid broken stone—about as trying a combination as can be conceived.

Dr. Zabriskie says that a number of Winton wagons, he thought 23, had been sold, mainly in Pennsylvania, all of which were giving excellent satisfaction. The appearance of the vehicle is well shown in the engravings presented herewith.—Hugh Dolnav.

#### Tried to "Make Sense."

In "The Whitney Wagon Steering Lever," p. 107 of the Cycle Age of Nov. 24, the word "spliced" is twice used in place of "splined."

Mechanical readers and writers well know the deadly propensity of the intelligent compositor to "make sense" of the slipshod writer's work—to the intelligent compositor all writers are a careless, foolish lot—by changing a few letters or figures here and there. Whitney's grip rod is "splined" to the throttle crank, not "spliced" thereto.

#### Start of Gas Engine Vehicles.

It is noticed that explosion motor carriage makers construct their starting mechanism in such form that the driver must stand on the ground when starting the engine to work. But there seems to be no good reason why this could not be done just as well after the driver has taken his seat in the carriage.

## HOW MANY CYLINDERS WANTED

### PLEA FOR THE PLURAL SYSTEM

#### To Produce a Constant Torque and Dispense With Heavy Fly Wheel and Cooling Jackets.

Motocycle explosion engines have been made with one, two, three, four and five cylinders. What is the proper number?

If a wagon is driven with a single cylinder, say 5 to 5½-inch bore, the piston and rod are pretty heavy, and are quite likely to cause an objectionable vibration of the vehicle body. A cylinder of this diameter is not safe without a water jacket, and this implies a large supply of cold water.

As this single cylinder, ottocycle, is idle three-fourths of the time, a very heavy fly wheel is needful, and even with the heavy fly wheel the wagon is not likely to be a good hill-climber.

#### Vibration Obviated—Weight Reduced.

With two cylinders the case is much better; the cylinders are smaller bore, and the pistons can be made to balance each other and so obviate vibration, and the fly wheel can be much lighter than where only one cylinder is employed.

With three cylinders the conditions are still more favorable; the cylinders are still smaller, the torque is much nearer constant, the fly wheel can be again reduced, and the whole mechanism is much improved.

There is another point greatly in favor of a smaller cylinder. Up to 3½-inch bore or a little more vertical explosion engine cylinders, splash lubrication, can be operated perfectly well without the water jacket. A 3½-inch engine is to a 5½-inch engine as 12¼ is to 30¼; hence three cylinders, 3½-inch bore, would do as much work as a single 5½-inch bore cylinders, piston speed equal, while the little cylinders would not need cooling water.

The same conditions apply with the four-cylinder ottocycle explosion motor, which gives the same torque as a single cylinder double action steam engine.

#### Manufacture by Automatic Methods.

Going one step farther, and using five cylinders, no flywheel, or at most a very small flywheel only, is needed, and the engines are perfectly safe with splash lubrication only, without water jackets. Say these five cylinders are each of 2½-inch diameter, which would be roughly equivalent to a single 5½-inch cylinder. These five little cylinders come easily into the scope of manufacture by automatic and semi-automatic machine tools, and hence could be finished for about the same cost as the single large cylinder engine. A single casing would enclose all the working parts of the engines, the splash lubricator would be perfect, and the small cylinders, which need not be more than 1-10 of an inch thick, can be sufficiently cooled by radiation, without the use of water.

Once more, if a small flywheel is used with five cylinders, say a flywheel of not more than 15 or 20 lbs., such connections can be easily made as will permit the driver to start only one of these little cylinders, and that one will start the others in work.

All of this is unquestionably feasible, and would give a fairly constant torque, and would reduce the vehicle weight say 200 lbs., in the way of flywheel and cooling water tank, and would cost less money for machine work, in a well fitted establishment, than less cylinders of larger diameter. Vibration would be impossible, light wheels and cheap tires could be used, and many of the advan-



tages of a steam motor would be gained, and the always objectionable steam boiler and its feed water would be absent.—Hugh Dolnav.

[Granting the special advantages of a plurality of cylinders as set forth in the above article, it yet seems apparent that the vehicle constructed in the manner suggested would be at a disadvantage in those numerous instances when a single powerful impulse is momentarily required, in order to get out of a rut in a road, "backing out" under difficulties, and on similar occasions. The opinions of motor vehicle engineers on this point would be of interest.—Ed.]

#### Origin of Standard Valve Threads.

As an example of how chance and circumstances sometimes count for as much in mechanics as forethought, is the standard thread now used in all tire valves for the attachment of the inflating pump. Away back in the early days of the pneumatic, when Morgan & Wright first began to make such tires, one of the firm went over to the establishment of G. M. Davis & Co., makers of steam specialties and valves, and asked them to make some kind of a tire valve. There being no data on the subject from which to get proper sizes, etc., a skirmish was made through the tools of the Davis company for something which would be suitable for the making of such valves. Among other things found was an old tap that had been some time before made for special work and which had been thrown away after use among the old tools. The tap was of no regular size or thread, but seemed to be about the right thing, and so was used to tap out the valve for the attachment of the pump. As everybody knows the old Morgan & Wright thread proved so satisfactory that it has now become the standard, and anybody who makes valves uses a tap of thread and size which is not only out of the ordinary run of tap sizes, but which was originally selected by the merest chance and without any attempt to logically discover the best size for the purpose.

#### The French Cycle Trade.

It is estimated that about 200,000 bicycles are sold annually in France, the greater part being of domestic production. Some of these are imported from Germany, England, and the United States, but the sum total is not large. It is hardly worth while to send over any but the best class of American bicycles, nor is it well to sell machines without first having made arrangements to have them taken care of. The cyclist who buys a bicycle for which he cannot readily buy parts in event of an accident to it will help to injure the trade in American wheels thereafter, no matter how cheaply the machine may have been bought at the beginning. Any tires imported from England are, of course, Dunlops, but the tires most widely in use in Germany are of the clincher type, such, for instance, as the Continental tire, made by the large rubber company of that name in Hanover.

#### Hardware Dealer Wants Catalogues.

S. F. Shoemaker, dealer in hardware at Dalton, Pa., expects to put in a full line of bicycle goods for the season of 1899, and would be pleased to receive copies of catalogues, price lists, etc., relating thereto.

In the last sixteen months the wages of the average cycle workman in the English factories did not exceed \$5 a week, chain makers excepted. In the factories here the average of wages is about \$10 a week.

## GOOD PARA RUBBER IS SCARCE

### NATIVE TREATMENT OF GUM

The Area is Vast But the Supply is Limited—Scarcity of Labor Keeps Prices Up.

The condition of the rubber market is one of exceptional activity, marked by daily and even hourly fluctuations. It is impossible to calculate in advance the extent of the Para rubber crop, though, judging from the present outlook, there will probably be a very large increase over that of last year. It is certain that the rubber-producing area in the Para section of the Amazon, recently discovered and untouched, is hundreds of times larger than that now being worked. The price of crude rubber is fixed in the foreign markets, especially New York and London. The buyer, stationed in Para, carefully watches the market, and calculates his price in accordance with quotations received from those cities.

The upper and lower districts of the Amazon produce the same kind of rubber, but that coming from the upper river obtains a slightly higher price, being drier by the time it reaches the port of shipment.

#### Limited Supply of Para Gum.

During the fiscal year 1897-98 there was received in Para 22,257 tons of rubber, and of this amount 11,422 tons were shipped to the United States and 10,796 to Europe. The state of Para does not produce more than two-thirds of the rubber shipped through the port of Para, the balance coming from the state of Amazonas, as well as from Peru, Bolivia, etc. The city of Para is a convenient shipping point on account of its telegraphic and banking facilities.

There are three grades of Para rubber—fine, medium and coarse. If rubber is not uniform and contains impurities, it is classified as medium. The coarse quality, or "Sernamby," consists of scraps that have not been cured.

#### Why Rubber Gatherers Are Scarce.

Insufficient labor is the most serious difficulty in the rubber industry. It would scarcely seem advisable to invest money in rubber estates, unless the owner first can see his way clear to obtain sufficient labor with which to collect the rubber. In reality, the genuine owner of the produce of the forest is the collector, not the landowner. Out of 100 employes, whose outfit and traveling expenses have been advanced, at least 75 die, desert, or return to their homes on account of illness. As a rule, the landowner makes advances to the collectors for their outfit, food, etc., and in return receives the rubber collected by them. He sells the produce on the collector's account, retaining 20 per cent for himself, and continues making advances in such manner that the collector always remains in his debt and consequently in his service. It frequently happens, however, that the collector takes the advance and fraudulently disposes of the rubber to any buyer who may be on hand. One of the methods in practice is to lease the trees in lots of 75, 150, or 200, at a given sum per annum, and to stipulate that the lessee shall sell the rubber and purchase all his supplies from the owner.

#### Enormous Area of Production.

The localities where rubber trees thrive best are on islands and low ground near rivers, where the banks are periodically inundated. Ground that is above water at all times, or that has no drainage, is not suitable. The peculiarity of this rubber tree is that it will not grow satisfactorily on cleared or opened ground. It

requires the shade of other trees and still air from the time that its growth begins until it becomes an adult tree. Without these conditions the supply of milk is very much affected. In fact, the tree has been known to die soon after the clearing of ground around it. No cultivation worth mentioning has been attempted in the region of the Amazon. It is considered useless to invest capital in cultivation so long as the Amazonian forests show no signs of exhaustion. The area that is known to produce Para rubber amounts to at least 1,500,000 square miles. Further exploration will no doubt show that this area is far underestimated. On the River Aquiry 200 trees yield as much as three tons of rubber per annum.

#### Life in the Forest.

The collector has to use a knife with a 26-inch blade to cut his way through the undergrowth, and also cut down a sapling, occasionally, to bridge a rivulet. At times he is knee-deep in ooze, or up to his waste in water. On arrival at a rubber tree, he chips away the rough parts of the bark, makes a more or less smooth surface, attaches a cup, and makes a small gash for the sap to fall into the cup, and repeats this process in a line round the tree until he has attached six or seven cups. The cups are of clay or tin. The former are attached to the bark by means of a little clay. Their weight, however, makes them inconvenient to carry when the trees to be tapped are separated by long intervals; the collector then prefers to carry tin cups, which are much lighter than the others. They easily penetrate into the bark by means of their sharp edges, and hold to the tree without the use of clay. The use of the tin cup is to some extent injurious to the tree.

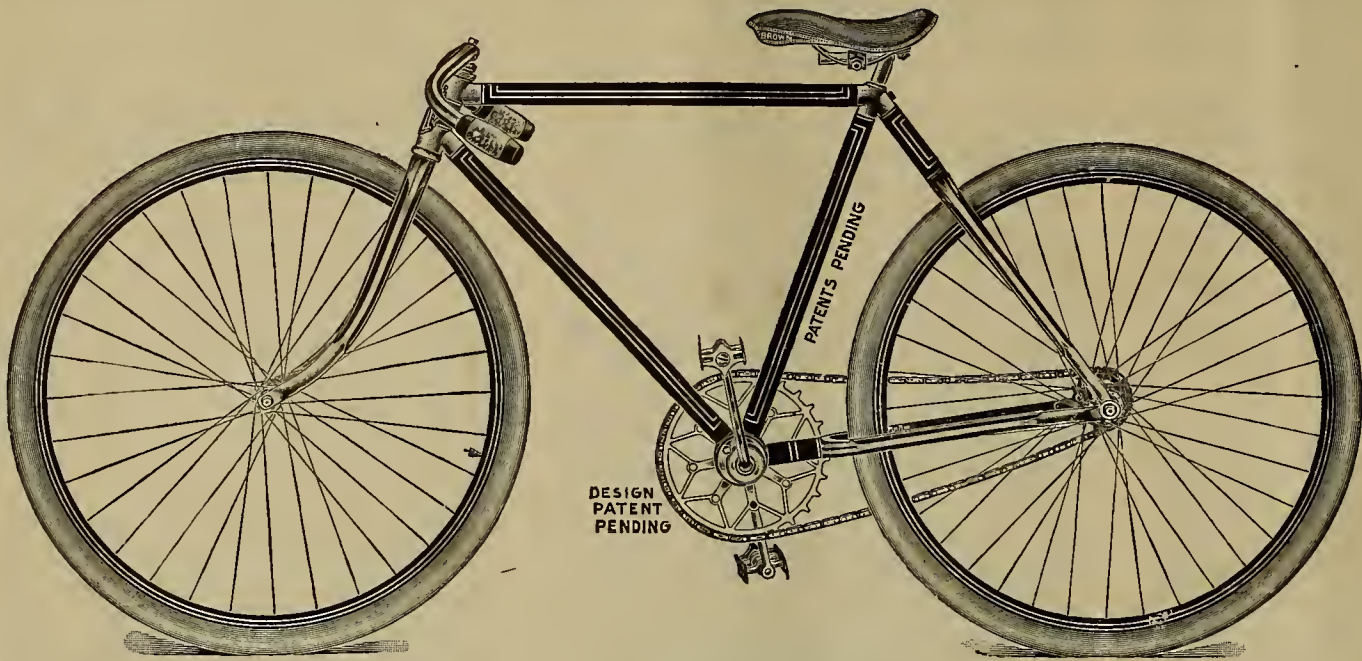
The collector continues this process until he has tapped from 75 to 150 trees, which can be done in a day if they are not too far apart. On the following days the gashes in the trees are made a trifle lower down than the first ones. Some collectors tap the trees in the morning and return to collect the sap in the evening, whereas others tap in the evening and collect in the morning. An expert gathers 7 pounds daily in the Lower Amazon; in the Upper Amazon three times this amount is collected.

#### A Popular Mistake.

It was at one time imagined that the excellence of Para rubber was greatly due to the kind of fuel used in curing it. The palms that furnish the fuel were accordingly transplanted to Africa, with a view to making Para rubber there. The experiment, however, has not met with success. The reason these nuts are selected in Brazil is because they emit a continuous dense smoke, and are more portable than other fuel obtainable.

When the accumulation of rubber is sufficient—usually in three or four days—the collector lights a fire in the hut he has erected, places a clay funnel over a fire, pours in a thin coat of sap over the paddle mold, and holds it over the smoke to coagulate. The process is repeated until a large cake has been formed. To release the paddle from the cake, it is necessary to make a slit on one side. The paddle mold makes a cake of uniform and even shape, and is in general use in the state of Para. In other parts a spit is placed on two upright forked sticks, and given a rotary motion. By this means, the rubber is cured with greater ease. Paddle-smoked rubber is decidedly preferred, as it is drier and seemingly more carefully cured. Many vain attempts have been made to introduce improved curing methods.

The process of curing rubber is extremely injurious to the eyes. Many cases of total blindness result therefrom.



MANSON, MODEL 33, 3-CROWN—LIST PRICE, \$50.

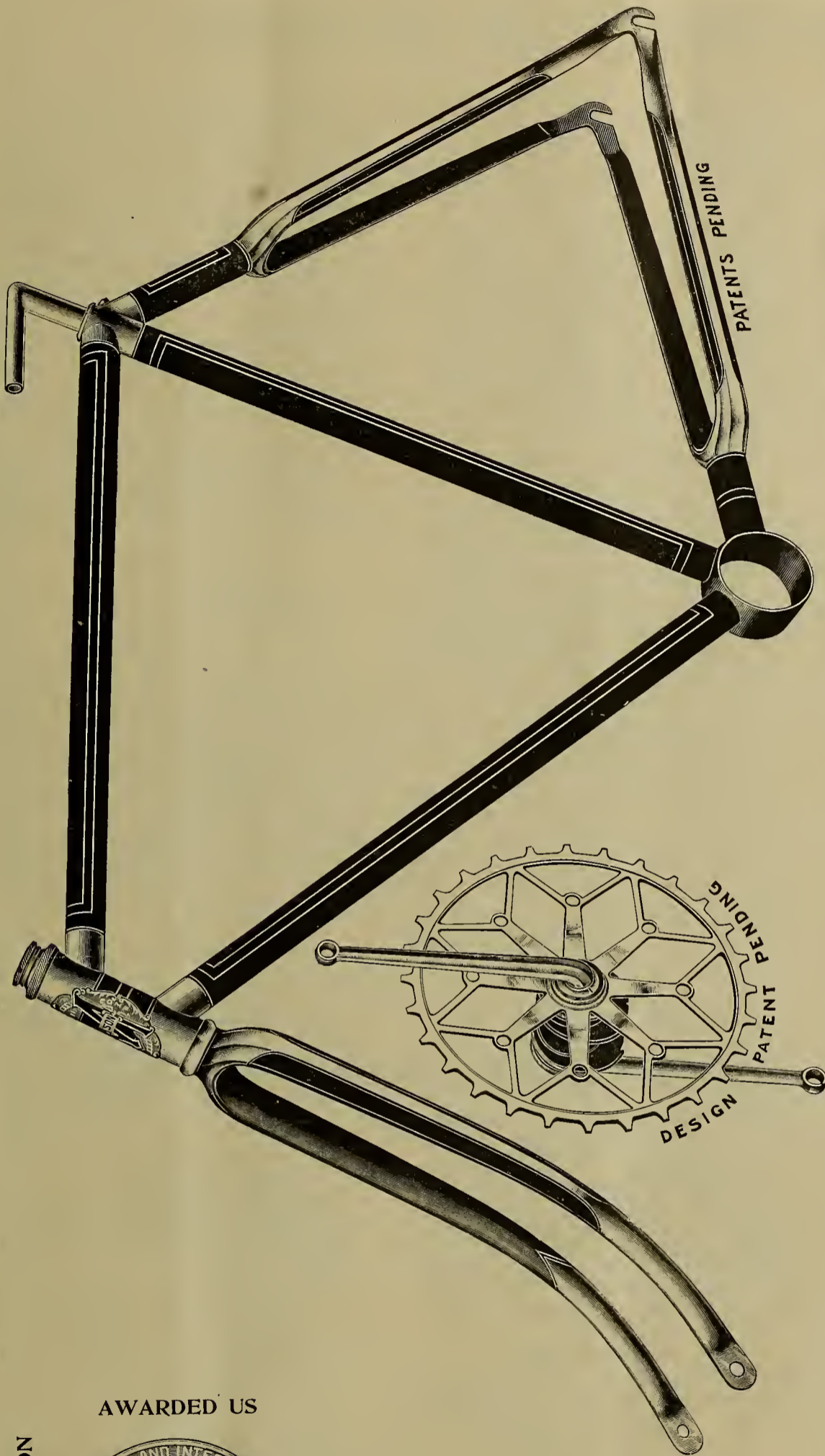


MANSON, MODEL 32, 2-CROWN—LIST, \$40.



MANSON, MODEL 31—LIST \$30.

**We want to put you in on the ground floor to handle a Bicycle with not even one single "black mark" against it.**



The originators of the 3-Crown Manson offer you for '99 a line of 3 grades— from the very best built with the very finest finish down to an honest built bicycle at a low price. We do not employ travelers (can't afford it), but to all first-class agents in unoccupied territory who want a line of wheels which are competition proof and who can pay for them, we will quote liberal discounts and back them up by a guarantee in which we agree to pay express charges both ways on defective parts. Write us.

AWARDED US

OMAHA EXPOSITION



SILVER MEDAL

# Manson Cycle Co.

153-157 W. JACKSON ST.,

CHICAGO

U. S. A.

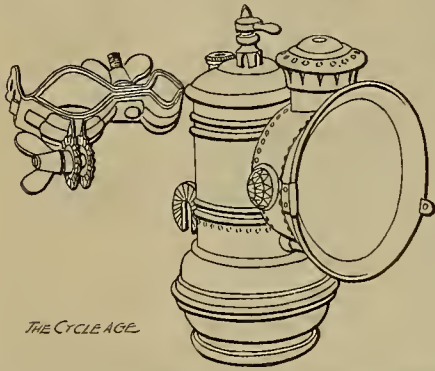
Mention The Cycle Age



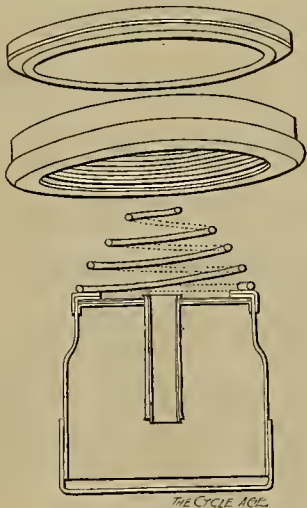
# INFORMATION FOR BUYERS

## THE BRILLIANT GAS LAMP.

An acetylene gas lamp that embodies a number of new and valuable features is the Brilliant, made by the Manhattan Brass Co., whose factory and general offices are at 333 East Twenty-eighth street, New York city. This concern is well known as the producer of the Frontlight, Cyclops, Queen and other oil lamps familiar to the trade, and is well qualified to offer a perfectly satisfactory gas lamp to the trade through years of experience gained in the manufacture of all kinds of lamps, including acetylene bicycle lamps made under contract. The general form and construction of the Brilliant gas lamp is



shown in the perspective drawing herewith. It is perfectly simple in every detail, and there are no delicate parts to get out of order. All parts, however, are interchangeable and can be replaced. The water reservoir is connected with the ventilated burner box only by a small metallic support for the latter, so that a minimum of heat is conducted to the water. The burner is of the two-jet type producing a fish-tail flame of constant size, which neither flares up through the top of the chimney nor jars out. The reflector is of aluminum, from which tarnish is easily removed with a cloth. Loose carbide or standard cartridges of powdered carbide can be used, the gas chamber having a metallic telescoping carbide cylinder, shown in the sectional drawing, for use with lump or granulated carbide. The top of this is closed by two perforated plates between which are placed several layers of muslin to act as filters for the gas as fast as it is generated. The gas, rising, impinges against the base of the water reservoir, where the moisture in it is condensed by the cold so that the gas passes to the burner in a dry state free from the usual impurities. Instead of feeding the water to the carbide through a tube, it is allowed to come out of two lateral holes and flow down two grooves in a metal needle pendant from the center of the water chamber and which fits within a perforated and muslin lined tube in the carbide cylin-

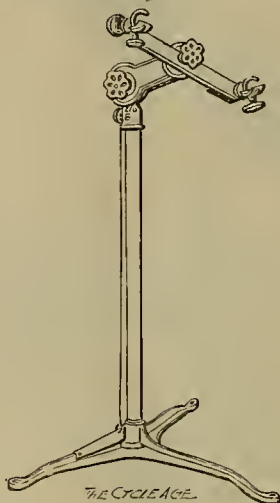


der. A little handle at the top of the lamp governs the water feed valve. The head of this is provided with a series of notches engaged by a spring clip that holds the valve handle at any position to which it is set. Perhaps the best feature, however, is the method of closing the carbide chamber so as to prevent the leakage of gas. This is accomplished by making the bottom of two parts—a screw threaded ring flanged underneath, and a metal disk fitting within this. A thick rubber cushion of just sufficient diameter to cover the edge of the gas chamber is placed upon this disk, and when the ring is screwed up until the rubber contacts with the circular edge of the lamp base it and the plate it rests on cease to

turn with the ring, whose flange nevertheless slides freely against the metal plate and squeezes the rubber firmly between the plate and gas chamber edge, making an airtight joint. Thus there is no friction to wear the rubber and a tighter joint can be more easily made than where the rubber turns with the entire bottom. Still another excellent device is the bracket. This is not only made to fit either the fork side or head of a bicycle, but is adjustable to fit heads of various sizes, from smallest to largest. Also, by the slotted form of the ratchet attached to the lamp body, a single turn of the thumb-screw that regulates the angle of the lamp releases the latter so that it may be instantly lifted off of the bracket, which is left attached to the machine. This is a feature that will be appreciated by riders. The lamp complete is six inches high and weighs eighteen ounces. By test it will burn four to five hours with one charge. Western sales department of the company is at 132 Lake street, Chicago.

## THE SNOW REPAIR STAND.

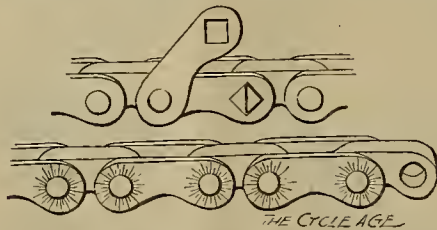
This is one of the most ingenious and practical of the many inventions brought out by the Snow Wire Works of Rochester, N. Y., which has won a reputation for itself on both sides of the Atlantic for the value of its products. The repairman and the careful and methodical wheelman will both find this stand a great help, since by its use both hands are free and the several parts of the machine may quickly be brought in succession before him. The drawing gives a good general idea of the stand, but a few words of explanation are also necessary. The bi-



cycle is first secured in the holder by means of grips covered with rubber. A pawl and ratchet movement, operated either by lifting the bicycle with the hands or by pressing the foot lever at the base of the stand, allows the bicycle to be lifted, lowered, turned up or down, or swung at any angle desired. There is no position that cannot be secured for the repairer's or cleaner's convenience, and so simple is the mechanism that a child can operate it. The different parts of the bicycle are successively brought within easy reach, and all the time the hands are free for work. This stand is so eminently practical that it seems almost certain to become as popular as all of the company's products in this line of manufacture. Jobbers have already arranged to handle it and will furnish it in any quantity on demand.

## TEN STYLES OF SNOW CHAINS.

Snow Cycle Chain Co., of Syracuse, in its brief 1899 prospectus descriptive of its product—cycle chains exclusively—is enabled to



make the clear-cut statement that quality alone determines the base price of Snow chains, and that the finish alone determines the difference in cost of the various styles. The company emphatically refuses to build a chain in which price rather than quality is paramount and therefore makes all styles of like material. An exception forms the nickel steel chain which is shown in the

accompanying illustration. This material is used in three styles, which are much more expensive than the most highly finished, nickel-plated pattern in which nickel steel is not used. Nickel steel when made into chains is susceptible of beautiful finish and by its great strength makes an extremely light chain a possibility. These and every other Snow chain bear the company's name as a guarantee against misrepresentation and the company's warrant to make good by repair or replacement any imperfection in material or manufacture is unlimited in time. The Crosby & Mayer company of Buffalo, with branches in New York City, Chicago, Toledo and London, will handle the Snow chains for 1899 as in the past as general selling agents. The patented Soule link lock, also shown in illustration, is controlled by the Snow company and is used instead of chain bolt and nut. As will be readily seen, the principle of this lock is of the utmost simplicity and thoroughly reliable.

## THE ROCHESTER PEDAL.

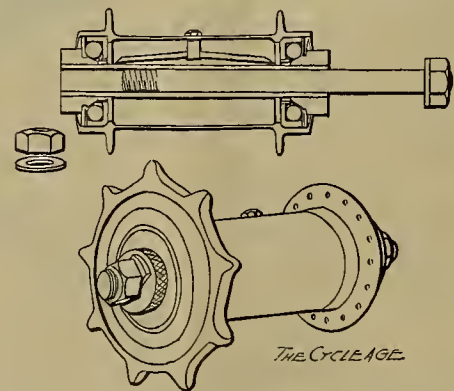
The Rochester pedal for '99, shown in the accompanying drawing, is designed to supply a durable, well finished pedal at a low price.



The material throughout is of the highest grade and the pedal is fully guaranteed. The frame, one piece of sheet steel, is fastened to the solid steel center by spinning over the ends of the arms, thus making the body perfectly rigid. Pins and cones are turned from the solid bar, case hardened, ground and polished. By a special process the threads and pins are not hardened with the cones and then drawn, but are left soft throughout the hardening process. The cones are so arranged on the pin that absolute adjustment is secured, and the cone is then locked, preventing tightening or binding. The Rochester Pedal Co., Rochester, N. Y., are the makers, and will furnish full information on request.

## MEISELBACH'S 1899 HUBS.

A. D. Meiselbach of North Milwaukee, Wis., makes it his aim to incorporate in his large production for jobbers all valuable features of construction as soon as they can be turned out economically by the use of automatic machinery and as soon as their value is recognized as indisputable. An example of this is noticed in the hubs which are shown in the accompanying illustration and which form part of the regular equipment of one of his lines. The usual style of hub renders it necessary to spread the



lower ends of the fork sides in order to put in the front wheel, thereby usually springing one of the fork sides more than the other, rendering them liable to break, and, at the same time, very often throwing the wheel out of line. The simple remedy of making the axle removable without interference with the ball bearings and chain adjustment has only been adopted by a few manufacturers on their high-grade machines. It is also found in these Meiselbach hubs in connection with other particulars of construction which entitle them to careful inspection.

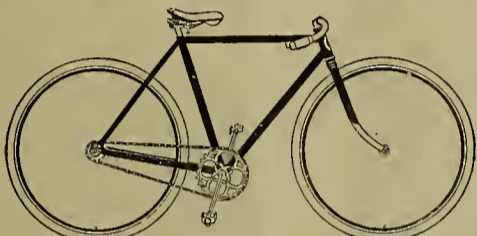
## MASTER OF THE ART OF PUBLICITY.

No more attractive advertising was ever printed in any trade paper than is at the present moment being used for the purpose of exploiting the merits of the Claus handle-

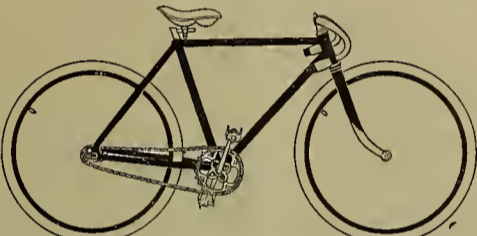
bar. It is a thousand pities that other advertisers in the Cycle Age will not imitate so superior a form of work. In graphic character, in aptness of illustration, in artistic ensemble, in the joining of happy phraseology to equally happy drawings, in power to arrest attention, it is easily in the lead. And all this is due to the Claus handlebar company's energetic and facile manager, Mr. W. J. Krauthoefer. Mr. Krauthoefer has been connected with the company ever since it was organized, but did not take an active interest in it until the opening of this season's business, when, owing to the company's increase of business, his services were demanded at the head of the concern. He is a most persistent and progressive worker and when not busy at his desk is out looking for business. A number of the largest orders were secured by him on several of these occasions. Mr. Krauthoefer is a firm believer in publicity. He has often said that a good thing unknown is not worth a name. The business of the Claus people is probably the largest of any handlebar company in the world, and it is only a man with the unlimited energy of Mr. Krauthoefer who is capable of leading it to success.

ADAMS & WESTLAKE LINE FOR '99.

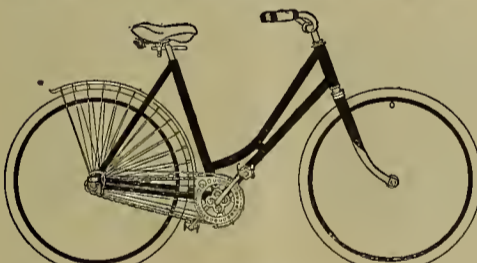
The Adams & Westlake Co., of Chicago, in making its '99 announcement, states that it will sell only to agents the coming season. Adlakes will be made in two grades—Adlake Specials, listing at \$60, and Adlakes, listing at \$40. A cheaper line will be made under the Alaska name, to list at \$30. Adlake Specials will be made in eleven models,



Model A—Adlake Special, 30-in. wheels. Price, \$60.



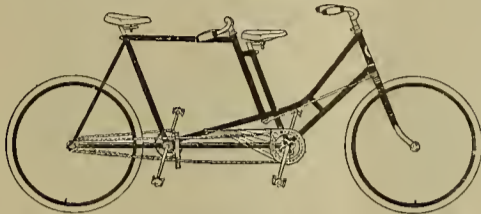
Model R—Adlake Special, Racer. Price, \$60.



Model E—Ladies' Adlake Special. Price, \$60.

A and B being 22 and 24-inch frames, fitted with 28 and 30-inch wheels, C a 20-inch frame with 28-inch wheels, R the racer, with 22-inch frame and 28-inch wheels, E and F, the women's models, with 21 and 23-inch frames and 28-inch wheels, G and H, the double-diamond and combination tandems, with 23-inch frames, and K, a 21-inch tandem. All the tandems list at \$90. Specifications of the Adlake Special men's 30-inch wheel roadster are as follows: Height, 22 inches; head, 4½ inches; drop to hanger, 3½ inches; wheel base, 45½ inches; tread, 5 inches; head, 1½ inches diameter; main top tube, 1½ inches; main lower and diagonal tubes, 1¼ inches; rear upper tube, ¾ inch; rear forks, D-shaped, ¾ inch at hanger, tapered to ¾ inch at fork ends. All joints flush and heavily reinforced. All tubing of best seamless cold drawn steel. Front forks are 1¼ inches wide, taper gauge and reinforced; stem, 1½ inch seamless tubing, reinforced; Adlake triple arch crown. Wheels are both 30-inch diameter, 32 piano wire spokes in front and 36 in rear; rims enameled black with natural wood edge and gold line. The hubs are entirely new, being of the cup-adjusting variety, the cups being held by locking collars. Cones are fast on the axle, adjusting being done by turning the left-hand collar and cup. Cones and cups are of the best tool steel hardened and ground. Cups are ball retaining and dust-proof. Cranks are diamond pattern, 6½ or seven inches, made from best spring steel tempered in oil; two-piece shaft fitted with bearings of new construction. Cups are ball-retaining and are easily removed when desired, and the whole construction is dust-proof. Cups and cones are of special tool steel hardened and

ground. Chain adjustment is new and simple. By removing two bolts the rear wheel may be taken from the frame without removing the chain bolt or touching chain or wheel adjustment. The wheel may be removed and replaced in 30 seconds, as no time is lost in the readjustment of any part. Handlebars are adjustable, with the Adlake internal fastenings, which are also used with the L seat-post. Pedals are Adlake rat-trap or rubber. Finish is ivory white, ornamented and striped in gold. All nickeling is done on duplex copper plate. Gear is anything that 8 or 9-tooth rear and 17 to 27-tooth front sprocket will make. The same general

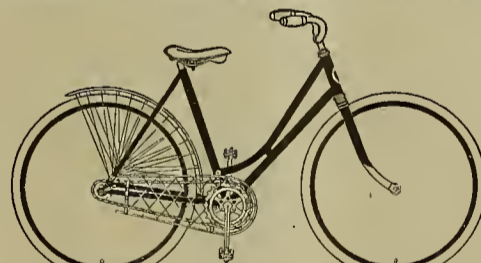


Model H—Adlake Comb. Tandem. Price, \$90.

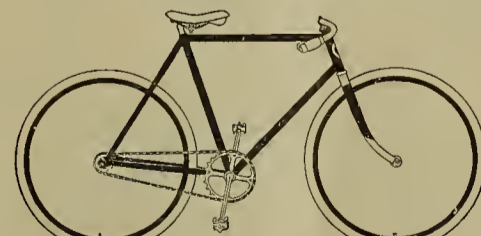


Model M—Adlake Roadster. Price, \$40.

specifications apply on all Adlake Specials. Adlakes will be made in six models, as follows: M and N, 22 and 24-inch frames, fitted with 28 and 30-inch wheels; P and S, women's, 21 and 23-inch frames, 28-inch wheels. Specifications of Model M men's roadster: Height, 22 inches; head, 6½ inches; drop to hanger, 2½ inches; wheel base, 44 inches; tread, 5 inches; head tube, 1½ inches diameter; main lower and diagonal tubes, 1¼ inches, main top tube, 1½ inches; rear forks, ¾ inch, D tapered; rear upper tubes, ¾ inch; flush joints throughout. Wheels 28 inches, 32 and 36 swaged steel spokes in front and rear respectively; wood rims, natural finish, with narrow red stripes. Hubs are turned from solid bar steel; cups and cones made from special cone steel; bearings adjustable and ball-retaining; direct oiling devices. Cranks are 6½ or 7 inches, diamond pattern; made from spring steel, two-piece of the most approved design; bearings ball-retaining and adjustable; cups and cones made from special cone steel. Chain is B pattern, 3-16 inch; hardened blocks and rivets; push back chain adjustment. Seat-post is L pattern with Adlake internal fastenings, used also in drop handlebar. Finish, Brewster green, ornamented and striped in gold; all nickeling done on copper. Gear, anything that 8 or 9-tooth rear and 22, 24 or 26-tooth front sprockets will make. Alaskas will be made in three models, as follows: Men's, 22 and 24-inch frames, and women's, 21-inch frame, all with 28-inch wheels. Specifications of this line are simi-



Model P—Ladies' Adlake. Price, \$40.



Men's Alaska Roadster. Price, \$30.

lar to above except that head tube is 1½ inches diameter, rims have black stripes, cranks are semi-diamond pattern, handlebars are upturned and finish is black, ornamented in gold.

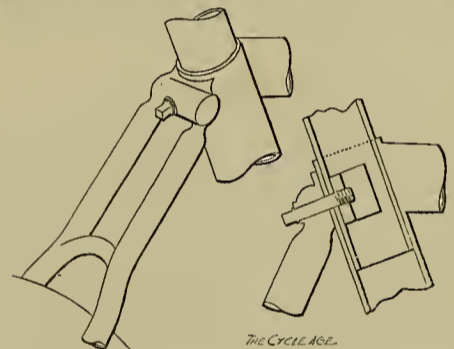
SPALDING & BROS. NEW POLICY.

A. G. Spalding & Bros., of New York and Chicago, who have heretofore depended upon the jobbing trade for the distribution of their sporting goods, announce that after January 1 they will sell only at retail direct and to retail dealers. There will be but

two prices on the goods bearing the Spalding trademark—one for the consumer and one for the dealer—regardless of quantity. No special prices or rebates will be given to the largest purchasers, and if any dealer persists in cutting the established retail prices the company will refuse to sell him more goods. The Spalding goods will be sold at uniform prices throughout the country, thus protecting the consumer against overcharge and at the same time protecting the dealer in the fair profit he is entitled to. It is much easier, more simple and possibly more profitable for the company to sell through the jobber, but the keen competition among jobbers prevents him from making any money on the goods, and for the same reason unrestricted retail prices prevent the retailer from making a fair profit, all of which reacts on the manufacturer, who is continually called upon to reduce prices, which in effect simply tends to degrade quality. In order to successfully carry out this new method of merchandising it is necessary for the company to control the source from which the dealer draws his supplies, and for this reason, and this reason only, according to A. G. Spalding, they have found it necessary to cut off the jobber and go direct to the retail trade. The eastern and southern trade will be supplied from the New York store, the middle west from the Chicago store and the Rocky mountain states from the Denver branch. The necessary traveling salesmen will be put out to cover the territory thoroughly.

NEW DESIGNS IN RACYLE MODELS.

The Racycle line made by the Miami Cycle and Mfg. company of Middletown, O., comprises four '99 models. The Racycle people state that it is their intention to furnish a line which will make it unnecessary for dealers to handle any other machine in order to have bicycles to sell at all prices. The best grade Racycle sells at seventy-five dollars and has all of the popular Racycle features of the past with the exception that the rake of the seat mast has been changed bringing the seat further back and giving more space between the hanger and the rear wheel. This change makes unnecessary the dished sprocket which has been a feat-



THE CYCLE AGE.

ure of the Racycle of the last few years. All sprockets now have straight spokes. This model has an arch crown behind the hanger. The other two leading gentlemen's models, one of which sells at fifty dollars and the other of which may be sold at any price which the agent thinks best, averaging around thirty-five dollars, are similar in appearance to the seventy-five dollar model, having the same frame lines and exterior constructive details with the exception of the arch crown back of the hanger, the rear forks in the cheaper models running directly to the hanger. A feature of all models is the built-up sheet metal arch crown of great strength and comparative lightness. All models have the distinctive seat cluster which is herewith illustrated. The seat post clamping device is original and has the advantage of always keeping the seat post in its proper alignment with the frame, it being impossible to turn the seat post, either accidentally or intentionally, sideways. The post is slotted up its rear side forming a passage for the small clamping screw which engages a bored and threaded semicircular block on the inside of the post. When the screw is tightened the block is drawn against the back wall of the seat post causing it to bind against the frame tube. All machines have well reinforced built-up flush joints and are unless otherwise specified finished in a lustrous plain black.

DISTRIBUTORS OF RAWHIDE SADDLES.

The individuality and distinctive merits of the Hollenbeck Rawhide saddle have won for it a quick appreciation by the trade, and this novel fitting seems destined to form a large part of the popular equipment of the better class of bicycles the coming season. The Hollenbeck Saddle Co., of Syracuse, N. Y., secures thorough distributing facilities for it through the following jobbers, who catalogue the 12-ounce Rawhide and furnish it to the cycle trade at factory prices: New York City—A. M. Scheffey & Co., U. S. Net & Twine Co., C. B. Baker & Co., C. Murray Rice, Schoverling, Daly & Gales, N. Y. Sporting Goods Co.; Boston—J. P. Lovell Arms Co., Brown & Wales, Wil-

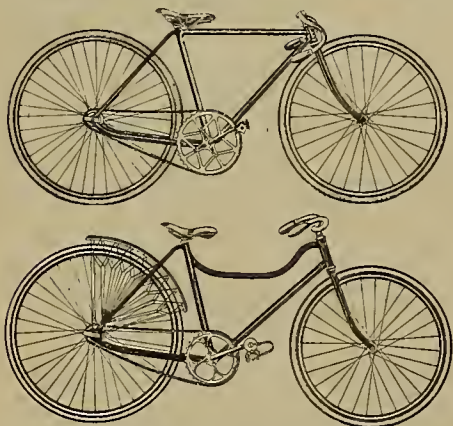
liam Read & Son; Appelton & Bassett; Philadelphia—McMaster, Eldridge & Maugle, George W. Nock Supplee Hardware Co.; San Francisco, Los Angeles, Sacramento and Hawaiian Islands—Baker & Hamilton; Chicago—Chicago Tube Co., Chicago Cycle Co., Eugene Arnstein, Von Lengerke & Antoine; Buffalo—Hanna Cycle Material Co.; Rochester—Shone-Hanna Mfg. Co., Hall-Shone Co.; Syracuse—Spaulding & Co., H. R. Olmsted & Son, Stearns Bicycle Agency, Frank C. Howlett; Utica—Clark, Horrocks & Co., Utica Cycle Co.; Albany—Albany Hardware & Iron Co.; Cleveland—McIntosh-Huntington Co., Collister & Sayle; Detroit—Fletcher Hardware Co., Standart Bros., Geo. Hilsendegen, William E. Metzger, G. W. Strelinger; Indianapolis—H. T. Hearsey Cycle Co., C. G. Fisher & Co., Van Camp Hardware & Iron Co.; Toledo—Viking Cycle Supply Co.; Columbus—Oscar S. Lear; Saginaw—Morley Bros.; Grand Rapids—Perkins & Richmond; Louisville—P. E. Allison; Milwaukee—Andrae Cycle Supply Co.; Minneapolis—Great Western Cycle Co.; St. Louis—A. F. Shapleigh Hardware Co.; Hartford—Cycle Supply Co.; Pittsburg—Justin Cycle Co.; Augusta—Davidson & Mathewson; Montreal, Can.—John Millen & Son; Atlanta—W. D. Alexander; Mexico—Hilario Meenen; Toronto, Can.—E. C. Stearns & Co.

#### CHASE SUSPENSION ONLY TEMPORARY.

The rumor has appeared in some of the trade papers that L. C. Chase & Co., of Boston, had retired from the tire business. This is not true. They have in no manner dismantled their factory, nor is it their intention to do so; they are to-day in position to begin manufacturing at once. They have simply suspended the manufacture of tires temporarily. After an extensive canvass of the trade, terminating two weeks ago, they concluded that the conditions now existing did not warrant them continuing on the old plans; consequently they are waiting until they have adjusted themselves to these conditions. Unless there is a material change for the better, Chase & Co. expect, soon after the first of the year, to offer their tires under conditions at prices which will be sufficient inducement to warrant the sale of as many as they care to produce. The capacity of the factory is sufficient to take care of all demands made upon it after the first of the year.

#### NEW NORMAN CONSTRUCTION.

The Norman Wheel Co., of Philadelphia, in a '99 supplement to its 1898 catalogue of Norman bicycles, goes extensively into the subject of increased sizes of ground wheels, which it advocates because of their easier riding qualities. Instead, however, of substituting two 30-inch wheels for two 28-inch wheels, it uses a 30-inch front and 32-inch rear wheel or 28-inch front and 30-inch rear. This practice is followed throughout the Norman line, including youths' and misses' machines with 22 and 24-inch wheels, in order that low frames may be used and the top bar kept level without weakening the frame by making the head impracticably short. An innovation in frame construction is the downward curving of the rear forks from the rear axle to obviate the sharp incline of these tubes when the hanger is excessively dropped. Still another deviation from recognized lines is the semi-drop frame machine for women, in which the top bar of the usual diamond frame is irregularly curved downward several inches, as shown in the second engraving herewith. The object is, of course, to provide a machine as light and stiff as a man's bicycle which can be ridden by a woman clad in a

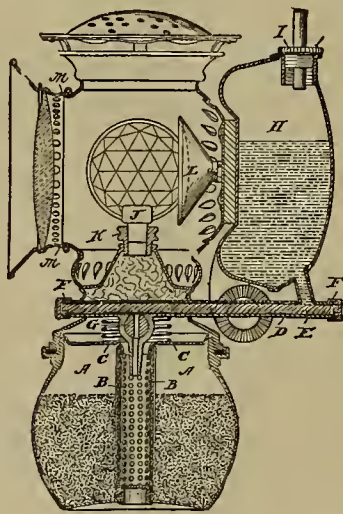


skirt instead of the objectionable bloomers. Specifications of the Norman line for '99 are unusual. They are as follows: Seat mast and lower front reach of diamond tubing, either 1 1/2 inches or 1 1/4 inches; upper tube, 1 inch or 1 1/2 inches; lower rear stays flat oval, curved at rear end, or straight to order; upper rear braces, 5/8 inch or 3/4 inch, full D-shape, curved at upper end, as shown. Diameter of heads, 1 1/2 inches or 1 1/4 inches; length, 3 to 7 inches. Front forks, 7/8 inch or 1 inch; fork crown narrow, oval, forged in two sizes. Wheels, 22, 24, 26, 28, 30 and 32 inches, to order in any combination required.

Rims, narrow, diamond and razor back, deep sections of special design, six sizes. Sprockets, pure phosphor-bronze, 7 to 46 teeth, 32 sizes. Gear, 27 to 210. Wheel base, 35 to 48 inches, according to height of frame and size of wheels. Cranks, 5 1/2 to 8 inches. Hanger drop, 2 to 5 inches. Tread, exactly 3 3/4 inches from center to center of cranks, 4 1/4 inches over all. Standard finish, black and gold; rims, Aurora red and gold, and black and gold. Weights, without tires, from 16 pounds to 22 pounds, according to height of frame, size of wheels and sprockets, style of saddle, handlebars and pedals. The most liberal options are allowed on the best standard equipment. By special arrangement with the Norman Wheel Co., the Hobbs Mfg. Co., of London, Ont., will, for the present, partially assemble the Norman bicycles and handle them exclusively in Canada, and later on may manufacture the entire machines under the Norman patents. In either event, the machines will be known in Canada as the New Norman Pacemakers and the Hobbs Mfg. Co. will be the headquarters for them north of the border.

#### SOLAR LAMPS FOR NEXT YEAR.

A bright and entertaining booklet just published by the Badger Brass Mfg. Co., of Kenosha, Wis., tells the interested cycle dealer of the Solar acetylene gas lamps and the improvements which have been made in this popular lamp for 1899. The general lines are the same as in the '98 pattern, but the weight has been largely and the size slightly reduced. The bracket has been changed somewhat and the lava tip is placed in an instantaneously removable holder which will be greatly appreciated. The wick tube is



straight and a new style of valve permits the lamp to be instantly lighted. The accompanying illustration shows a cross-section of the '99 pattern.

#### LOVELL DIAMOND CYCLES FOR '99

Lovell Diamond bicycles will be made in six models for next season by the John P. Lovell Arm Co., of Boston, Mass., as follows: Model 45, light roadster, \$50; Model 46, ladies' light roadster, \$50; Model 47, men's road racer, \$65; Model 48, ladies' road racer, \$65; Model 49, combination tandem, \$100; Model 50, double diamond tandem, \$100. The men's machines are made in 22, 24 and 26-inch frame heights; the ladies' in 20, 22 and 24. All models are fitted with 28-inch wheels, and with the exception of the racing machine, which is crimson, are enameled in black or maroon, with colored or natural wood rims. Cranks are of flat pattern, 6 1/2 and 7-inch throw. Choice of seven styles of bar is given, and option on rubber or rat-trap pedals and Goodrich, M. & W., Dunlop and Corker tires. Front sprockets have 28 and 30 teeth; rear, 8 to 12. Garford saddles are regularly fitted.

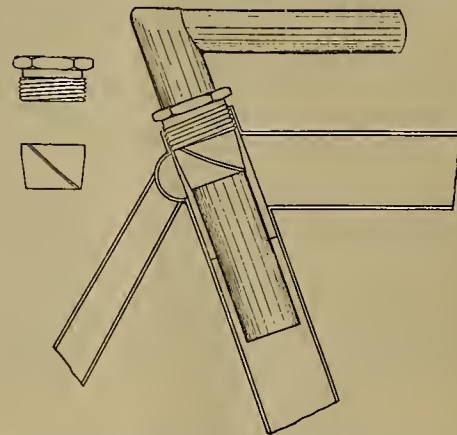
#### AMERICAN MACHINE CO.'S LINE.

The American Machine Co. of Flint, Mich., departs in more than one respect from common trade methods and by doing so is enabled to announce in its 1899 catalogue that the past year has been an eminently successful one in its history. It gives a one-year guarantee with all models, ranging from \$50 to \$25 in price, and makes it a strong point to identify itself with the interests of its established agents. The catalogue gains greatly in interest by presenting each model in its true colors by means of carefully and tastily executed color prints, thereby enabling the agents to judge in advance and accurately of the effect that they will produce on customers. The color-prints are supplemented by a sheet of engravings showing construction details. The combination of the two forms of illustrations rounds off a total impression which seems much more complete than that obtained from most latter-day bicycle catalogues. The Hygienic Oscillating bicycle saddle base, which has been described in this paper, is invented and manufactured by this

company, but being in the nature of a distinct specialty is offered the trade as such, and is not incorporated in the regular equipment of the company's models. These models are American Standard, with 30-inch wheels; American Special, male and female; American Banner, male and female; American Diamond, similar to Banner, but built with flush joints throughout. The Diamond is also built in juvenile sizes. The company has branches at Columbus, O.; Detroit, and Cleveland.

#### NATIONAL SEAT POST BINDER.

The seat post binder used on the 1899 models of National bicycles made by the National Cycle Mfg. Co. of Bay City, Mich., is of the expander type and is especially praiseworthy



because of its extreme simplicity. It consists of only two parts—the long threaded nut fitting into the top of the seat post lug, and the expansion collar. To bind the post it is only necessary to screw down the nut; to loosen it the nut must be loosened and the saddle given a twisting movement, which frees the post. There are no threads to jam, as the lock does not depend upon a reverse tread to loosen it.

#### DEMAREST BICYCLES ABROAD.

An extensive foreign trade has been built up by the Demarest Mfg. Co., of Williamsport, Pa., in France, Belgium, Holland, Scandinavia, Australia, South Africa, England, Scotland, and Japan. To the latter country 150 bicycles per month are shipped by contract. In addition, negotiations are now in progress for shipments to Italy, the Argentine Republic, Cuba, and Sweden. A goodly share of this success is due to Manager MacDonald, who devotes all his time and talent to the success of this gigantic enterprise. He is a natural born manufacturer of high class goods. The 1899 Demarest model will have all the latest and most useful features. Nine years ago the company was established for the production of sewing machines, of which 20,000 a month are now made and sold. In 1891 the firm first began to make bicycles. The company has the following officers: E. R. Payne, president; Senator J. Henry Cochran, treasurer; Attorney General H. C. McCormick, secretary; Hugh MacDonald, general manager. The factory buildings are one-eighth of a mile long.

#### WILL CONTINUE MAKING KANGAROO TIRES.

In contradiction of the reports that have been circulated through the medium of advertisements, letters and personal interviews to the effect that the National India Rubber Co. of Bristol, R. I., had discontinued the manufacture of Kangaroo tires because of a suit instituted by the makers of another tire on the market of which the Kangaroo is alleged to be an infringement, the National company announces that it is still making and intends to make the Kangaroo tire, and from present indications shall have to run night and day to supply the demand for its '99 goods. The company says it will meet fairly and squarely any suits brought against it for infringement, and will protect all of its customers against suits that may be brought against them for selling or handling Kangaroo tires made under the National India Rubber Co.'s patents. The new '99 goods will retain all of the good features of the '98 product, and in addition will have many improvements which another year's experience in their manufacture has suggested.

#### BUSY ON SEYFANG HANGERS.

The Bison Mfg. Co., of Buffalo, N. Y., successors to Seyfang, Prentiss & Co., and present makers of the Bison cycles, is working a large force of men on the Seyfang hanger and bracket here shown, which are meeting with excellent success. The hanger for three-crown frames is made of one piece of steel, machined for use with 28 and 30-inch wheels, with the brazing walls on the inside of the bracket, and is designed to receive 1 1/2-inch tubing for the main body of the frame, and oval-shaped straight tubes for the rear stays, and it will permit the

**THINK OF THIS=**

WHAT YOU GET FOR YOUR MONEY IS AS IMPORTANT AS THE AMOUNT YOU PAY.

**THEN OF THIS=**

A NATIONAL RIDER NEVER CHANGES HIS MOUNT.

It's self-evident that there's 100 cents worth for your dollar in NATIONAL BICYCLES or riders would not stick to them.



If you want to build up a trade that means a continuing profit to yourself, write us for prices—they are fair for a down-to-date good bicycle.

NATIONAL CYCLE MFG. CO.  
24 BAY CITY, MICH.

Mention The Cycle Age

Initial Tension Expansion Spring **SEAT POST**

The Only True Jar Absorber.

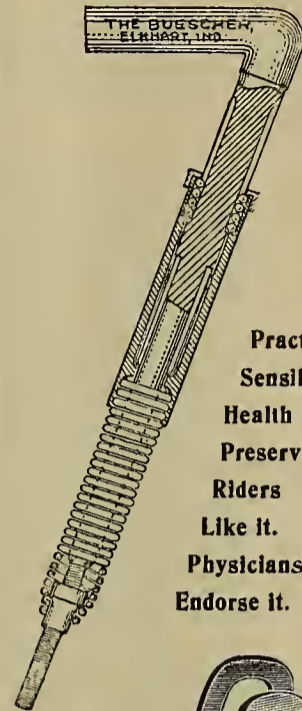
(Patent Pending.)

PRICE, \$2.50 EACH.

SYNONYM FOR THE BEST IS THE NAME OF

**THE BUESCHER MFG. CO.**

ELKHART, IND.



Practical,  
Sensible,  
Health  
Preserving  
Riders  
Like it.  
Physicians  
Endorse it.

The jobber, the dealer and the user of bicycle sundries know this.

Our products are standard and reliable in style, quality and price.

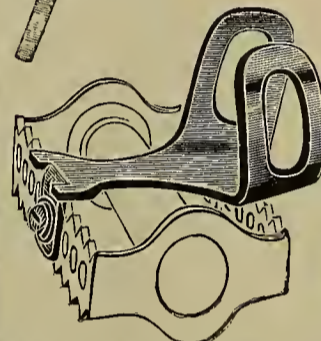
'99 CATALOGUE mailed at your request. It will pay you to see same before ordering a single sundry.

Complete lines of Pumps, Lamp Baskets, Toe Clips, Coasters, the best Spring Seat Post, etc., are shown in it.

See our Trouser Guard. We make specialties—write for estimates.



No. 7 FOOT-PUMP, barrel 1 1/8 x 12. Solid stirrup. Price 80c Each.



No. 3 TOE-CLIP Patent Sept. 14, '97. Correct practical design, 35c pair.



No. 3 COUPLING.

Latest and Best. Every Pump should be fitted with it. Pat. July 14, 1896.

**T  
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**We Have the Same Agents...**

Year after year. There must be a reason for this. It is not difficult to guess. Our BICYCLES always please.

**THE KIRK MFG. CO.**  
TOLEDO, OHIO.

**Distributing Agents:**

- Conroy Mfg. Co., 28 John St., New York.
- H. B. Shattuck & Son, Boston, Mass.
- Jas. Bailey Co., Portland, Me.
- Carlin & Fulton, Baltimore, Md.
- Mistrot Bros. & Co., Houston, Tex.
- Boutell Bros., Minneapolis, Minn.
- Powell & Clement Co., Cincinnati, Ohio.
- P. E. Allison, Louisville, Ky.

Mention The Cycle Age

Andrae Cycles Never Disappoint.

**How Do Prompt Shipments Help the Agent?**

When people want a bicycle they want it quick. Every agent knows that. He knows what it means, too. When the fact becomes known that a dealer can't fill orders within a month he might as well close up shop. When the buying season comes around promptness will be a power in selling bicycles. People want the

**Andrea Bicycle**

(14 MODELS, \$30.00 UP)

not only because it can be delivered promptly but because it never disappoints. We have earned that reputation for our bicycles and are working to earn that reputation for our service. We will not make people wait—our agents can tell them so. We have built a large new factory—the finest equipped bicycle factory in the world.

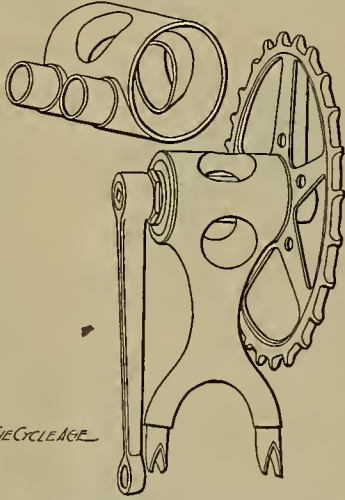
WE WANT RESPONSIBLE AGENTS TO WRITE FOR PRICES.

**Julius Andrae & Sons Co.** Milwaukee, Wis.

Eastern Export Branch: 95 Reade St., New York City.

Mention The Cycle Age

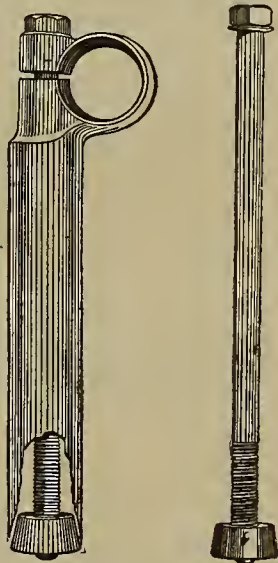
use of sprockets as large as twenty-eight teeth. The hanger is made for 3 and 4-inch drop. The chain line is  $1\frac{1}{2}$  inches, tread  $\frac{3}{4}$  inches; sprockets, 24, 26 and 28 teeth for the men's hanger and 18 to 21 for the ladies'. Seven-inch oval cranks are furnished forged of the best material and workmanship. Crank shafts are of two-piece pattern, the ends securely locked by a tongue and groove device and held in position by a bolt extending through the entire length of the shaft. A lug on the right crank drives the sprocket, and a right hand threaded cone abuts the sprocket, making this of solid construction. The adjusting cone is on the left side of the hanger, which has a left hand thread, washer and lock nut. This forms the adjustment, which can be easily operated by any one. The bearings on this bracket are



of the three-point type, dust proof, and of the best material and workmanship. The four-lug bracket is designed to be used in conjunction with the above hanger mechanism, on old-style frames. It can be furnished in the rough or machined. It is built to receive  $1\frac{1}{2}$  tubing in the main frame and  $\frac{3}{8}$  round tube for the rear stays, and is made in 3 and 4-inch drops for 28 and 30-inch machines respectively. The principal feature is the inside brazing walls, which are thoroughly covered by a broad patent. The chain line is  $1\frac{1}{2}$  inches and tread  $\frac{3}{4}$  inches.

#### IDEAL DOUBLE ADJUSTING STEM.

The Ideal Plating Co., 7 Appleton street, Boston, whose Ideal adjustable bars and other goods have been favorably known to the trade for a number of years, is pushing the sale of the double adjusting stem, which was patented in 1897 and brought out last season. The rod which draws the taper plug into the correspondingly tapered and split end of the stem also binds the clamp that holds the bar in their adjusted position, thereby doing away with the head clamp and simultaneously locking the bar in place and clamping the stem in the steering stem by the single operation of turning one nut.



This stem also gives a forward and backward adjustment of  $2\frac{1}{2}$  inches and makes the bar reversible as well as adjustable. This stem is furnished with or without the bar. The Ideal company makes also a stationary, with and without internal binder, and a variety of adjustable bars for use with any of its stems, which are bored to receive bars of one-inch diameter at the middle. All these goods are heavily copper-plated before nickeling. A good demand for the Ideal bars has grown up among the riders in the east.

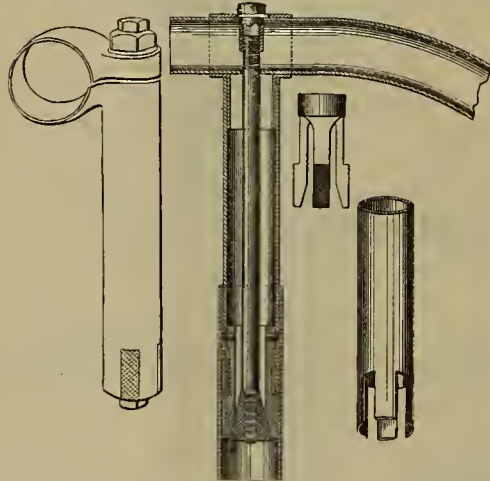
#### STRAUSS' NEW SUPPLY HOUSE.

Matthew Strauss, who recently sold out his interest in the trauss-Hanna Cycle Material Co., of Buffalo, has established a new cycle

supply house, under the name of Strauss Cycle Supply Co., and has secured a large building at 334 Genesee street, Buffalo, with about 12,000 feet of floor space, and expects to have one of the largest and most complete supply houses in the east. He invites correspondence from manufacturers of '99 goods, or from any one having goods on which they are willing to quote interesting prices. Mr. Strauss has been identified with the bicycle trade of Buffalo for nearly fifteen years.

#### KNURLED JAWS IN EXPANDER.

It has been the drawback to most internal expander devices for fastening of seat-posts and handlebar stems that the binding effect in course of time and by use became uncertain. When the expanding surface was small—mostly a mere edge of metal—the tubing would bulge under the pressure and after a short time the device was useless and must be adjusted in a new place. When, on the other hand, the expanding surface was larger, difficulty was experienced in bringing the two parallel cylindrical surfaces in sufficient intimate contact to bind, unless exceptionally great force was applied. Trouble of this kind was chiefly due to the fact that the cylindrical surfaces of tubing are not quite accurately cylindrical and the fit between the parts can therefore not in practice be made so close but what considerable force would be required to expand the inner member of the device until the minute rugosities of its outer surface would enter into that kind of contact with the similar rugosities of the external tube which constitutes friction. By accurate workmanship, as by turning the expander on a lathe, the trouble might be overcome to some extent, but the irregularity of the inner surface of the seat mast or fork stem would remain, and at all events it would be hard to prevent the expander from rotating even if it served to prevent up-and-down movement. A simple method for overcoming these faults has been invented by L. B. Gaylor, of the Black Mfg. Company, and applied to Tribune bicycles for 1899. It is designed for the fastening of the handlebar stem only and was



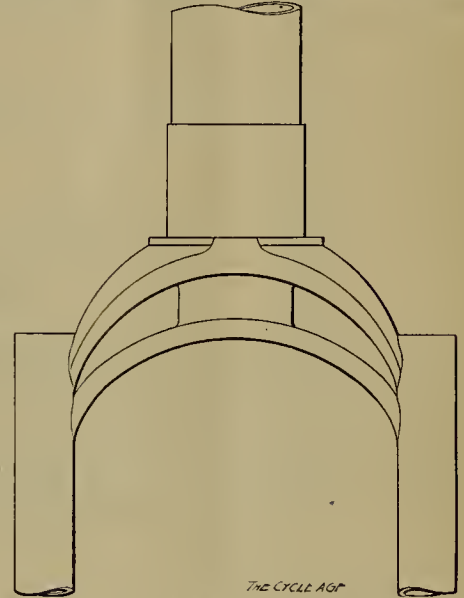
patented November 29, this year. Under this invention a series of clamping jaws is employed which is supported upon the stem of the handlebar and acts directly upon the interior of the fork stem. These clamping jaws have knurled binding surfaces and form the lower portion of spring-prongs which are integral with a short cylindrical piece which is riveted to the lower end of the handlebar stem in such manner that the jaws rest within recesses formed in the stem. The inner sides of the jaws are beveled at about the same angle as that of the conical expander which is treaded upon the lower end of the spindle extending upward through the stem and into the handlebar tee. At its upper end the spindle is threaded to receive a nut which has a square or hexagonal head by which it rests upon a washer which is placed in a recess in the tee. The clamping-jaws are of such width that they fit quite accurately, although with sufficient freedom of movement, within the recesses in the lower end of the stem, so that no lost motion exists between the jaws and the stem.

The operation of the apparatus is simple. Upon unscrewing the tubular nut the expander will move downwardly by reason of the pressure of the clamping jaws upon its conical surface, or, if preferred, in order to insure this action the washer may be dove-tailed within the tee and caused to engage with the tubular nut in any preferred manner, so that the spindle and expander will be positively forced downward when the nut is unscrewed. As the expander moves downwardly, the elasticity of the clamping-jaws causes them to move inwardly away from the walls of the steering-tube, so that the clamping action is broken. When this takes place, the handlebar and its stem may be adjusted vertically in any desired position. When such is attained, the clamping-jaws may be again forced outwardly into engagement with the walls of the steering-tube by simply screwing up

the tubular nut, and in the extensive tests that the inventor has given the apparatus he has been astonished at the rigidity with which the parts are clamped together by the exercise of a very little pressure upon the nut. The surfaces of the clamping-jaws being knurled grip the inner walls of the steering-tube with great firmness, and the inventor prefers to give to those gripping-surfaces considerable area, as shown, so that they may have large contact with the interior walls of the tube, both for the purpose of increasing their hold upon it and also for the purpose of preventing any tendency to bulge the tube. In one part of the illustration is shown the manner in which it is actually applied to Tribune bicycles, the handlebar being in front of the stem.

#### IVER JOHNSON FORK CROWN.

The accompanying illustration shows the new pattern of fork crown used on the high priced Iver Johnson bicycles. It is undoubtedly one of the neatest and strongest



crowns which has ever appeared in a bicycle. In it are combined the mechanical advantages and graceful lines of the solid round and open bridge crowns. No sectional view is presented, though on that account it is not to be imagined that the work will not stand inspection. All the vital parts of Iver Johnson bicycles are made of drop forgings.

#### AMERICAN SUBSTITUTE FOR GEAR CASE.

Walter Luther Dodge, 97 Clark street, Chicago, who makes the Sprocket chain cleaner which has been illustrated in this paper, is apparently making a success of the heretofore thankless task of marketing a special device for keeping sprocket chains in good working order. His scheme for overcoming the natural indolence of the rider and the repairman combines the requirements of efficiency, cheapness, cleanliness and ease of application to such a degree that leading jobbers have been readily persuaded to catalogue the "Sprocket" among other practical novelties.

Owing to the rapid growth of the business of the Crosby & Mayer Co., of Buffalo, N. Y., the secretary, William H. Hill, heretofore acting as eastern representative, with headquarters at 320 Broadway, New York City, has returned to the factory at Buffalo to assume a share of the increased office duties which the business demands. He will be succeeded in the eastern territory by George H. Brown, formerly manager of George Hilsendegen's fittings department, at Detroit.

Cutting, Kaestner & Co., 241 South Jefferson street, Chicago, have recently enlarged their factory and added 10,000 square feet more floor space to the plant, which now has capacity for turning out more than 200,000 saddles annually. The company states that their traveling salesman, Mr. Bice, has just secured a large season's contract from one of the largest Ohio bicycle concerns.

Mr. Wilkstrom, mechanical engineer of the Shelby Steel Tube Company, was in Toledo recently to superintend the installation of the retort oven in factory D. The oven works successfully. Superintendent Sage, of the Toledo plant, says trade indications point to a most successful year.

George H. Brown has resigned from the management of the sundries department of George Hilsendegen, to take the position of eastern representative for Crosby & Mayer, with headquarters at 320 Broadway, New York.

E. J. Welch, who recently represented New Brunswick Tire Co. in Chicago, will handle trade for the Goodyear Tire & Rubber Co. of Akron, O., in the territory west of Pittsburgh, except Chicago.



# The Barnes Cycle Company

## HERE THEY ARE:

**"If the river of life freezes over, put on skates;"**  
 In other words, meet your competitor by over-matching any line that he can produce.



Mention The Cycle Age

Model 20.....Barnes Special.....	\$ 50.00
Model 23.....Barnes Superba .....	50.00
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Register your application before it is too late  
 Our salesmen are out, and will call if you  
 will write us. ❀❀❀❀❀❀

**The Barnes Cycle Company,**  
 SYRACUSE, N. Y.



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The Greatest Value for the Price



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Roadsters, \$50

Tandems, \$75

Chainless, \$75

Send for Catalogue detailing construction of our 1899 models.

Always glad to hear from Energetic Agents.

**STERLING CYCLE WORKS, KENOSHA, WIS.**

# THE PASTIME AND SPORT

## Banker Wins a Match.

For the first time since the world's championship at Vienna, George Banker has made a good showing in Europe, having won a pretty match race from Grogna, the Belgian, and Tommaselli, the Italian, at Marseilles, November 20, the first meet on the southern winter circuit. The match was for 1,200 meters. The first heat was a loafing race until the bell, when Tommaselli began the sprint and seemed to have the race won, but Banker, who seems to have again returned to

from the American Cycle Racing Association to ride exhibitions at the Garden this week interrupted his visit. The offer was accepted. The fear of suspension by The League does not worry the Midget, who will make an effort to tie up with Tod Sloan and tour the country as a jockey, going first to the races in New Orleans.

## Potter Will Not Run.

New York City, Dec. 5.—Isaac B. Potter announced to-day that he would not be

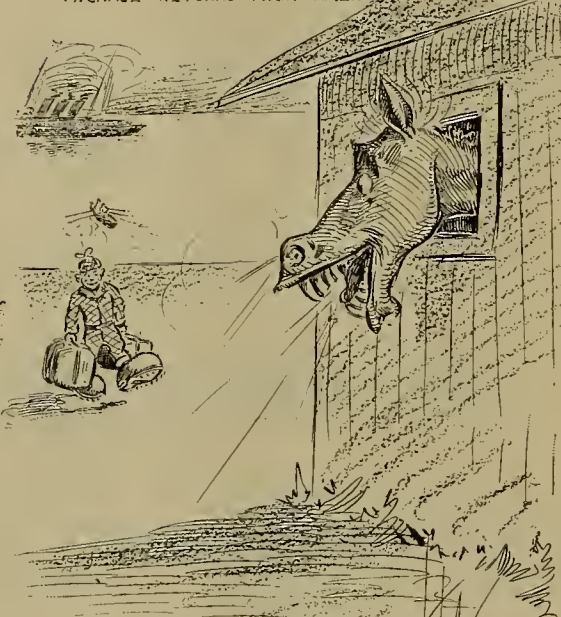
## Anti-Control Sentiment Grows.

Philadelphia, Dec. 5.—While P. S. Collins of this city, secretary-treasurer of the Pennsylvania division, L. A. W., League politician and prominent member of the Century Wheelmen of Philadelphia, was characterizing as unauthorized the use of his name in connection with the call issued last week for the formation of a new race-controlling association and was citing reasons why he thinks the racing men foolish for defying the League at this time, the Century Wheelmen, one of

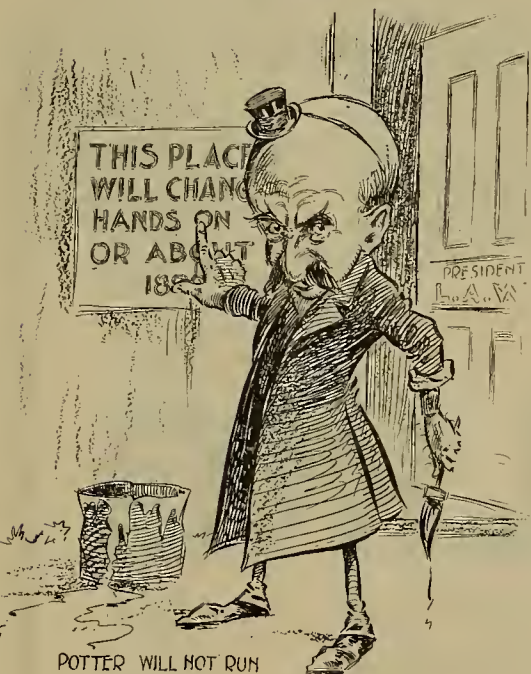
PIERCE LEADS THE LONG GRIND



MICHAEL RETURNS FROM WALES



ELKES DEFEATS TAYLOR



POTTER WILL NOT RUN



JACK PARSONS FINED FOR LOAFING



BANKER WINS FROM TOMMASELLI AND GROGNA

good form, went after him and, passing him at five yards from the tape, won by a wheel in 2:08 2-5. In the second heat the American took the lead and maintained it to the finish, watching his opponents for the pursuit and winning by inches from the little Belgian in 2:21 2-5. The third heat was a loaf till Tommaselli started the sprint 300 meters from the tape, winning by the width of a tire from Banker in 2:17 2-5. The series went to Banker, with Tommaselli second and Grogna third. A 2,000-meter tandem race was won by Girardet and Leynaud, with Banker and Grogna second.

## The Return of Michael.

Jimmy Michael arrived in New York last Saturday after a three weeks trip to his home in Wales, where a cable offer

a candidate for reelection to the presidency of the L. A. W. Up to this time he has declined to discuss the League political situation, stating that it was too soon to take up the subject, which interrupts the regular League work.

## Bicycle Accidents Infrequent.

The police department of Berlin, Germany, has issued a statement showing the rate of accidents to the number of vehicles in use there during 1897. The table shows that an accident happened to one in every fourteen cabs, one in every twenty-five wagons, one in every two stages (omnibuses) and one in every forty-two bicycles. And only a small number of the bicycle accidents resulted in death. The statement gives the number of bicycles in use in Berlin in 1897 as 130,000.

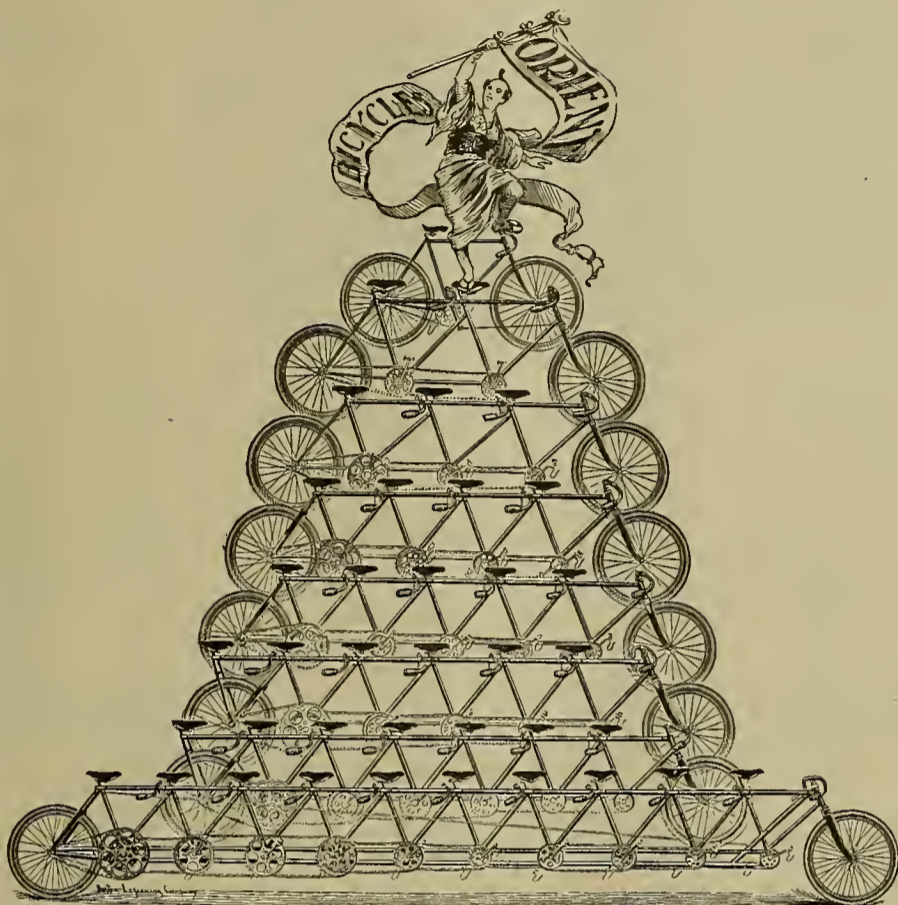
the largest League clubs in the country, was by some strange coincidence passing by an almost unanimous vote the resolution "That it is the sentiment of the Century Wheelmen that the League of American Wheelmen should abandon the control of cycle racing." The statement is openly made that a similar resolution will be offered at the meeting of the Pennsylvania division in this city next Saturday. With Pennsylvania and Massachusetts in favor of the League abandoning the control of racing, a great stride will have been taken toward securing the two-thirds vote necessary to bring about such a radical departure.

Buffalo, Dec. 5.—The first road to be built in this section under the good roads law recently passed by the state legisla-

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Do **you** want a line of wheels with the best selling device that was ever attached to a bicycle? If so, be sure and order your wheels to be equipped with the

## Morrow Automatic Coaster and Brake

It can be had on any of the following well known cycles: Spalding, Pierce, Acme, Stearns, Orient, Iver-Johnson, White, Reading-Standard, Eclipse, Thomas, Wolff-American, Columbus, besides Humber, Rover, Triumph, Rudge-Whitworth and other English makes. The agent who fails to order his wheels with this equipment will be apt to have a lot of machines to carry over at the end of the season.

ture, is nearing completion. It is being constructed of macadam, is twenty-two feet wide and extends six miles into the country.

### ELKES DEFEATS TAYLORE

American Wins Hour Match by More Than a Mile—Motor Pacing Tried—Sprint Races.

New York City, Dec. 5.—About eighty of the best amateurs of the metropolitan district took part in the short races on the Madison Square ten-lap track run by the American Cycle Racing Association which opened the indoor season last Saturday night. Collett and Powell did not enter, however, fearing to imperil their eligibility to the intercollegiate championships.

The "outlaw pros" gathered to the number of thirty, among them being Gardiner, Kimble, Cooper, Eaton, Nat Butler and other shining lights of the national circuit.

It was the first appearance of Nat Butler as an outlaw and he celebrated by winning the mile championship from Bob Wathour. Cooper had a fall in his trial and Gardiner fell in the final.

Petroleum motor pacing was given its first trial. When Henri Fournier mounted the cumbersome machine first and slowly circled the oval there were derisive calls from the gallery of "choo-choo" and "ting-a-ling." After a mile, however, he got up steam and with Eddie McDuffee following, reeled off a mile very handily in 2:09 3-5. The jeers changed to cheers and it looks as though the practicability and popularity of motor pacing had been established in this country.

In the Taylore-Elkes hour tandem paced race the Frenchman's pacing was far inferior to the Yankee's and he was caught (they started from opposite ends of the track) and passed in the first mile. Taylore showed indomitable pluck to the end, at times riding many laps without pace. He wore himself out and was easily beaten by a mile and two laps. Elkes made 27.65 miles in the hour. His pace following was of the easy, impressive order shown when he made the world's hour record at Philadelphia.

Owing to the big entry list of amateurs, some of the semi-finals and finals had to be postponed. A new amateur star was disclosed in George Schreiber, who won the mile open handily from Charles Ertz. The summaries follow:

One-mile indoor amateur championship, final heat—G. C. Schreiber, first; C. M. Ertz, second; W. Torrence, third. Time, 2:54 3-5.

One-mile professional indoor championship, final heat—Nat Butler, first; Robert Walthour, second; F. F. Goodman, third; Oscar Hedstrom, fourth. Time, 2:42 4-5.

### AUSTRALIAN SEASON OPENED

Walne Makes a Record and Parsons is Fined for Loafing—Big Austral Race Prizes.

Sydney, Nov. 5.—The racing season was opened with a meet at Adelaide run on October 15 and 22. The meets were only moderately attended and the South Australian League just cleared expenses. Exceptionally fast times were made. Walne rode half a mile from scratch in :59, which stands as competition record. Jack Parsons was fined \$5 together with another rider, for loafing in their heat of the mile scratch, whereupon he scratched for all events and declared that he would not ride in South Australia again.

A great overland ride has recently been accomplished by Albert McDonald, who left Port Darwin on August 22 and arrived in Adelaide on September 19, having cycled from ocean to ocean, a distance of 2,080½ miles, in the marvellous time of 28½ days. The previous record was held by Tom Coleman in 63 days. This ride has now been accomplished three times.

A syndicate is arranging to run electric light race meets during December, January and February, two nights each

month, in Sydney, \$350 prize money is to be given each night.

The Austral meet will be held November 26, December 3 and December 10, when \$4,270 will be given in prize money. The chief events are the Austral wheel race with prizes amounting to \$2,000 and a scratch event for prizes aggregating \$850. This will be followed on January 26 and 28 and February 4 by the big Australian Natives' Association meet, when \$4,500 will be given in prizes, the principal events being the A. N. A. handicap for \$2,250 in prizes and a scratch event for \$700.

### PIERCE LEADS THE GRIND

Is Ahead of Record in Six-Day Race—Leads Miller and Waller by Sixteen Miles.

New York City, Dec. 7.—Thirty-one riders hailing from all parts of the United States and Europe, and from Australia as well, faced Starter Eddie Bald on the Madison Square Garden track when, at 12:05 Monday morning, he fired the shot that started them on the 142-hour grind that has been looked forward to with so much interest. The resolution presented to the city council to prohibit the race on the ground of cruelty, had been voted down by that body, so little interest having been shown in the measure that none but the framer was present to argue in its support and no one deigned to oppose it. A board of physicians was appointed, however, to examine the riders daily, and the health board of the city announced it would interfere to stop the race should the doctors find at any time that any of the contestants was being forced to ride against his will or when physically unfit to participate.

The contest for position at the start was between Miller and Shinneer for the lead, then between Waller and Miller. At daylight Fredericks had the lead and in the afternoon Pierce led by a mile and a half.

Waller rode 314 miles and 4 laps before making a dismount, breaking Stephane's endurance record of 272 miles made last year.

Five men dropped out the first day. Leslie fell and did not return to the track, Smith fell and broke a rib, Neal quit with a bad eye and Rice with a weak stomach, Burke and Beacon because they were tired.

Eight spills occurred during the first day, one being caused by the slipping of one of the tandems which were to pace McDuffee in a five-mile exhibition. Miller ran into the tandem and fell but was not hurt, McDuffee dislocated a thumb and Hicks of the tandem team cut his head on a post.

At the end of the seventeenth mile Pierce was about five miles behind Waller's record of last year, but at 10 o'clock Monday night, after riding twenty-two hours, was 350 yards ahead of Waller's record for the time, having ridden 419 miles 1 lap.

From the twenty-second hour to the thirty-fifth Pierce rode ahead of the record. At the thirty-fifth hour he was three miles behind, but in the next hour he went ahead again. Records fell steadily from that time. In the thirty-seventh hour Pierce rested twenty-nine minutes and slept eighteen minutes, his first sleep in the contest. He lost eight miles of his lead over Waller, but was still a mile ahead of the record at the thirty-eighth hour. His 500th mile was completed in 27:29:00, 600th in 33:34:00, and 700th in 40:06:00. At the forty-third hour he was twenty-one miles ahead of Waller, and nearing the finish of the forty-fourth hour Miller did some brilliant sprinting and took Waller's position as second. Waller kept the terrible gait set by the Chicago gripman for only a short time and then got off his wheel, yielding up second posi-

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judged by their  
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## Rawhide Saddle

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Eclipse	Viking
Envoy	Wolf-American
Hudson	Yale
Lovell-Diamond	Snell
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Write us, if you want a very light, attractive, up-to-date bicycle saddle of the highest grade.

## Hollenbeck Saddle Co.

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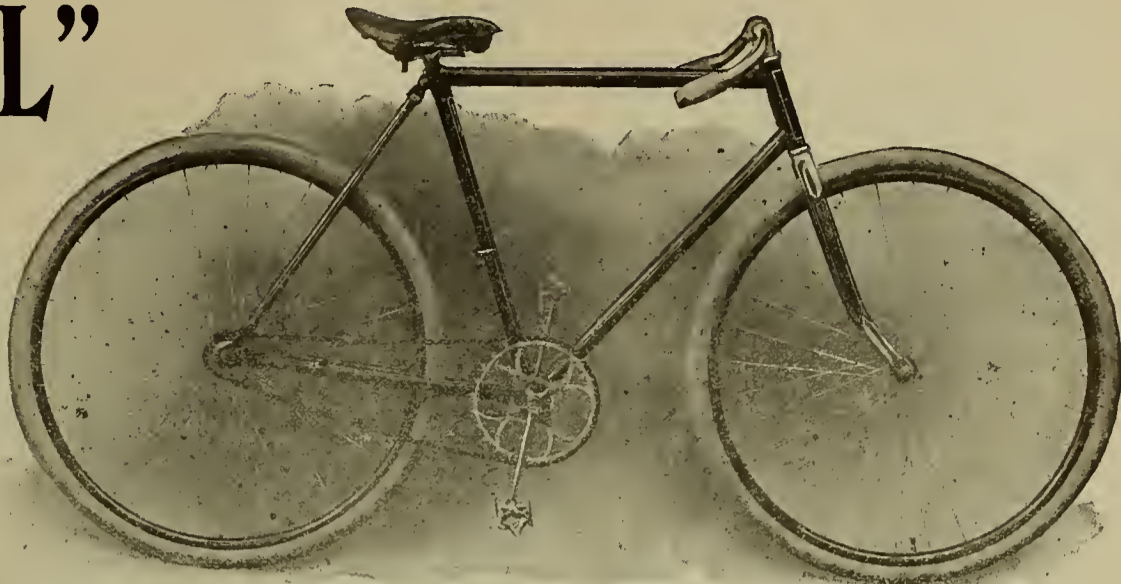
List \$30

M. & W. tires; 1 1/4-in. flush joints; 2 piece hanger; 3-16 in. chain; oval crown; D rear forks; large sprockets.

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Has met with the approval of those who are progressive in the bicycle industry.

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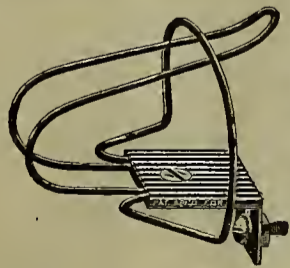
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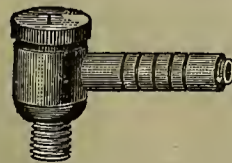
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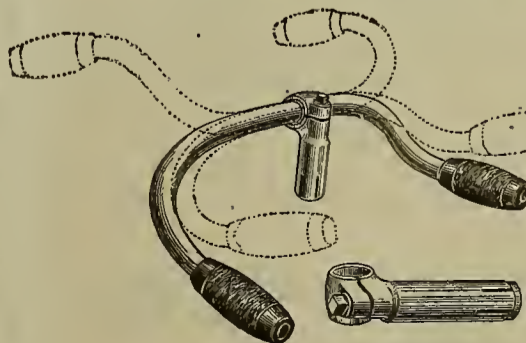
Everywhere will sell the Monitor Pump Connection in 1899. AIR TIGHT. PRICES RIGHT. ELECTROS READY.

An inquiry from you will be appreciated. Sample mailed any dealer for 6 cents.

HARRAH & STEWART MFG. CO. (Dept. A), Des Moines, Iowa.

Mention The Cycle Age

## The Oldest Handle Bar Manufacturers in Business



Don't be misled to use bars that are unknown and of inferior quality when you can buy the

Ideal Adjustable and Internal Binder Bars

for the same money. Our bars are made of the best seamless tubing, and the stems of one-piece forging. All styles. All bars heavily coppered before being nicked. Guaranteed the best finish and most perfect bar made. Get our prices and circular for '99.

IDEAL PLATING CO., 7 Appleton St., Boston, Mass.

tion, to which he had held so tenaciously all day Tuesday.

Pierce's remarkable riding has changed the opinion of many who thought he had little chance for first place. His lead of more than sixteen miles makes it possible for him to rest at times for half an hour or longer without losing the lead. He is in excellent physical condition, with the only exception that the soles of his feet are sore.

Miller spends more time resting, and trusts to Pierce overtaking himself in the first half of the struggle.

Lawson shows the effects of the strain more than any of the others and seems on the point of breaking down.

Stevens has not slept yet and says he will not during the first seventy-two hours. He is apparently the freshest man in the race.

Gimm is plodding patiently and Waller is in the best of good nature, having ridden off all the crankiness with which he started.

The score at 2 a. m., Wednesday, after fifty hours' riding, was as follows:

Pierce .....	846.1	Lawson .....	760.1
Miller .....	829.6	Aaronson .....	707.7
Waller .....	813.3	Schinneer .....	664.0
Albert .....	800.0	Forster .....	677.3
Hale .....	763.6	Filkington .....	648.6
Gimm .....	774.5	Julius .....	653.0
Stevens .....	803.3	Monachon .....	643.1
Nawn .....	765.8		

The starters were as follows:

- Charles W. Miller, Chicago.
- Joseph H. Rice, Chicago.
- Fred Schinneer, Chicago.
- Teddy Hale, Ireland.
- Frederick Michel, Switzerland.
- Theodore Joyeaux, France.
- Frank Cistac, France.
- Ulysses Monachon, Switzerland.
- Etienne Stephane, France.
- Frank Waller, Boston.
- Fred Forster.
- Burns Pierce, Canada.
- Frank Albert, New York.
- Louis Gimm, Pittsburg.
- John Lawson, Chicago.
- Oscar Julius.

- Earl D. Stevens, Buffalo.
- A. G. Blivens, New York.
- Magnus Gross, Brooklyn.
- Charles Neal.
- James A. Rafferty, New York.
- Oscar Aaronson.
- Jack Burke, New York.
- Louis J. Kinse, Bloomfield.
- Henry Pilkington.
- J. W. Nawn.
- Stephen Fallon, Jersey City.
- Charles Turville, Philadelphia.
- Bert Leslie, Chicago.
- Edward Beacon, New York.
- E. C. Smith, Saratoga.

NEWS IN BRIEF.

Teddy Edwards has entirely recovered from the effects of the attack of fever that interrupted his continuous century riding and is enjoying life in New York. He intends to add eight more centuries to his record of 252 before the year ends. His employers refuse to allow him to make an effort to make up lost centuries and complete the 365.

There was but one ticket in the field for the annual election of officers of the Michigan division L. A. W., and the vote of the state was cast solidly by the chairman of the returning board. The result is: Chief consul, Edward N. Hines, Detroit; vice-consul, Wilbur T. Eldredge, West Bay City; secretary-treasurer, Henry E. Perry, Detroit.

The A. R. C. U., by unanimous vote of the executive committee, has invited all riders now in good standing with the L. A. W., except Major Taylor, Fred Titus and A. C. Mertens, to join the Union.

League members and racing men are awaiting with interest Chairman Mott's forthcoming annual report, which promises to be interesting.

NICKEL PLATING

We are prepared to take large contracts for plating bicycle parts. Best workmanship guaranteed and lowest cash price. Send us samples and we will plate and return with best figures on large lots or any size lots wanted. Address

Keller Dental Plating Works 91 and 93 Barr St., Fort Wayne, Ind.

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Advertisements under this head 5 cents per word first insertion, 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received.

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WANTED—Agents for chain and ball lubricators should address. Box 349, Williamsport, Pa.

WANTED—Position by active young man; experienced buyer and correspondent; thoroughly acquainted with all office and manufacturing details; ten years with large manufacturer; well recommended. ENERGETIC, care Cycle Age. 1

WANTED—A description of the Sager Gear; also net cash prices on '99 wheels. DAN M. WOGAMAN, Retail Agent Quincy, Logan Co., O.

WANTED—One good agent in every large city in the United States for the best selling bicycle repair tool on the market. Big money for good agents. THE HEATH-QUIMBY Co., Minneapolis, Minn. \*

FOR SALE

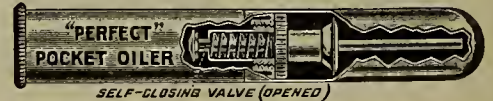
MAKE your own Tire Fluid—Five formulas for fifty cents. Costs 80c. per gallon. DAN ANTHONY, San Antonio, Tex. 1

NEW Novel Bicycle Cuts. Write for catalogue. WILLIAM STRONG, Cincinnati, O. 2

WE Build Frames or stripped wheels in any quantity for the trade; correspondence solicited. S. G. MORRIS FITTINGS Co., Cleveland, O. 2

FOR SALE—14 complete sets Thor fittings at one-half cost. J. L. BURDITT, 363 S. Clinton St., Rochester, N. Y.

"PERFECT" OILER 25cts.



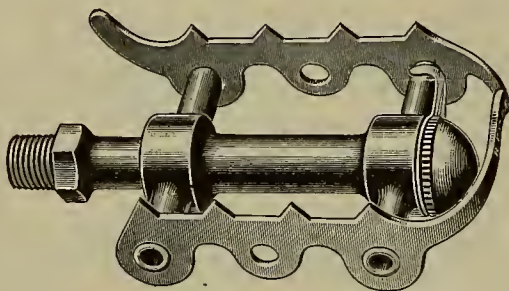
The kind you have always found with a high grade bicycle. 7

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Notice No. 1.



RECORD PEDAL No. 9.

You can tell at a glance the idea we had in mind when we devised the above pedal. It is good for ROAD or TRACK.

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For Singles, Tandems, Triplets, Quads and Quints,

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The season of 1899 will be a record breaker for the bicycle specialist who will use good material, build a good wheel and treat his customer right. Do you want a seat in the band wagon? Write for a ticket to,

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Standard Saddles.

# THE CYCLE AGE

## AND TRADE REVIEW

VOL. XXII—No 7.

CHICAGO, DECEMBER 15, 1898.

NEW SERIES No. 56.

### HUMBER MAKERS IN DISTRESS

#### FAILURE TO PAY A DIVIDEND

**A Committee of the Stockholders is Appointed to Examine the Affairs of the Company.**

The well known English cycle making firm of Humber & Co. is in distress. Its directors have confessed inability to declare a dividend and a special committee of the stockholders has been appointed to examine the affairs of the concern. In addition it is suspected that Martin D. Rucker, the managing director, has overdrawn the commission account and through neglect of his duties is mainly responsible for an all around decline of the company's business. When demand was made for the appointment of an investigating committee, Rucker resorted to strategy by calling for a poll of the stockholders, but found himself in the company of a small minority. It was decided to conduct the inquiry on December 13.

#### Rucker is Under Suspicion.

Rucker has been one of the conspicuous men in English cycle finance for many years, but he did not attain proportions of greatness till the dazzling Hooley appeared on the scene. The two became partners in many a gigantic enterprise and grew enormously wealthy. Rucker invested in baronial estates, race horses and yachts. Last November Rucker was fined \$5,000 for contempt of court in having offered Hooley a bribe of \$5,000 to falsify his testimony before the bankruptcy court. But being a man of singular astuteness in business, as some of his victims in this country during the early period of American cycle manufacture can testify, Rucker escaped the fate of his friend. It was at his suggestion that Humber & Co., which once had control of the high grade trade in all European markets, ventured further afield and established branch factories in France, Belgium and Russia. The Russian house lost a barrel of money last year, and the collapse of the English trade in European markets, owing to sudden production in the leading countries and the competition of America, weakened the opportunity of the Belgian house.

#### French House in Difficulties.

The French enterprise of Humber & Co. was launched under peculiarly fortunate circumstances. Years ago the company's goods ruled supreme in the French market and so remained until Clement & Co., and the Gladiator company, both situated in Paris, so developed the resources of their bicycle factories, the one by the use of American

automatic machinery and the other by attention to modern design and extension of foreign connections, that the Humber people found themselves being squeezed by two formidable rivals. Then came consolidation of the three interests and a three-year period of uninterrupted success. But of late the gossips have been busy and letters recently received in this country hint at the approach of trouble for the French firm.

#### American Factory Attached.

The American branch of the parent house, too, is in difficulties, for a short time ago a tire company executed an attachment for \$4,000 on the factory at Westboro, Mass. It is one of the vagaries of the parent house to disavow connection with its American offspring whenever it falls from grace. When the slaughter of Humber's on the eastern market this year was reported in England the connection between the two concerns was repudiated, but the whole trade knows that it was temporarily advantageous to resort to such a subterfuge to sustain the reputation of the goods made in England.

#### New Factory for Ohio.

A company to be known as the Lorain Wheel Works has been organized by several Cleveland and Elyria capitalists. The property of the defunct Lorain brass works has been leased and the new company, which has a capitalization of \$100,000, will at once convert it into a fully equipped bicycle factory. The intention is to put the factory into immediate operation, as contracts are said to have been already made for a large number of machines to be delivered soon after the first of the year. The manager will be H. C. Williams, and the secretary, T. C. Moxham.

#### Ide Mfg. Co. Quits Business.

Very quietly the F. F. Ide Mfg. Co., in Peoria, Ill., have slipped out of business and are selling the machinery, small tools, shafting, pulleys, belting, etc., of the factory. Such stock as was carried over was disposed of some time ago. It is understood that the concern does not owe money to creditors.

### TIRE PATENT CLAIMS INVALID

#### COURT REBUFFS BOTH LITIGANTS

**In an Appeal on Interference it is Decided Both Palmer and Hess Claims Were Antedated.**

A great deal of excitement has been created in trade circles since it became known that the United States Court of Appeals, sitting at Cincinnati, has rendered a decision declaring invalid certain claims in the patents granted the Palmer Pneumatic Tire Co. and Henry A. Lozier, the well known bicycle maker.

It has been erroneously stated in the public prints that the court held both patents to have been anticipated by patents taken out years ago by the contending parties, and that as a consequence both litigants are thrown back on whatever rights they have under their old patents. From this statement it has been inferred that the Palmer patents, which are now controlled by the B. F. Goodrich Co., as well as the patents owned by Mr. Lozier, are ineffective in preventing anyone from manufacturing tires with the construction peculiar to Palmer and Lozier tires.

#### Not a Sweeping Decision.

While the lawyers for both parties are yet without a full transcript of the decision they are reliably informed that it is not half so sweeping as the daily papers have led interested people to suppose. Three or four years ago John F. Palmer was granted a patent on tire construction. The patent office also granted one Hess a patent on similar tire construction about the same time, three claims of which were alleged to be in interference with similar claims in the Palmer patent.

The ruling of the court now is, that the three claims in the Hess patent, which are owned by Mr. Lozier, out of the dozen or more allowed are invalid, and that the same claims which are part of the Palmer patent are also invalid. The main Palmer and Lozier patents, however, are not affected by the decision, and nobody has the right to manufacture goods of such construction as is peculiar to both the Palmer and Lozier tires.

#### Sieg Resumes Management.

The receivers of the Chas. H. Sieg Mfg. company, of Kenosha, Wis., have, upon recommendation of a majority of the creditors of the company, including Morgan & Wright, asked for and been granted a discharge, in favor of the return of affairs to the former owners. Mr. Sieg is therefore again in control of his business. The liabilities of the company when the receivers took charge of its affairs were about \$112,000 and the cash on

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hand less than \$100. Now the liabilities are about \$60,000 and the cash on hand to start with more than \$7,000, with one order booked for 5,000 bicycles and another from a large Chicago house for all the machines it may require next year. During the past four months the sales of the company have amounted to about \$30,000, and an average of about forty men have been employed.

### BICYCLES BY PARCELS POST

Bill in Congress Providing for Handling of All Freight by the Postoffice Department.

Washington, Dec. 12.—A peculiar measure, now pending in Congress, has for its object extension of the postal department to cover the entire business of public transportation. It is proposed to consolidate the Interstate Commerce Commission with the Post Office Department. Under the terms of the measure the Post Office Department, thus consolidated, is directed to cover the public transportation of persons, baggage, parcels and general freight. All parcel and freight rates must be prepaid and the postage on general freight must be paid either by stamps affixed to the various articles or to the bills of lading, as the department may require. No rebates, or reductions of tolls, on parcels or on general freight shall be granted either to private individuals or to public servants, with the exception that all government supplies shall be transported free on all the lines of transportation under the control of the department.

The measure provides that on parcels over one pound and not over five pounds the postage shall be 5 cents; on parcels over five pounds and not over ten pounds, 10 cents; over 10 pounds and not over thirty pounds, 15 cents; over thirty pounds and not over sixty pounds, 20 cents; over sixty pounds and not over one hundred pounds, 25 cents, with an additional rate of five cents for each additional twenty pounds or fraction thereof. These parcel rates shall include all kinds of merchandise not of a deleterious character, and packed in accordance with the rules of the department.

The bill also provides that bicycles may be carried as baggage, subject to a toll of five cents per trip of the owner.

This remarkable measure now reposes in committee. It has attracted widespread attention, but it is hardly thought that any action will be taken on it.

### Private Trading Ticket Scheme Upheld.

Washington, Dec. 12.—In the case of the District of Columbia against Harry King, Jr., charged with conducting a gift enterprise, the jury, acting under instructions from the court, brought in a verdict of not guilty. The court held that the giving of tickets by a merchant to purchasers of goods in his store, to be redeemed by himself, is not a violation of the statute prohibiting gift enterprises, the transaction being in effect a discount.

### Decorative Plants as Sideline.

Camden, N. J., Dec. 12.—A retail cycle house in this city which heretofore has carried toys, juvenile goods and couches branched out this year and has practically a monopoly of trade in southern plants for holiday decorations. Vast quantities have been sold for decorating churches, halls and large business houses. A specialty is made of doing the decorative work and of renting palms and ferns. The plants are lasting and the work a novelty which has proved a success.

There are twenty-two bicycles and sixty-one tricycles in use by the postoffice employes of Berlin.

## LOW FOREIGN FREIGHT RATES

### THE SHIPPING RING IS BROKEN

#### Rates From New York to South African Ports are Very Much Lower Than From England.

Foreign freight rates do not, as a rule, give much concern to sellers of bicycles, parts or material. And yet in the whole scheme of foreign trade there is no more important factor. Sometimes a distant market is so affected by freight quotations that the currents of trade are violently changed, and a nation's goods which have been in strong demand one year are not wanted the next.

During the past year, writes a traveling correspondent of the National Association of Manufacturers, freight has been delivered to all the South African ports from New York at an average of about 20 per cent cheaper than from London, while during August and September of this year the difference has been even greater.

The present low rates from the United States to South African ports are not due to any philanthropic efforts on the part of the transportation companies, but result from a freight war which is to determine the "zone of influence" of several shipping lines which are at loggerheads with each other. The American-Australian ships have recently taken up South African business while the American-South African lines have gone in for Australian trade. A spirited war is now being waged. All of the steamers sail under English register and two regular English companies are in the contest.

#### English Makers Are Alarmed.

In England, among both manufacturers and exporters, the American freight cut is being warmly discussed. In studying the complaint of all classes mentioned, the fact is brought out that, especially in South African trade, there is a strong combination among all the carrying companies by which they are bound to maintain a fixed rate of freight as well as passenger fare. There have been many statements made in public meetings and trade conferences of individuals interested in having rates reduced which, if true, prove that Americans have not a monopoly on monopolies.

It has been inferred that in order to uphold the present rates between England and South Africa, and vice versa, the large and more influential shippers are given rebates and commissions which the colonists argue must come out of their pockets. The English shipping ring in defense of its position claims it cannot possibly afford to deliver goods at lower rates owing to the lack of freight coming home, and both the English transportation companies, the shippers and manufacturers and anti-American colonial merchants place most of the blame on the English companies sailing out of New York, who have been responsible for the American cut rates.

#### American Shippers Hold Aloof.

It is said that strong pressure is being brought to bear on these latter companies, in order to force them to maintain a general rate at least equivalent to the English shipping ring tariff, but if they run up against the American export shipping concerns interested in this conflict without a good cash argument, their efforts will result in naught.

One thing is certain, however, and that is that it behooves American exporters to maintain an assured low, regular rate of freight between South Africa, Australia and the United States if we desire to be important factors in the trade, and

what applies to these two export markets applies to all of them. It is a point of special importance.

This little cut in rates, seemingly of such small import, has set the English manufacturing and shipping world agog. Books have recently been written on the subject, striving principally to show the unjust methods of the English shipping ring. It has become one of the chief topics of discussion in the various local chambers of commerce throughout South Africa and Australia, and all the trade journals are full of it.

The delivery of American products to South Africa and Australia is now the chief secret of maintaining a satisfactory trade with these two territories, because it has been amply demonstrated that we can and are making goods suited to their markets.

#### No Return Cargoes.

A feature which would insure a cheap, prompt and regular transportation would be that of encouraging the purchase of all raw material we possibly can from these two colonies, for it is the lack of cargo coming back which to-day causes rates to be as high as they are. This is especially the case with South Africa. Our steamers usually go out with a full cargo, and come home in ballast. The freights out must pay the expense of the whole voyage. Unfortunately, the exports from South Africa are so meagre that for at least some years to come we cannot hope to buy much from its producers.

In addition to greatly lowering rates and producing a better transportation service, the collapse of the American-Australian shipping trust in itself must prove to be a great boon to American manufacturers.

#### Shipping Ring Broken Up.

To state the case mildly, the American export trade with Australia has for years past been controlled by a combination of exporters, a transportation corporation and a lot of Australian merchants who must have believed in the policy of small sales and large profits, if the testimony from Australia is anywhere near correct. Wholesale profits of 100 per cent on American goods were for several years considered only fair, while on many commodities the rate of profit was greater. At the same time English goods of similar character were being wholesaled at 20 per cent profit.

This great difference between the prices of English and American goods was maintained by a combination of Australian importers for two main reasons: First, because, supported by our export houses, who profess to have the American manufacturer's interests at heart, they had control of all the American goods going into the market. It was impossible to ship a case of goods into Australia direct from America without going through the hands of this combination. Secondly, among the Australian jobbers there were many very anti-American in feeling, who tried their best to keep up American retail prices, so as to show the local consumer how costly our goods were.

To-day we may thank this patriotic combination for doing more than any one else to create an impression in Australia that American goods are far more costly than those of English manufacture.

That shipping ring is now broken up, and it is the duty of every interested manufacturer to see that it remains broken.

An extra appropriation will be asked for by the war ministry of France, in the budget for 1899, for the creation of a bicycle company of 200 men, for every independent cavalry division on French territory. There are seven such divisions.



**LARGE PROFITS IN AUSTRALIA****STRANGE CONDITION OF TRADE**

**From 100 to 300 Per Cent Profit Realized on Imported Bicycles—Placing American Agencies.**

Sydney, Dec. 12.—It is a somewhat curious condition of the Australian market that while the bonded warehouses have long been full of imported bicycles and auction sales have been frequent of late, machines thus sold seldom bringing more than \$45, the better class of foreign bicycles are sold at the agencies at prices out of all proportion to the cost of those machines delivered at Australian ports. Of the two Canadian machines represented here one is landed for less than \$35 and sold for \$140, and the other is landed here for even less and is never sold for less than \$125. Of English wheels the Rover is landed at less than \$60 and is sold at \$130, and the Swift is sold in London at \$75, while the Australian agents ask \$140. These are mentioned just to give an idea of the huge profit made on bicycles in Australia. If a first-class American machine could be put on to the Australian market at \$85 it would take immensely. The high grade American bicycle, such as the Cleveland, when properly rigged, has a much better appearance than many of the others landed here, and will always command a good sale.

**Would Take American Agency Now.**

The Austral Cycle agency would not in the past accept the agency for anything but American machines, for some reason known only to themselves. They are the offspring of the John Griffiths Association of London. At the present time, however, they would probably be glad of the agency of a good American wheel. At one time they were offered the agency for a Canadian line to be sold to them at a little more than \$35 a machine, but they refused; then the Goold Bicycle company opened branches all over Australia, and at the present time are selling this same machine at \$140 and doing good business.

American tires are not handled properly here, with the exception of the Morgan & Wright in Melbourne and the Hartford in New South Wales. Perdriau holds the agency for one of the leading American single-tube tires in New South Wales, but does not endeavor to push it, as he also manufactures a tire of his own. The single-tube tire does not take on at all well out here, although where their contracts permit, the racing men use them and say that they are the fastest.

**Hardware Dealers Are Poor Agents.**

When manufacturers are determining who shall act as their agents they should be careful not to give the agency to any of the big iron and hardware firms, as they do not push it once they get the agency. An Ohio made machine, which is considered by good mechanics to be a perfect bicycle, is handled in New South Wales by a big hardware firm, but they do not go out of their way to attempt to make sales. An American traveler who was out here three years ago fixed the agency for his machine with a big hardware firm, which has some of the original machines in stock yet and has never been known to advertise the line. On the other hand, when the agency for any line is given to a bicycle firm, the members know that they must sell the machines to make a living and to be successful they must advertise.

**Bankruptcy Law Amendment.**

Washington, D. C., Dec. 12.—An effort will be made during the present session of congress to amend that section of the

new bankruptcy law describing who may become bankrupts. The amendment provides that any person who owes debts amounting in the aggregate to \$100, except corporations, shall be entitled to the benefits of the act as a voluntary bankrupt; any person, except a wage earner, and any corporation engaged chiefly in manufacturing or mercantile pursuits, owing debts to the amount of \$1,000 or over, may be adjudged an involuntary bankrupt upon default or an impartial trial.

**SOUTHWESTERN TRADE GOOD**

**Past Season the Most Profitable Known to Los Angeles Dealers—Fifty New Repair Shops.**

Los Angeles, Dec. 10.—The past season has been an excellent one for local cycle dealers, more bicycles having been sold in Los Angeles than in any previous season. During 1897 there were many auctions of cheap machines shipped by carloads into this city from Chicago warehouses, but notwithstanding 1898 has been the record breaking year. The large volume of business done here is due to the fact that this is the distributing point for the southwest, from central California to Mexico and from New Mexico to the Pacific.

There has been a remarkable increase in the number of repair shops during the past season. Probably fifty new shops opened in Los Angeles during 1898 and all found good business except the few who failed from bad work or poor location. There were already a score and these older ones grew in business and capacity. Many of these repair shops do more or less renting. In one block on West Fifth street there are four repair shops adjoining each other.

W. K. Cowan, who has sold the Rambler for five years, either as manager of a branch house or as manager of the cycle department of a carriage and cycle establishment, this year launched into business for himself. He reports a splendid cash trade for the last three months and says he cannot get 1899 models fast enough to supply the demand that has already developed.

Manager Ostendorf, of the San Francisco house of H. A. Lozier & Co., has been in the city for several days arranging for the opening of a Cleveland branch house in which Bob Lennie will be interested, it is said.

The Avery cyclery put in a stock of golf goods the past season and has found that they help out trade greatly.

**Indicted for Illegal Use of Mails.**

Toledo, Dec. 12.—The United States grand jury indicted D. Frank Dreher last Friday for using the mails in pursuance of a scheme to defraud. The charge is based on a circular letter sent to Elwood, Ind., pretending that he was engaged in the sale of high-grade bicycles, and that on receipt of \$3.90 he would ship one of the new models, which, upon receipt, proved to be but a toy machine. The indictment also charges that there was no such concern as the "Monitor Manufacturing Company," for which Dreher pretended to act.

**Elgin Plant For Sale.**

The assets of the Elgin Sewing Machine & Bicycle Company of Elgin, Ill., are being advertised for sale by order of court, on December 15. Bids for the company's equity in the plant and for the bicycle making machinery, tools, materials and supplies, in whole or in part, will be received by Assignee Dewitt Campbell at 364 Wabash avenue, Chicago, until December 14.

Distinctive labels long used on patented articles do not become free to the world on the expiration of the patent.

**GERMAN TARIFF ON BICYCLES****CONSERVATIVE POLICY LIKELY**

**The Commercial Group of Statesmen Oppose the Views of Agrarian and Industrial Champions.**

Though little is heard at present of the threatened increase in the German tariff on American bicycles, parts and material, still the fears of our makers are by no means allayed, for the danger is not yet past. Politicians temporarily check the German makers in their desire to choke off American competition. There are in Germany, aside from merely political divisions, the shades of which are multifarious and incomprehensible to a foreigner, three well-defined groups, each representing the personal interests of its members. They are respectively the agrarians, who, if unrestrained, would abolish most of the concessions granted by the commercial treaties that were negotiated with foreign countries during the administration of Chancellor Caprivi, and, by cutting off the importation of meats and cereals, advance the local prices of animals and food products, and thus render German agriculture more profitable; secondly, the industrial group, which would lower or abolish entirely the duties and restrictions against foreign meats and breadstuffs, and, by making food as cheap as possible, facilitate low cost of production in manufactures; and, thirdly, the commercial group—merchants, bankers, and traders of all kinds—who urge the utmost freedom of trade, large international exchanges, busy railroads, canals and inland river routes, increased subsidies to ocean steamship lines, and a general open and liberal policy in all matters of trade.

**Conservative Foreign Policy.**

Theorists have been studying the results of the recent elections to the Reichstag and estimating the changes in Germany's foreign policy that may come as a result of the weakening or strengthening of the representatives of one or the other of these parties, but all predictions on that score are thus far contradictory, and appear to be based rather on the hopes than the convictions of the writers. The fact that the agrarians have lost a few seats is, however, generally accepted as meaning that the difficulties that they have helped to make about food imports will at least not be aggravated, and the poor success which special groups of manufacturers—as, for instance, the bicycle makers—have met in striving to obtain new and prohibitive duties on imported products in their line would indicate that a conservative policy is more than probable in future.

**Customs Retaliation Not Likely.**

The shrinkage of certain German exports to the United States has led some of the more aggressive journals and economists to favor the adoption of a retaliatory policy against the United States. This project appears to have gone so far that the Prussian chambers of commerce in the districts most concerned—that is to say, where sugar or textile products form the bulk of exports to America—have made a general inquiry to ascertain the opinions and wishes of merchants and manufacturers in respect to the future commercial policy of the German empire toward the United States. The result of this inquiry has been overwhelmingly against the policy of a retaliatory customs war. Germany has had recent experiences in tariff wars with Russia and Spain, and the result in both cases has been disastrous.

The Boston Cycle Board of Trade has decided against holding a Boston bicycle show next year.

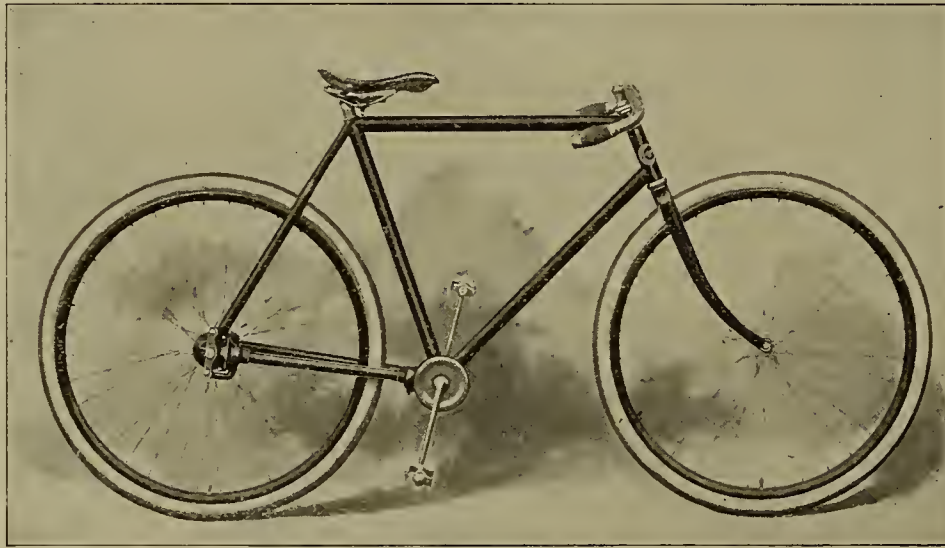
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## 1899-Crescent Bevel Gear Chainless-1899

**STRONG DURABLE**  
**EASY RUNNING EASILY ADJUSTED**  
**THE GREAT HILL CLIMBER**

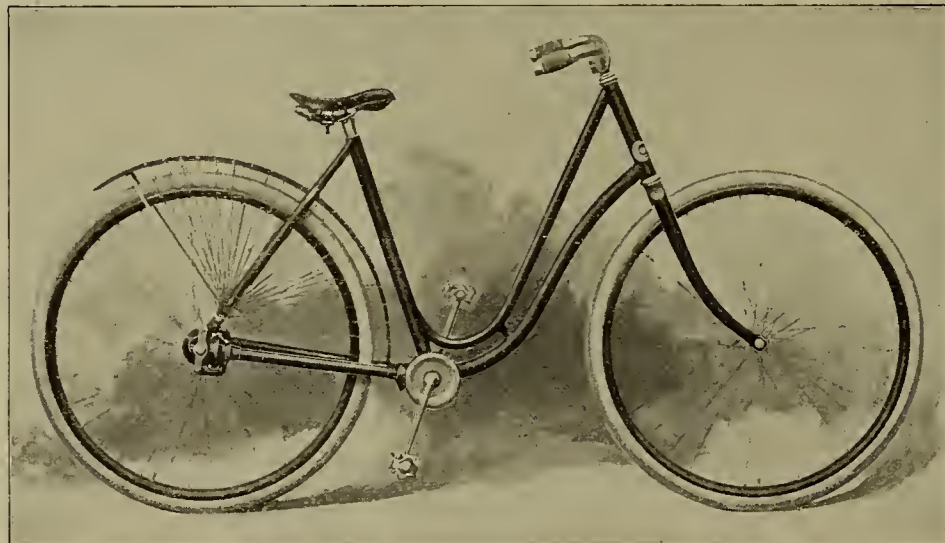
**\$60**



**\$60**

No. 17.

**\$60**



**\$60**

No. 18.

**THE MOST SATISFACTORY WHEEL FOR LADIES' USE.**

Best adapted of all bicycles for use at any time, on any road and under any conditions.

Equipped regular with CRESCENT DUNLOP DETACHABLE  
 TIRES the wheels need not be removed to repair  
 punctures permanently.

— CATALOGUE FREE —

CHICAGO—WESTERN WHEEL WORKS, Makers—NEW YORK

# THE CYCLE AGE

## AND TRADE REVIEW

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

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ALL remittances should be made to THE CYCLE AGE COMPANY.

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### PIN HEADS AND PIN PRICKS

That the advertising matter in this paper measured one and a half pages less one week than the week preceding, has been deemed so portentous a fact that the Wheel felt in duty bound to issue a solemn warning to its readers, exhorting them to quit the sinking Cycle Age ship and seek shelter under its own protecting and hospitable covers. Probably the semi-scholarly ruler of the Wheel's editorial destiny—and moderator of its funnygraphs—if by any chance he should see the Atlantic ocean at ebb tide would declare that its volume of water had become reduced to a point of danger for deep-draft vessels.

Emboldened by the New York paper's little quip another contemporary, the Cycling Gazette, which rarely ventures into anything more original than odoriferous self-laudation, shortly afterwards took heart to elect itself by pronouncement "the leading cycle paper of the world," by virtue of having in its issue of November 24 printed more pages than any other American cycle journal; especially reading pages. By this performance the Cycling Gazette "dispelled whatever doubt might have existed" as to its high grade quality and usefulness to the trade.

There are people who buy paintings by the yard, and consequently there are also artists who paint by the yard; authors who write by the yard, speakers who gain eminence by speaking by the yard. To those in the cycle trade who have done with the mere lingo of cyclism and the mess of self-neutralizing laudatory press notices which the Cycling Gazette claims is the pabulum still mostly wanted, the Cycle Age caters, and is quite content to have the division recognized which thus separates it from contemporaries.

### AGENTS ARE BEING COURTED

This time a year ago the agent's usefulness in distributing bicycles was assailed in many quarters, chiefly because he had for the first time in the history of the trade failed to respond to the impatient demand of manufacturers and early order goods in quantity. Mistaking this evidence of conservatism for faintheartedness, the makers turned to the department store and wooed it with a warmth which resulted in consequences that were as disastrous as they were poetically just. But now the record of the past trading season has been written up, and the manufacturers can clearly distinguish between genuine and spurious friends, an eagerness is being displayed again to cultivate cordial relations with the agent which contrasts curiously with the supercilious treatment he received a twelvemonth ago.

It is a commonly accepted belief today that had the agent succumbed to the temptations of the manufacturers last year, and fed their sanguine expectations, the season of 1898 would have been calamitous in the extreme. It was the coldness of the agent which operated to prevent the manufacturer from communicating the fever which raged in him to the people from whom he bought parts and material. In fine, if the agents of the country had failed to profit by past experience, it would not have been possible to point to the safe conditions which characterize the trade at this moment. For undeniably the trade, both

wholesale and retail, is in enjoyment of more than common good fortune, the agents having fewer mistakes to mourn and the manufacturers lighter stocks and freer markets than ever before.

So much importance is now attached to the trade functions of the agent that in their ardent quest for his favor there is danger of manufacturers adding to ranks that are already overcrowded if they fail to find suitable representation for their models as quickly as they would like. The example set by one giant concern is being imitated by many, and soon it will be possible to find, not one or two agents, but a score of them, or perhaps half a hundred, selling the same model in every large city. Only well known machines can be marketed in this manner, for they are sure to be in demand. On the other hand, even the best known bicycle with the fairest reputation is not likely to be marketed so profitably by ten houses as by one or two good firms in a large city, for the reason that the profits are too widely distributed and the chance of continuing to handle the line is too problematical. When such an argument is presented to the traveling men of the makers in question they invariably report that it will pay one substantial firm to sign a contract for the exclusive agency for the goods and so shut off competition. It is a neat policy.

But there is another policy which leads to the same end, and yet is as indirect in method as the foregoing one is direct. It has been in successful operation for a couple of years with a large manufacturing concern. Its method is to offer its goods to any agent who will agree to do as well by them as other lines he may be handling. Then, if at the end of a year's probation the agent has demonstrated his ability to sell the machines to advantage in competition with other lines, he is granted an exclusive agency.

These two policies are rival, yet similar in results. One is tried; the other is just emerging from the experimental stage. But enough is known of both to believe they will last.

### BRAZING BY IMMERSION

There are now very few American bicycle manufacturers who have not experimented with liquid brazing, and a large number of them have finally adopted the method for a part of the brazing work in their factories.

Among all the uncertainties and drawbacks to the method of which some of the experimenters have complained, this one fact stands out preeminent that several factory men whose judgment on such things it is impossible to set aside as incompetent, pronounce the process of brazing by immersion a success mechanically and satisfactory as an improvement in shop economics. And they continue to employ the process. This one fact is preeminent because it overbalances all indications that point in the opposite direction, just in the same manner as the production of a missing person alive and well, disproves at once all rumors or theories according to which he should be dead.

Under the circumstances the process of liquid brazing may therefore now unhesitatingly be declared a success. The statement may be qualified by saying that it is a success only under the proper conditions and when properly done, but that is a limitation that may be applied to everything. The bicycle is a success; yet it can be made so badly that it is fit only for the scrap heap after a month's use; and even the best made bicycle cannot be ridden comfortably by one who is doubled up with rheumatism, etc., etc. Liquid brazing saves work and money for those best versed in the application of the process. No inference is left, then for those who have arrived at a different result but that they are not well versed in the process, or else that the conditions in their factories are very different from those prevailing in the factories where success has been accomplished. It is possible that brazing work may have cost one manufacturer two thousand dollars under the flame brazing system and that he considers liquid brazing a success because it reduces this expense to twelve hundred, and that another manufacturer with the same capacity but who has managed to get all his brazing done for twelve hundred dollars by the old system, would see no sufficient reason for making a change. Such cases are theoretically possible but very unlikely to be actual; that is: between manufacturers of bicycles of the same numerical capacity there is now-

adays very little difference in the cost of brazing work by the flame brazing process except such as would mean a great difference in quality if investigated and explained. The difference in cost which may be caused by variations in construction of joints and in number of operations required for each complete bicycle are undoubtedly of minor importance; and furthermore are most likely to be duplicated by any other system of brazing.

It is only when the position of the repairman and the assembler of bicycles to order is considered, that the experience of the competent manufacturer on a larger scale ceases to be applicable. Whether liquid brazing can be made a success for the builder who produces each bicycle separately, still remains a question unanswered. But that liquid brazing in its best form represents an economy and an improvement in which the local builders perhaps cannot share, will probably not be considered a drawback to the method by manufacturers who are straining every nerve to make the public understand that factory-made bicycles are as much superior to built-to-order bicycles as the best factory-made shoes are superior to the more expensive home-made footwear which the cobbler around the corner pronounces a masterpiece of anatomical fitness.

When a few authentic facts—connected by a “long logic”—are sufficient to establish it as a certainty that liquid brazing must eventually prevail where bicycles of the present type are to be produced in quantity by economical factory methods, it is at once seen that manufacturers who have already made the process a success have no great inducement to publish the details of the shop practice by which they have accomplished so much. There is apparently nothing patentable about the whole process, and they must rely upon secrecy alone for maintaining the advantage which they have gained by dint of faith, perseverance and skill. On the other hand, those who have not yet reached so far or who have abandoned their experimenting under the influence of unscientific shop foremen and others who are chronic objectors to new things, would seem to have every reason for resuming their quest and reconsidering the subject in all its phases.

The main trouble with those who have condemned the process seems to have arisen from a fundamental misunderstanding. They have looked upon the idea of brazing by dipping as a full-fledged invention to be tried as a new hub, a new seat post or handlebar is tried. In reality it was—and is yet to the majority—an infant thought, handed over to them for fostering and schooling. While the special requirements of each factory are not by any means of great importance in the application, yet they are not to be slighted. Certain forms of tube joints require special manipulation of the frame to avoid waste of spelter, “rattlers” or accumulation of metal. The duration of immersion is somewhat conditioned by thickness of metal, etc. Screw threads need to be protected. Brazed tubing requires special precautions in composition of the spelter. These and other special requirements have been readily understood, but in compliance with the more general requirements which are common to all bicycle manufacturers there has evidently been a shortcoming, arising from the thought that the process as delivered to the manufacturer, with or without furnace, was already adapted to all practical needs.

Thus trouble was experienced in keeping the spelter at an even temperature all through the molten mass. The antiflux offered in the market was not so readily applied but what most firms quickly dispensed with it and preferred to remove the superfluous spelter by filing, sandblast or other means. One large firm is said to have devised a wiping system which removes this objection; others accomplish the removal by pickling, and a new method which promises still better results is projected. The functions of the flux floating on top of the bath were not always well understood. The thickness of the layer used even now varies from  $\frac{1}{4}$  to 3 inches. The zinc in the spelter would burn out and the fumes would be objectionable. The graphite crucibles were not renewed in time and operations had to be stopped. Clay crucibles were tried and are yet being tried. A few firms tried to enamel on top of a thin spelter coating and were doomed to disappointment.

In spite of all these tribulations the successful establishments have reached practical conclusions and others will do like-

wise in the future if they approach the subject of each and every factor that has a bearing upon the success of the process in its entirety. When all the science that enters into the subject shall have been mastered the process bids fair to become as nearly automatic as any other class of work that is done in American bicycle factories.

\* \* \* \*

All sorts of rumors are afloat with respect to the future intentions of makers of high-priced bicycles toward those who slap parts together and distribute the assembled machines in home and foreign markets to the great chagrin of the folks who have opened them up. Since it is impossible to bridge over the gulf which separates the bicycle makers from the parts and material houses, it is being considered if it is not prudent to take the fullest advantage of the opportunities which the latter class hold out to the former as well as to their competitors. It is acknowledged with grief and bitterness that a large slice of trade is captured each year by firms which have staked nothing in the way of original enterprise, and that so far from wearing down this order of competition the well established makers are by declining to participate in it actually giving it the protection needful to make it flourish. Of late, however, a violent change of feeling toward low priced manufacture has cropped out in several parts of the country. And here and there makers of good machines may be found conferring upon the subject of mass production of cheap stock, made up from parts which are for sale to everybody, and meeting the assemblers at their own game. Two well known eastern houses have already engaged in such an undertaking. In the state of Ohio others are contemplating to follow suit. The plan is this: each firm which is harassed by the competition of low priced machines is to make a certain number of cheap models, identify them with the firm's reputation for good construction, though not brand them with the nameplate of the house, solicit orders everywhere, meet quotations on competing machines, and by concerted action get control of a class of trade which through inattention to its wants has passed into the hands of people who are indifferent to the fate of the whole industry so long as they themselves are afforded a profit. Factories are to be leased and the experiment launched at once. The fruit of this blossoming enterprise will ripen a year hence.

\* \* \* \*

While the country abounds with people who can talk foreign languages in a fashion and who pretend to speak and write them with proficiency and correctness, it is lamentably poor in that class of translators who really can and will do meritorious work. The reasons for this condition are sufficiently plain, when a little thought is given to the subject, yet the fact is often overlooked when catalogues for foreign markets are to be prepared. In the absence of licensed translators, the manufacturer too often braves the risk of provoking derision or impatience among his foreign customers by placing his translating work in the hands of tyros or mere pretenders. Very few of the foreigners living in United States and compelled to earn their living by translating have thorough knowledge of their own vernacular and are especially at sea in technical terms. Those who have the knowledge are usually engaged in more profitable work. It would probably be a good plan to have all translation work which is now being done for the 1899 export trade tested before expense is incurred for printing and binding.

\* \* \* \*

If a manufacturer “salted” a gold mine he would not be in a hurry to buy the property. But he finances a cycle show—salts it—buys his way into it, and then brags about his investment. And the promoter has a fit of cacchination.



# STEARNS BICYCLES

The object of advertising is to bring business.

Upon the cordial co-operation of maker and dealer rests the foundation of success in selling bicycles.

The agents for Stearns Bicycles are regarded as a large family whose interests are our interests—whose wishes are consulted and for whose appreciation and approval it is our pleasure to strive.

The agent who handles Stearns Bicycles is sure of a successful season. Each 1899 model has been produced with the view of COMPELLING business. Each model is high-class and distinctive. There are no patterns of previous years to compete with the more profitable ones of the new season. Each detail of equipment is the finest known to the trade.

A large stock is on hand ready to be promptly shipped.

We invite correspondence with dealers who desire a PERMANENT and PROFITABLE arrangement.

The trade on the Pacific Coast supplied from our branch store, E. C. Stearns & Co., 210 McAllister Street, San Francisco.

**E. C. Stearns & Company,**  
Syracuse, N. Y.

The trade in the Dominion of Canada supplied from our Canadian factory, E. C. Stearns & Co., 67 Adelaide St. West, Toronto, Ontario.

# MILWAUKEE TIRES

PUNCTURE PROOF

**Pneumatic  
Single Tube**

**Resilient  
Easy Riding**

JOSEPH SCHLITZ BREWING CO.

MILWAUKEE, NOV. 21, 1898.  
MILWAUKEE PATENT PUNCTURE-PROOF  
TIRE CO., MILWAUKEE, WIS.

Gentlemen: Replying to your inquiry as to my experience so far with your puncture-proof tire, I wish to state that I am well pleased with it. I have used a pair of your tires all of last season, and have ridden over all sorts of roads, never tried to avoid broken glass or anything else liable to cause a puncture ordinarily, and my tires today are as sound as when I first used them.

In starting out on a trip now, I do so with a feeling of safety that nothing like a puncture can happen to me, which I formerly apprehended all the time. I remain, Yours truly,  
(Signed) EUGENE WUESTHOFF,  
Manager Joseph Schlitz Brewing Co.

F. C. JOHNSON, Lawyer,  
FULLER BLOCK

WINFIELD, KAS., NOV. 23, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS.

Gentlemen: I have been using your puncture-proof tires on my wheel for about eight months, and I find them to be the most durable and satisfactory tires I have ever been able to buy. Since my experience with your tire and your manner of doing business, if I were to buy any new tires I would buy your make of tires. I regard them as the best tires made. Yours truly,  
(Signed) F. C. JOHNSON.



GEO. L. TATE,  
Gunsmith and Bicycle Machinist.

LIVINGSTON, MONT., NOV. 22, 1898.  
MILWAUKEE PATENT PUNCTURE-PROOF  
TIRE CO., MILWAUKEE, WIS.

Gentlemen: Your favor of 17th inst. at hand. The pair of your tires that I purchased are fitted to a wheel that is used to carry mail over a very rough route. Since they were put on the machine, Oct. 10th, 1898, they have made the trip, 22 miles every day, through all kinds of weather and over all kinds of roads and these roads are through some of the worst cactus country to be found, and many times the mail carrier has to leave the road to avoid certain bad places, this being done without a single puncture or any attention to the tires.

Respectfully,  
(Signed) GEO. L. TATE.

MENOMINEE, MICH., NOV. 21, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS.

Gentlemen: Before using your Milwaukee Patent Puncture-Proof Tire I was puncturing my tires about twice a week. Since riding your tires I have never had a puncture, and this is so desirable to me I would not change back at twice the cost of your tire.

Yours truly,  
(Signed) H. O. CARPENTER.

Representatives Wanted. Write for Prices and Other Information.

**MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.**

## OUR CYCLE TRADE IN ENGLAND

### Increasing Demand for Stampings—Factory Managers Outgrowing Their Prejudice Against Our Goods

To show the opportunities existing in Great Britain for our bicycle makers it may be mentioned that a large American house with direct representation in London sold to a Scotch firm a short time ago 1,000 machines, to be delivered during the forthcoming season. Unquestionably, if bicycles are sent over according to English requirements, and the tastes of buyers in the various details cultivated, there is no reason why a large business should not be done. Thoroughly good bicycles are now sold in England from \$50 to \$60.

If orders are filled promptly and with exactness bicycle fittings can be sold with better advantage than in any of our foreign markets. There is a good demand and ready sale for well-made saddles, hubs, pedals, etc. Sheet-steel stampings are growing in favor. Malleable iron castings are also in demand, and the high-class work of this description turned out in the United States finds a ready sale.

#### Stampings Are Pushed Hard.

Sheet-steel stampings, as applied to lugs, bottom brackets and other fittings of a bicycle, are not a new feature in Great Britain, but are now being pushed hard by Americans. The fact is that the application of sheet-steel stampings to bicycle uses was first made in England, but without satisfactory results, due to the very high grade of castings made there at the time, and also because there was a failure to improve on the early stampings, which turned out badly.

#### Our Rear Fork Ends Unsuitable.

The American idea of building bicycles is to get good results with the least possible complexity of parts. Some English makers seem to prefer intricacy of construction. Thus the first difficulty which arises before the salesman is that he cannot quite conform to several features of the English design. This means that a machine frame set of stampings must be made up of fewer parts, several not quite applicable here being left out, and the sale is not so profitable. One part not applicable is the rear fork end which is furnished by the American manufacturers, and a sale is often lost because this fitting is not adjustable. The English pattern, although much more bulky in appearance, enables the manufacturer to adjust it to any height of frame, while the fitting furnished by the American is available for one angle only; therefore, the change in the height of the frame necessitates using a different rear fork end. The English post lug is in a single piece, and the back stays are fastened with a bolt, and, as the stays are adjustable to different heights, the angle at that lug changes, affecting at the same time the angle of the fork end. Fork ends are cheap, and many angles may ultimately be stocked; or the American stamped post lug or cluster, having either two, three, or four branches, as necessary, may be adopted.

The great difficulty is, of course, to overcome past prejudices. While it is very hard and discouraging work, progress is being made, and most of the manufacturers are ready to take a look at the samples—something few of them would think of doing last spring.

#### Factory Managers Are Timid.

The next trouble is that everything that can be classed as American is con-

demned, until its superiority is clearly proven. There is something equivalent to a high tariff in this fact. The statement that the use of an article would close a portion of a plant is frequently found to be an argument for not using it, as there are many reasons why some people would and even should prefer to keep a plant going. There are managers who frankly admit the advantages and superiority of sheet-steel stampings, but who prefer to build machines on old lines, as there is no necessity then of their having to conduct a campaign of education with their customers, the agents, and of the agents in turn convincing the bicycle riders.

Some stampings were sold last year, and there was delay in deliveries. While most of those who bought are buying again this year, it is only because they liked the article.

#### Work of Salesmen is Laborious.

It might be well to remember that selling goods here is not an easy task. There are no notions of hospitality for salesmen, and while waiting to see the manager their time is spent standing, not sitting, in a cold and shabby looking area way, with no certainty but that the errand boy or the card clerk has sized them up as in his opinion of no importance, with the result that he will not deliver the card promptly. He may even, without delivering it at all, say, "Nothing in your line is wanted to-day."

So long a time is spent at lunch in this country that the hours in which a salesman can do business are few. This means a great cost in selling. So much time is consumed in trying to see the buyers of houses, who frequently assert their importance in that way, that few sales can be made in a day, and this means further cost. In English trade, this has required an increase in the number of commercial travelers, and, as only so much money can be afforded in selling goods, it has also caused lower salaries and cheapened the class of men. The American salesmen have found their ingenuity tested to the utmost, but frequently manage to escape the petty buyer and his small ways and see the head of the house.

#### Bad Packing Leads to Trouble.

About six months ago, when bicycle prices were higher in England than they are to-day, a rich and reputable firm of Birmingham merchants with a big continental trade ordered, at a figure considered high at home, two hundred American bicycles for shipment to a port in Russia, where the shipment was to be divided and forwarded to several different points. Men's and ladies' machines were wanted in a stated proportion and, of course, with different frame heights, and both maroon and black enameling was desired. It was directed that six frames be packed in each frame case, and six wheels in each wheel case, and that a combination system of lettering and numbering be adopted, so that sets of six bicycles of any kind could be identified.

But the American manufacturer—and the concern is well known—did not rise to the occasion, and with one exception not a numbered or lettered case corresponded, and no purchaser got just what he wanted. Twenty-six-inch wheels were coupled with shipments of frames with 28-inch front forks and fitted with 28-inch mud guards, making it impossible for the brakes to reach the tires by over an inch;

maroon was mixed with black parts; pedals were packed so badly they arrived with broken centers, spindles, or cones; and it is stated that the chains were actually tied around the saddle post lug, and so loosely that they had swung around among the frames and chipped the enamel.

#### Not According to Specifications.

In addition there is a charge of bad faith in shipping goods not up to an honest standard. It is held that there is an incrustation which, having set up underneath the enamel, indicates that the frames were rusty before the enamel was put on. It is also claimed that old-pattern frames were sent, and that catalogues clearly show that the frames were second grade of the previous season, equivalent to a third grade of the present. It must be patent to any American that with this kind of a story current, even people anxious to purchase hesitate about paying cash against documents.

#### Foreign Buyers Are Very Alert.

An American salesman living in Birmingham was engaged by an American firm to handle its bicycles in England. As he learned afterwards, the firm was regarded as "sharp traders." This salesman had not been home for a couple of years, and was not, in consequence, an up-to-date American, and believed his employers when they said the sample bicycle was their 1898 model. He states that he placed 450 machines with small dealers at \$60, a big figure, and he got it because the machine had borne a very good reputation; but before the deliveries were completed, a few samples of the real 1898 model arrived in England, and an English bicycle paper happened about that time to print the fact that the firm in question were selling their 1897 model in the United States at retail for \$30, and that the machines were being sold at that price extensively throughout the United States. The 1897 models which the salesman had sold, believing they were 1898 models, were promptly returned, and the firm had hurt not only themselves, had lost the respect of their salesman, but had injured the American bicycle trade generally.

#### Bitter Experience of Lamp Makers.

A large American bicycle lamp concern, manufacturing a first-class article, was so anxious to introduce its goods into Great Britain that it accepted the offer of a big London jobbing house to buy 20,000 lamps at a very low or so-called introductory figure. In this lamp, a felt and not a knitted wick is used, and a felt wick requires the very best quality of petroleum. It is, however, very difficult to buy good petroleum in England. Petroleum oils have fancy names; the fancier the poorer. The name petroleum is almost unknown, and coal oil and kerosene, unheard of. Now, to make this lamp a success, there was needed a campaign of education, and the purchasers would have had to be taught to demand and insist upon white rose oil—a high grade, refined American petroleum—and be impressed with the absolute necessity of taking no other; for many shopkeepers in England will never sell you anything you want, but always insist on selling you something else, until they realize that you will only have what you asked for. The big jobbing house did not employ a campaign of education and had most of the lamps left on its hands.

Early last spring—just a year too late—the lamp manufacturers determined to enter into a well-organized campaign in behalf of their lamp. They had an 1898 model which was superior to the 1897, but the jobbing house demanded that they take back the 14,000 lamps they had left out of the 20,000, and fought them when no attention was paid to their demand, and wherever the Americans went they found the 1897 model advertised at

50 per cent, and they discovered that the 6,000 lamps which had been sold had proven unsatisfactory because bad oil had been used; and the American concern had to give up British trade. This is a case of a good business spoiled by a bad start. If they had put their men in the field the year before to co-operate with the jobbing house, there would have been a great success.

IN THE FOREIGN MARKETS

Imposture Practised by English Firms Desiring Exclusive Agencies—Credits in Colombia.

Quite recently attention was drawn to the dangerous haste with which American manufacturers granted exclusive agencies for continental Europe and Great Britain, when they were personally sought by well-accredited foreigners who represented houses of undoubted financial responsibility, frequently ready to pay 70, 80, or 90 per cent on consignments, or even as a tempting bait, "cash f. o. b., New York." It was then urged that they take time for investigation and satisfy themselves that the motive behind such a proposition was not an intention to control and hamper a possible future competitor. There is a great deal of such trickery practiced against Americans. It can be prevented if manufacturers will test the first strong house which bids for an exclusive agency. Offer an exclusive contract for a term of years; but retain, in a carefully worded paragraph, the right to supplement the merchant's efforts by sending American salesmen, who are to work in harmony with the merchant firm, yet to be subject to home orders. Make the commission less when men are in the field, during the introductory and educational campaign period, and larger when they are recalled; but retain also the right to make the decision when that period shall end. Sell all goods through the agents, and never sneak a commission from them. Live up to the spirit as well as the letter of the contract. Most of the successful businesses in England in American automatic machinery and pig iron have been built on these lines.

In Colombia the matter of credits is always of deep interest. European houses give six and twelve months credit, and some of them extend this to eighteen months, charging interest on the sales. When one considers that the time required to ship some goods is from six to twelve months, it is not to be wondered that merchants complain of short credits; for it sometimes happens that the time for payment expires some months before they receive the goods. During the year the United States' exports to Colombia have languished on account of the commercial depression there prevailing and the small coffee crop.

Guatemala is very mountainous. In general it may be said that American goods are too good for this market. They should be made to sell cheaply, and should be showy. The Germans and English are our most active competitors.

India, with its population of 250,000,000, is a good market for American bicycles, though the demand is chiefly confined to that portion of the country which is under British control. The following table, showing the imports of merchandise in the last three years, enables the student of our foreign trade to locate the position of the United States among competing nations:

	1895-96.	1896-97.	1897-98.
United Kingdom . . . . .	\$146,100,600	\$156,294,253	\$144,485,801
Germany . . . . .	7,290,505	7,154,245	7,547,008
Belgium . . . . .	8,461,902	7,451,479	7,083,000
Austria-Hungary . . . . .	4,107,100	4,612,142	6,655,058
United States . . . . .	3,532,257	4,547,541	4,436,332
France . . . . .	3,034,807	2,852,397	2,736,667

The Crown Electrical Works, of St. Charles, Ill., has recently received an order from Europe for 5,000 Crown cycle chains.

TEN MONTHS' CYCLE EXPORTS

GERMANY IS BUYING HEAVILY

Gratifying Increase in Our Trade With Argentine Republic—African Demand Slackened in October.

Exports of bicycles and bicycle material from the port of New York for the week ending December 6 are recorded as follows:

	Bicycles.	Materials.
England . . . . .	\$ 3,888	\$ 4,980
Ireland . . . . .	40	2,269
France . . . . .	7,822	13,410
Germany . . . . .	8,547	603
Belgium . . . . .	52	1,303
Holland . . . . .	1,830	3,681
Denmark . . . . .	1,770	1,795
Sweden . . . . .	53,469	248
Russia . . . . .	15,560	1,864
Italy . . . . .	275	709
Egypt . . . . .	709	75
Portugal . . . . .	75	111
British East India . . . . .	111	186
Australia . . . . .	186	7,068
Canada . . . . .	7,068	50
Cuba . . . . .	50	397
British West Indies . . . . .	450	255
British Guiana . . . . .	829	35
Dutch Guiana . . . . .	35	222
Ecuador . . . . .	222	20
Peru . . . . .	20	32
United States of Colombia . . . . .	32	100
Venezuela . . . . .	100	
Totals . . . . .	\$95,834	\$38,111

American Exports for October.

Governmental returns on the exports of cycles, parts and accessories for the month of October (1896, 1897 and 1898 compared) are as follows:

	1896.	1897.	1898.
United Kingdom . . . . .	\$117,299	\$58,630	\$49,507
France . . . . .	2,376	7,400	3,648
Germany . . . . .	11,413	27,928	30,458
Other Europe . . . . .	57,289	31,134	39,918
British America . . . . .	9,970	9,716	8,293
Central America . . . . .	9,020	50	981
Mexico . . . . .	4,465	3,748	2,032
Santo Domingo . . . . .	440	58	524
Cuba . . . . .	5	517	997
Puerto Rico . . . . .	250	451	3,736
Other West Indies . . . . .	8,600	7,143	22,481
Argentina . . . . .	2,031	5,134	6,661
Brazil . . . . .	1,150	7,056	470
Colombia . . . . .	1,832	2,141	8,229
Other South America . . . . .	3,647	5,339	2,384
China . . . . .	550	5,763	14,489
British East Indies . . . . .	1,548	4,123	2,853
Hong Kong . . . . .	635	7,100	8,391
Japan . . . . .	86,148	24,538	9,886
Australia . . . . .	2,911	6,511	4,588
Other Asia . . . . .	13,107	24,835	11,966
Africa . . . . .	155		
Other countries . . . . .			

American Exports for Ten Months.

Governmental returns on the exports of cycles, parts and accessories for the ten months ending with October (1896, 1897 and 1898 compared) are as follows:

	1896.	1897.	1898.
United Kingdom . . . . .	\$1,138,270	\$1,967,510	\$1,597,340
France . . . . .	116,136	247,043	463,535
Germany . . . . .	216,202	1,147,776	1,411,961
Other Europe . . . . .	394,250	1,027,727	892,093
British America . . . . .	514,915	697,802	561,804
Central America . . . . .	53,255	13,758	6,535
Mexico . . . . .	42,152	59,860	52,983
Santo Domingo . . . . .	918	2,780	3,930
Cuba . . . . .	4,686	7,476	2,351
Puerto Rico . . . . .	8,134	3,555	60,403
Other West Indies . . . . .	37,584	109,833	101,512
Argentina . . . . .	16,019	41,258	88,701
Brazil . . . . .	17,990	30,509	7,372
Colombia . . . . .	18,780	17,871	42,747
Other South Amer. . . . .	31,223	51,998	20,721
China . . . . .	7,963	22,186	120,357
British East Indies . . . . .	9,890	25,302	9,289
Hong Kong . . . . .	635	7,100	114,894
Japan . . . . .	34,969	65,521	185,150
Australia . . . . .	349,059	396,568	65,858
Other Asia . . . . .	29,444	58,769	146,380
Africa . . . . .	33,735	132,022	762
Other Countries . . . . .			1,699

The past season has not been satisfactory for the Belgian trade. Many houses have big stocks. The main cause of this quietness in the industry has been the American competition. The production and the imports increased in disproportion and the introduction of some heavy customs duties in foreign countries to which Belgium exported was not less damaging. The statistics show progress over former years, but this progress is not proportionate with the growth of for-

mer years. During the month of October the cycle exports amounted to \$20,000, as against \$15,000 in October, 1897. For the first ten months of 1898 the total value of cycle exports was \$500,000, as against \$400,000 in 1897 and \$300,000 in 1896. In 1897 the imports made up a sum of \$500,000, while in 1896 they reached only \$350,000. The exports to England and France increased, those to Germany lessened, and the exports to Holland remained stationary.

SPAULDING SCREW PLANT SOLD

Buffalo Factory Is Bid in By Assignee Keim Under First Mortgage—His Plans.

Buffalo, Dec. 12.—The entire plant of the Spaulding Machine Screw company, which went into the hands of a receiver September 15 as a preliminary move toward dissolution of partnership, was sold at public auction last Thursday to satisfy a first mortgage held by John R. Keim of New York city.

Of the 150 or more creditors of the concern but two were present at the sale and but one bid was received, that of Mr. Keim, who offered \$10,000, and the property was knocked down to him at that figure. The sale is subject to an incumbrance of about \$22,000. A deficiency judgment to the amount of about \$42,000 is to be entered against the stockholders of the company.

The Spaulding company was incorporated about five years ago for \$300,000 to manufacture bicycle parts. About a year or so ago a chattel mortgage for \$50,000 in favor of Mr. Keim was recorded on the company's property. Mr. Keim was connected with the company from the time of its assignment some two years ago. He was made assignee and managed the reorganization which followed.

It is not known definitely what Mr. Keim's intentions are with regard to the future of the plant, but it is expected, Receiver Lewis says, that a company will be organized in the near future to carry on the business, and he believes that the factory will be in full operation within a very short while. He says there were sufficient orders on the company's books when proceedings were begun, to keep the plant running for three months or more. He worked the plant up to the day of the sale and used up all of the stock on hand.

To Wind Up Machine Screw Co.'s Affairs.

All persons interested in the Spaulding Machine Screw Company, of Buffalo, are required by court to show cause before Fred B. Skinner, who has been appointed referee for that purpose, at his office, 28 Church street, on December 22, at 11 o'clock in the forenoon, why the corporation should not be dissolved in accordance with the petition in insolvency and for voluntary dissolution heard September 15 at a special term of the supreme court of New York. The referee will then make his report as soon as possible and be dismissed.

Building Up a Foreign Trade.

Failure in export efforts is nearly always due to American impatience and to unwillingness to accept new trade conditions. Salesmen are not given time to build up a new business. In most cases it is senseless to expect a profit the first year. Building up a foreign business is as much an investment, requiring time and money, as is the building of a new wing to a factory.

A common carrier cannot, by contract, limit its liability for damages resulting from its liability to exercise ordinary care.

## CYCLE SHOWS IN DISFAVOR

### Testimony of Manufacturers is Overwhelmingly Against the Exhibitions—Local Shows Favored

Further evidence of the disrelish of manufacturers for that unpalatable thing, the cycle show, is presented on this page. It is not the intention to smother the views of those who may, for some reason or other, favor exhibitions, and on this account the Cycle Age throws open its reading columns to all who have an inclination to dispute the soundness of the opinions heretofore put forward in connection with the subject. Minority opinion, though often eclipsed, is of value.

A correspondent of this paper complains that it is unfair to asperse the motives of Promoter Van Sicklen, who is whooping up the Chicago show. The critic does not stop to consider that Van Sicklen, who he asserts is promoting a show which may exert a local usefulness, is endeavoring to persuade makers that it is of national importance. If Van Sicklen had elected to conduct a local show, and not tried to persuade agents that it was to be an exposition of all the new cycle wares, he would have been immune from reproach. His sin is that of misrepresentation.

#### An Idea That Is Spreading.

In the following letter is found an expression of thought that by this time is pretty generally shared by makers of all kinds:

To the Editor:—We have been asked by a dealer in Chicago to contribute towards taking space for him to exhibit our goods in the cycle show. We have written and given him the substance of our ideas on cycle shows.

The writer always maintained that it was an imposition on the part of the cycle show managers to ask manufacturers and dealers to bring their products, which go to make up the show, and then ask them to pay for exhibiting them. I am sure that if managers of opera or playhouses would ask actors to pay for the privilege of giving their shows on the stage, there would be no shows. I think this illustration should apply in the same way to cycle shows, for if the dealers and manufacturers did not make an exhibit there surely would be no cycle shows. There is no question in my mind but that the admission fees have always paid the expenses and a fair margin on all shows in the past.

ED. A. THIEM.

The Chicago show will contain 136 spaces—not 72, as stated in the last issue of this paper—and the revenue from their sale is expected to be as follows:

12 spaces at \$125.....	\$ 1,500
72 spaces at 100.....	7,200
3 spaces at 90.....	270
49 spaces at 75.....	3,675
Total .....	\$12,645

Another batch of opinions on the subject of cycle shows is herewith presented:

#### No Show Boom Needed.

The bicycle business needs a boom. That is the cry of the showman and the daily newspapers. Boom is a very unhealthy word. It means inflation and a consequent collapse. About every town in the union, from Plymouth Rock to Seattle, has had a boom and the after effects have always been disastrous. The greatest boom Chicago ever had was during the World's Fair, and it never wants another. In other words a boom is apt to be a boomerang.

We get our ideas of cycle shows from England, a tight little island that you can run over in a few hours. There the agent at slight expense can run up to London and go home the same day; but with us the agent is from 500 to 1,000 miles away and the walking is not good in January. When he gets to the cycle show the noise and excitement is so great that before he has seen half a dozen lines he is so dazzled that he does not know where he is at, and if he is a cool hand, he will say: "I guess

I will wait until the salesmen come to my town."

Bicycles are past the missionary period, they have resolved themselves into a fixed type, it is a question of price, quality and reputation. Nothing but freaks attract attention at the shows.

If you could abolish the traveling salesmen then let us have shows. But why have both? Agents used to come to the shows, usually with the money they owed the manufacturers, and spent a week having a roaring good time, but they can't afford to do it now on the present margin of profit.

Speaking from experience every show we have ever had has been a failure from the point of view of securing agents and booking orders. Held in January they upset the salesmen's plans on the road. A show held in March, to help the local trade, might be encouraged, but you can't sell straw hats when the snow flies, or retail bicycles, much less ride them, with the thermometer at zero.

If we follow in the footsteps of the older industries we will learn from their experience that there are no booms or shows. They do not need an absinthe cocktail to give them a brace. The goods are sold in the regular channels of trade, and the sooner the bicycle gets there the better it will be for all concerned.

The best bicycle show we know of is a line of samples with a smart salesman to explain their talking points, traveling from town to town and making a personal canvass of the trade.

The bicycle is an instrument of pleasure and of utility, and is able to stand alone on its merits without the aid of the wet nurse or the molycoddler.

McKEE & HARRINGTON.

#### Can Spend Time and Money More Profitably.

We do not believe in shows, either national or local, and do not think they are any benefit to either manufacturers or dealers. Conditions have not materially changed since the National Cycle Board of Trade had this subject in hand for discussion. All the points, both pro and con, were thoroughly thrashed out and the decision arrived at that shows were detrimental. It is not our present intention to again take part in them. We think the same amount of time and money spent in other ways would promote our business to a much greater extent.

UNION CYCLE MFG. CO.

#### Have Always Opposed Shows.

We have always opposed cycle shows, and see no reason for changing our opinion.

DAY MFG. CO.

#### Will Not Exhibit in New York or Chicago.

This company is not in favor of cycle shows, and we do not expect to be represented at the Chicago and New York shows now being arranged for.

THE BRISTOL BELL CO.

#### Only the Promoters Benefit.

We do not see where bicycle shows, either national or local, would be of the slightest benefit to us. We have yet to find the manufacturer who has found shows profitable. The promoters are the beneficiaries.

RECORD PEDAL MFG. CO.

#### Would Exhibit If Forced To.

It would hardly be judicious for us to condemn cycle shows from the manufacturers' standpoint. That, of course, rests solely with the bicycle manufacturers. If they deem it necessary for their welfare to encourage the reincarnation of the cycle show, of course we should have no complaint to make, and should probably make a small exhibit, merely for the purpose of having a place to sit down and talk to our friends.

THE B. F. GOODRICH CO.

#### Heartily in Favor of Shows.

We are heartily in favor of the large cycle shows, and believe that the small, if conducted on a proper basis, will result to the advantage of both dealer and manufacturer. The same easily holds true with reference to the local cycle shows.

WALTHAM MFG. CO.

#### Too Late For Shows.

We believe that the national shows are not at all helpful to the manufacturer, entail a great deal of expense and no corresponding benefit is derived. It may be advisable, sometimes, to have local shows, with the

idea of arousing interest among the riders, but taking the matter of expense, delays, etc., incident to holding an exhibition of this kind, we do not believe that either the manufacturer or agent is benefited. As a matter of fact, we believe that the cycle trade has passed beyond its incipient stage, and while exhibitions four or five years ago served a good purpose in that they interested the general public in the machines, the industry has now settled down on a permanent, legitimate basis and shows in this line are not any more needful than exhibitions of any other article manufactured. Since the opening of the bicycle trade is so close at hand, exhibitions for next season are entirely out of the question.

RELAY MFG. CO.

## IN LITIGATION

### Petition of Bankruptcy Filed Against Anderson Cycle Co.—New Evidence in Worcester Case.

A petition asking Judge Swan to declare the Anderson company, of Detroit, Mich., bankrupt was filed December 5 in the United States district court by the Detroit Screw Works, the Detroit Free Press, Octavia W. Bates and George W. Bates, of Detroit, and the Excelsior Needle Co., of Torrington, Conn. The claims held by these creditors aggregate \$799.36. Last September the cycle company gave a chattel mortgage to secure these and other claims amounting altogether to \$7,457.92, with George Angell as trustee. On the following day it executed another chattel mortgage on the same effects, it is claimed, in which the petitioners are included. This, they allege, constituted a preferential act, contrary to the bankruptcy act. Proceedings were begun at the eleventh hour and the subpoena served on the trustee just in time to stop a sale under the first mortgage.

J. Frank Frier, of the Globe Cycle Co., of Buffalo, N. Y., has been declared a bankrupt on his own application. The first meeting of creditors was set for December 19. As a member of the firm he was liable on bonds of the company. In this way his total liabilities amounted to about \$200,000. There are no assets.

The Central Trust company of New York has filed a motion to set aside the recent decision holding its mortgage of \$500,000 against the Worcester Cycle company, of Middletown, to be invalid. It is claimed there is new evidence.

### Talk of Amalgamating English Shows.

The concurrent holding of the Stanley and National shows in London gave rise to the expression of many opinions as to the possibility of amalgamating the clashing interests of the two annual exhibitions so that in the future the trade will not be tossed on the horns of a dilemma and finally cajoled into the trouble and expense of making two displays where one is quite sufficient and very probably more than enough in the present state of development of the industry. For many reasons such a combination is much to be desired, according to the English trade papers, but the difficulties are great, though not by any means insuperable. The selection of a building of suitable size for holding the consolidated shows seems to be one of the main obstacles, but if the Crystal Palace were used a reduction of the areas occupied by the larger makers could be made with an increased charge for each machine shown. It is not impossible, however, that the effect of the only partial success of these last exhibitions will so deter makers from further lavish expenditure in this direction that the Crystal Palace will prove fully adequate to contain all the exhibits that manufacturers will feel disposed to make next year.

Cycle taxation is being adopted in all the leading cities in Canada. The average tax upon a rider is \$1 per year.





TRADE MARK



38

MANUFACTURERS ARE FURNISHING

# Dunlop Detachable Tires

On their wheels AT NO EXTRA COST, either wholesale or retail.

Agents should see that the manufacturers whom they represent are among this number. Write us about it.

1899 IS GOING TO BE A DUNLOP YEAR.

## The American Dunlop Tire Company

134 Lake Street, Chicago.

Belleville, (North Newark) N. J.

36-38 Lombard St., Toronto.



TRADE MARK



## INVEST YOUR MONEY

where you can secure

### GREATEST RESULTS.

In handling

### SNELL BICYCLES

the Dealer gives

### HONEST VALUE

for the money he gets, and can secure

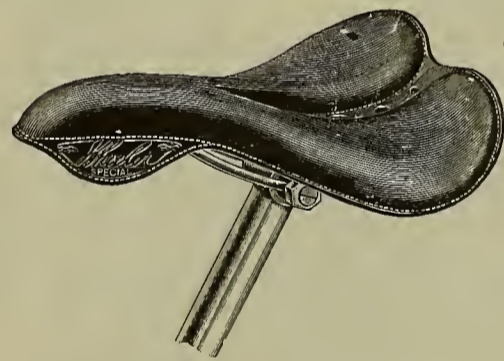
### GREATER PROFITS

thereby. An investigation of the line is

### CONVINCING PROOF.

Three Models—Up-to-Date POPULAR PRICES. Write for catalogues.

**THE SNELL CYCLE FITTINGS COMPANY**  
TOLEDO, OHIO, U. S. A.



## WHEELER SADDLES

HAVE ALWAYS BEEN MADE WITH THAT  
CURVE IN THE BACK.

OUR LINE FOR '99 COMPRISES BUT FOUR DISTINCT MODELS:

- “EXTRA” Woman’s . . . . . Broad, Soft and Easy.
- “EXTRA” Men’s . . . . . Hygienic and Durable.
- “SPECIAL” Roadster . . . . . An ornament to any wheel.
- “CORK-TOP” Racer . . . . . Light and Graceful.

These saddles are made and finished in the careful and stylish manner that has always characterized Wheeler Saddles.

Send for samples of the most popular saddle on the market.

## THE WHEELER SADDLE CO.

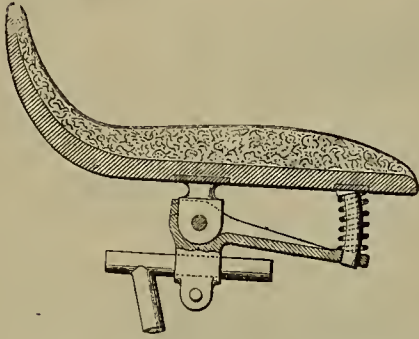
1427-1457 Woodward Ave., DETROIT, MICH.

Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT.  
New York Distributing Agents: HARTLEY & GRAHAM.

## RECENT PATENTS

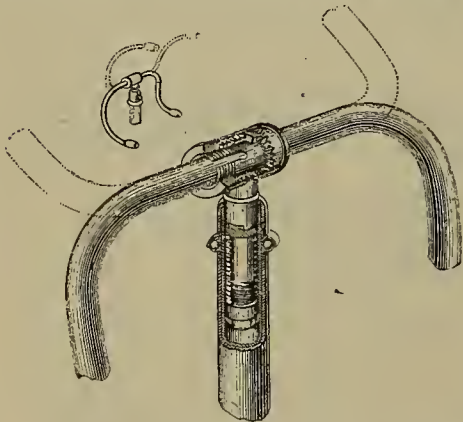
## Automatic Tilting Saddle—Handle Bar Reversible While Riding—Double Band Brake—New Step

**Self-Adjusting Saddle.**—The object of the saddle is to offer accommodation to the change of positions which a rider may desire to assume when endeavoring to ride with the greatest possible speed. The saddle top is of ordinary padded or unpadded pattern and is mounted on a central lug which is pivoted to the top



of the seat post clamp from which an arm extends forwardly to a point under the extreme pommel of the saddle. A segmental rod extends downwardly from the pommel and enters a hole in the front end of the extension from the clamp. Between the extension piece and the bottom of the saddle and surrounding the depending rod is a coil spring. When the rider sits well back on the saddle, as when riding easily, the saddle remains firm under him, but when, as in sprinting, he crowds to the front end of the saddle the spring gives underneath him and the pommel lowers enough to afford the desired freedom of action. The inventor is L. D. Lovekin, of Philadelphia, assignor to the Lovekin Saddle Co., of the same place.

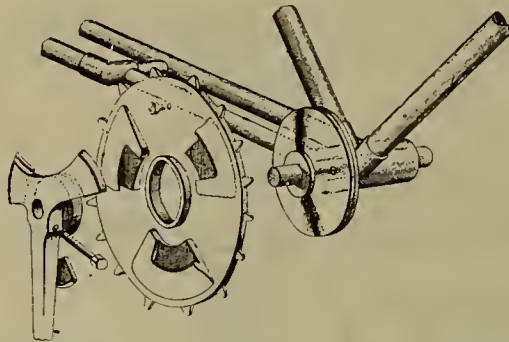
**Adjustable Bar.**—The bar is of the ordinary plain adjustable type with the exception that the bars can be inverted from their low position and swung to their high upward position without the rider having to dismount. Inside the tee at the top of the stem is fixed a short sleeve with saw teeth on one end, which engage the teeth of a corresponding ring secured to the handlebar. A spiral spring back of the toothed sleeve and a lock nut



at the opposite end of the tee completes this part of the bar. By loosening the nut the bars may be pulled to one side against the pressure of the spring a sufficient distance to allow them, after having been freed from the engaging teeth, to be turned into whatever position is desired. On the lower reduced end of the handlebar stem is a nut on top of which rests a spiral spring abutting at the top against a collar brazed to the stem. The collar has two projections at the top that enter corresponding notches in the shoulder formed by the enlarged upper end

of the stem. The spring holds the notches and projections normally in engagement, but when the rider wishes to convert his bars from drop into up-turned, or vice versa, he loosens the binding nut on the tee, turns the bars up and then by pulling them upward against the pressure of the spring in the stem, releases the engaged projections and turns the bars around. The inventor is Albert Ross, of Woodstock, Canada.

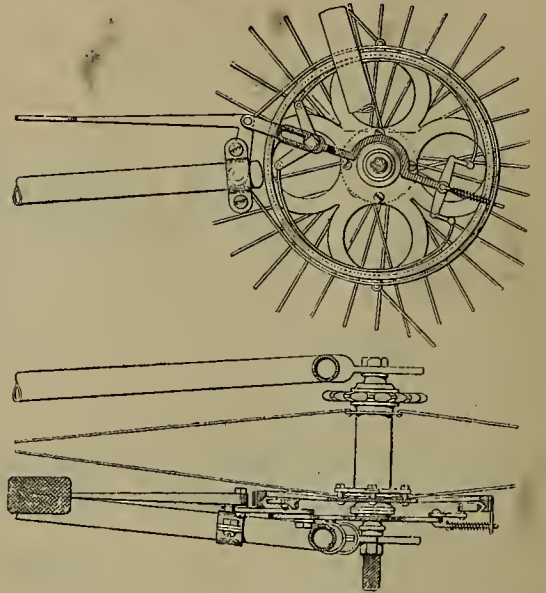
**Back-pedaling Brake.**—At the sprocket end of the crank bracket is secured a leather covered disk adjacent to the inner face of the driving sprocket. The sprocket is not keyed to the axle but merely fitted so that it can turn in its rotation direction for a limited distance, and also so that it can move in a lateral direction along the crank shaft. The crank is firmly attached to the shaft. On the outer face of the sprocket are segmental inclines which correspond in their action to one part of a set of internal and external screwthreads. The other part of the segmental thread is on the inner face of the enlarged crank hub. When the pedals are rotated backward a short distance this segmental threading causes the



sprocket to be forced inwardly against the leather covered disk on the crank bracket, thus braking the bicycle. A forward movement of the pedals and cranks causes the sprocket to be turned outward to its normal position away from the brake disk. The segmental threading is formed by means of bosses on the outer face of the sprocket which have thread-like under-cut edges along their inner sides, forming the internal threading which matches the external threading cut on blocks on the crank hub. The inventor is G. C. Mandleberg, of Manchester, and J. J. Young, of London, England.

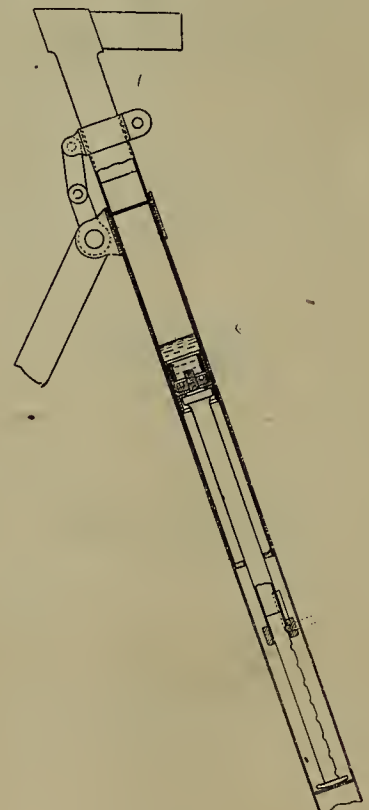
**Double Band Brake.**—A brake wheel of a larger diameter than is common in band brakes is attached to the rear hub and is also braced from the wheel rim by two or more spokes running tangentially in opposite directions to the regular wheel spokes. The flange of the brake wheel has a flat outer surface and a V-shaped groove extending around its inner periphery. Segmental brake bands of spring steel and of V-shaped cross section are hung within the brake wheel flange, being normally free from contact with the flange. The rear end of each segment is attached to a double link which is pivoted to a forwardly extending arm, the front end of which is slotted, sliding upon a stud supported upon an arm connecting with the bent actuating lever. The connection is made at the angle of the lever. The stud on the rear end of the connecting arm holds, besides the slotted arm, a double link the ends of which support the rear extremities of the two segmental brake bands. Running

from the bracket on the rear fork tube of the frame which supports the fulcrum of the actuating lever is an exterior brake band, also of spring steel, which entirely surrounds the brake drum and has its other end attached to the actuating lever at the same point where the arm operating the interior bands connects. The front end of the lever arm may be either fitted with a foot piece or may be attached to connecting rods or wires running to a hand-operating lever on the handlebars of the bicycle. When the forward end of the lever is pushed down-



ward, the outer band is contracted and caused to bind on the outer face of the brake wheel flange, while the distance between the ends of each inner segmental band is lessened, causing the bands to bulge in the middle and to bind upon the inner V-shaped surface of the brake drum. To assist the natural spring of the bands in keeping them out of contact when it is not desired to operate the brake, a small spiral spring may be added, as shown in the illustration. The inventor is L. E. Clark, of Shenandoah, Pa.

**Anti-Vibration Device.**—The invention, which comprises air-cushioned handlebars and seat post, is carried out by supporting the telescopic tube holding the seat post or handlebar stem, upon a pis-



ton held on a rod erected in the seat mast or head tube, a cushion of compressed air being maintained between the piston and the air tight partition near the top of the

# THE SCHOOL OF BUSINESS

THE CLAUS  
EXPANSION  
STEM



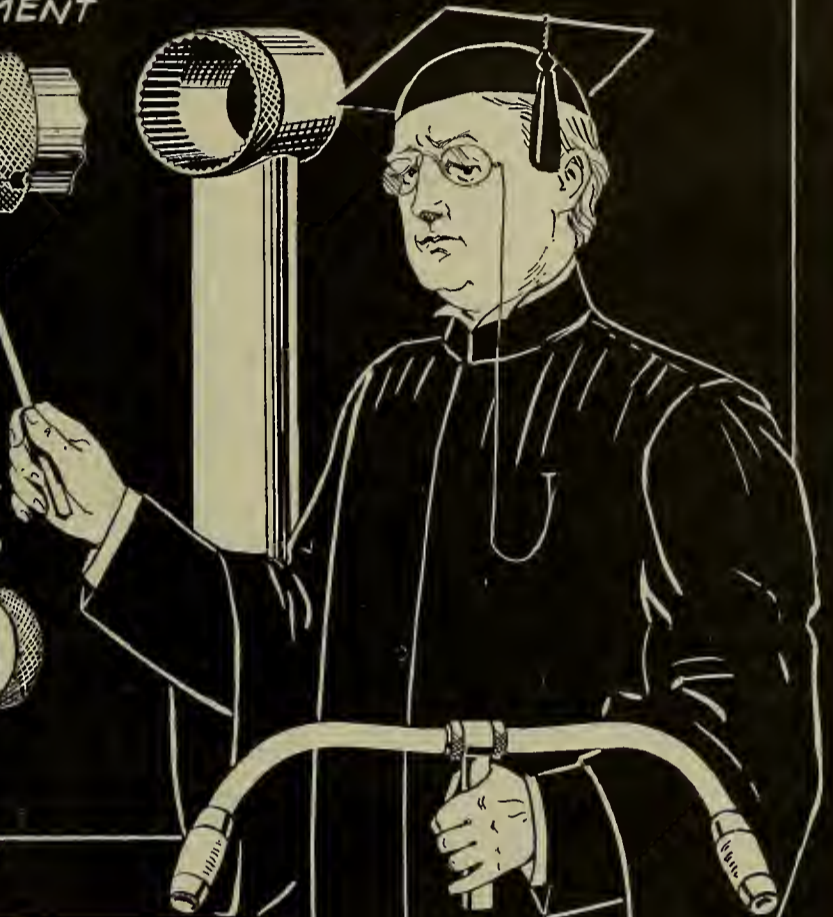
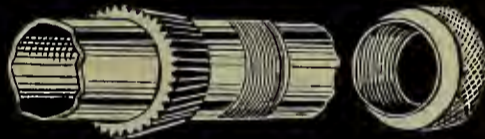
THE CLAUS ADJUSTMENT



THE CLAUS  
PLAIN STEM



THE CLAUS ADJUSTMENT  
SHOWING STEM DETACHED



In the school of business common sense is a good teacher.  
It teaches you to sell what the people want—to cater to a popular demand.



## The Claus Bar

is creating a non-resistant, unwavering demand for itself. Its mechanical perfection is doing the work.

No other bar is so simple, strong, durable, so easy to adjust, so sure to stay adjusted.

It is the only bar that can be adjusted without a wrench. The only bar that retains its width at all adjustments. The only bar in which all parts interlock—it cannot wriggle. And the only bar guaranteed forever.

These are selling points the bicycle dealer, jobber and manufacturer cannot overlook. May we quote you prices?

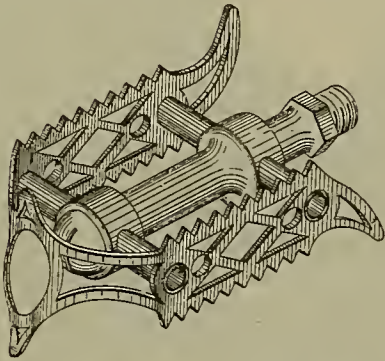
**The Claus Handle Bar Mfg. Co.**

Milwaukee, Wis., U. S. A.



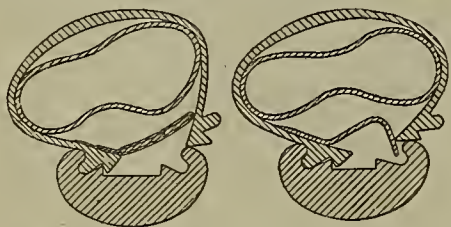
telescopic tube. The piston rod, which is adjustable in length for the purpose of regulating the elasticity of the cushion, is based at its lower end upon a partition which has to be built into the seat mast of the bicycle frame. The piston, comprising a pair of leather cups, carries a quantity of heavy oil in order to render its contact with the walls of the tube air tight. Air is admitted into the tube above the piston through a small hole in the wall, the hole being below the piston, so that the compressed air cannot escape after the piston has been pushed to its normal position in the tube. To keep the tube and its seat post or handlebar from turning in the seat mast or head stem, detachable links in pairs are attached between the top of the frame and the clamp which secures the post to the telescopic tube, thus forming a flexible coupling which steadies the device laterally but does not interfere with its longitudinal movement in the frame. The inventor is Francis Beauchamp, of London, England.

**Sidwell Pedal.**—This patent is for a pedal constructed on the now well known pattern of a body shorter than the entire



pedal and cross arms supporting at their ends side plates composed of one piece of metal of suitable form bent in U shape with the rounded closed end projecting beyond the outer extremity of the pedal body and protecting it. The side plate piece is thus entirely independent of the bearing parts. The inventor is Arthur Sidwell, of Waltham, Mass., assignor to Walter Measure, of Needham, Mass.

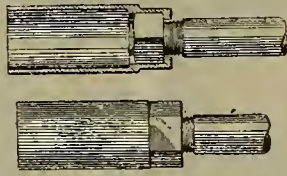
**Detachable Tire Improvement.**—This invention consists in the improvement of the flexible flap on one of the inner edges of the casing of a detachable tire of the G. & J. construction designed to cover the joint of the two edges of the casing when the tire is in place on the rim, by making the flap so wide that it cannot catch the rim grooves while the tire is being placed on the wheel, and further by making the flap of sufficient stiffness to insure against its doubling under. The flap is very flexible to the point where it leaves the edge of the casing; there it becomes so stiff that it just allows the necessary bending to conform



to the interior shape of the tire when inflated. Quick and easy assembling of the tire is thus attained. The inventor is T. B. Jeffery, of Chicago.

**Combination Step and Washer.**—By constructing a hollow step piece with an in-turned flange on its inner end and with a portion of the shell shaped internally at that inner end to conform with the rear axle nut, it is possible to slip the step on over the nut before the nut is screwed to the axle and thus form both a casing and a washer for the nut. The exterior of the step shell may be either round or hexagonal; if the former, span-

ner holes must be supplied in the step; if the latter, a common wrench can be used. The interior of the step being of the same shape as the axle nut, and fitting it closely, the latter turns with the

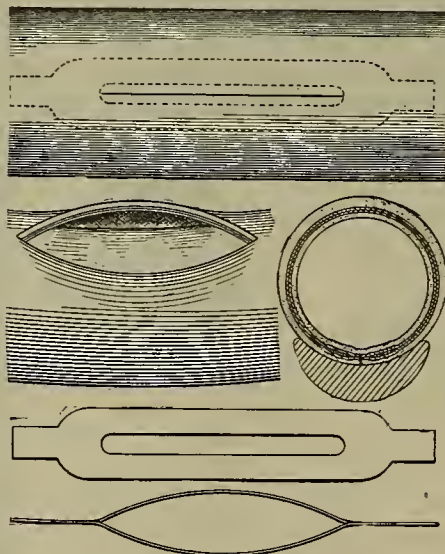


step. While the in-turned flange forms a sort of washer for the nut it does not act as a perfect washer, inasmuch as it turns with the nut and therefore brings the binding power of the nut upon the frame side in practically the same manner as though there were no washer of any kind round the axle. The inventor is A. R. Demory, of Milwaukee.

### M. & W. TIRES WITHOUT LACING

**Self-Closing Slits to Facilitate Repairs of Double Tube Tires—Inner Side Smooth.**

In construction of double tube tires an innovation of notable importance is presented for the trade's consideration in a device for which Fred W. Morgan, of the firm of Morgan & Wright, Chicago, has been recently granted a patent. The invention is a recent one, the application having been filed September 9 of this year, and it comprises means for allowing the opening of the casing of double tube tires of the Morgan & Wright type for the removal and repair of the inner tubes, without making necessary any cutting of lacing or relacing after the replacement of the tube. In carrying out the invention a number of longitudinal slits are cut along the under side of the casing at regular intervals, these slits being similar to the slit commonly found near the valve on the rim side of double tube tires. The object in having more



than one slit is to enable inner tube repairs to be sometimes made without the entire removal of the tube from the casing.

The slitted portions of the casing are reinforced so that the slit will be normally closed and incapable of stretching laterally or longitudinally, by the introduction of thin oblong spring stay plates. Each plate has a narrow slit running lengthwise through it, and when the plate is placed in the tire this slit coincides with the slit in the casing. The stay plates may be either molded into the tire or otherwise suitably secured, a simple way being to mold the plate between the canvas and rubber layers of the casing. While the spring plate makes it impossible for the slit surrounded by it to open laterally, it is possible by pressing downward on one side of the plate and pulling upward on the opposite side to make an

opening in the casing which will permit the removal of the inner tube. This bending of the plate sides is shown in the illustration in a side view of one of the stay plates separated from the tire. As soon as the sides of the plate are released they will spring together again, thus closing the slit in the casing. If the slit in the plate is made wide enough so that there will be a slight margin of free or non-reinforced casing along either side of the latter and inside the edges of the slit in the stay plate, the removal and replacement of the inner tube will be rendered more facile. The exact form of the spring plates can be varied to suit any needs that may arise in the construction of the tire, and one plate can be arranged with an enlargement at one end of the slit for the passage of the valve stem. As the stay plates can be made comparatively thin the casing will not be materially or undesirably thickened in the vicinity of the slits. The presence of the slits in the tire does not increase the liability of the casing to unduly stretch either laterally or longitudinally. The self-closing slits have the advantage over the old laced slit besides that of convenience, that they present a smooth surface inside and out, thus giving the inner tube no chance to chafe on the casing.

### CHANGES AMONG RETAILERS

**Bard Branch Store in Westfield Closed—Burtis & Zimmerman Sell Out—Barden Co. Dissolved.**

W. L. Peeler has sold his bicycle shop in Bloomington, Ill., and will travel for A. G. Spalding & Bro.

The Bard Cycle company, which has had a branch store in Westfield, N. J., for two years, has closed the branch store and taken the stock to Plainfield.

A. W. Brock, of Alma, Mich., has sold out his business to J. McKay, formerly with Pinney & Horr, at Ithaca, who will keep a line of bicycles and a tin repair shop.

The bicycle business of Burtis & Zimmerman, at Asbury Park, N. J., has been bought by M. L. Ferris, who has been manager of the store for several years.

The Barden Cycle company, which has been in business for some years in Dorchester, Mass., has been dissolved by the retiring of F. J. Carle. E. Barden has secured a larger store and will remove his cycle supplies and add a line of sporting goods, retaining the firm name of the Barden Cycle company.

### The Rudge-Whitworth Reduction.

So many rumors have been current regarding the reduction of the prices of Rudge-Whitworth bicycles that the English company has found it necessary to call attention to the fact that as long ago as July, 1897, it adopted a system of net cash prices, and lowered the list of its standard machines to \$60 and its specials to \$80. The last reduction, which took effect November 18, places the retail price of the standard Rudge-Whitworth at \$50 and the special at \$75.

### New Jobbing House for Iowa.

A new stock company, with Chicago and Council Bluffs manufacturing houses as principal holders, will open for business as wholesalers of bicycles in Cedar Rapids, Ia., January 1. A stock valued at about \$15,000 will be carried, no retail business being done. A large storage room will be secured, with a business office in Dows' auditorium.

A custom to be binding must be shown to be universal in the locality and of long existence.

## MOTOCYCLE GEARING

### Graduated Speed Changes by Regulation of Power Supply Superior to Change by Gear Only

Since the explosion motor has not yet been shown in any form capable of reversing its direction of motion, wagons driven by this motor must always have a reversing gear with some form of clutch to throw it out of action, and at least two forward gears, one fast and one slow, each with its clutch. It is very common to arrange an explosion engine with three gear speeds forward and one gear speed backward, when used for wagon driving. Many very simple and ingenious arrangements of gearing have been devised for use in this connection, besides many others which were neither ingenious nor simple, and were violent and noisy in action.

Winton, with his foot-actuated governor, obtains a great simplicity of construction, using two forward speeds, one high and one low, and one low speed backward, and modifying these speeds by this governor action.

#### Three Different Conditions.

In order to successfully change the speed of a piston and cylinder driven wagon by reducing the power of the engine, it is evident that the engine must be considerably larger than would be needed if the speed of the engine could always be kept at its maximum. This feature, however, can hardly be considered as objectionable from any point of view, because it is always best to have a very large surplus of power available. With the explosion engine this large power can be maintained for any length of time, since it is only the best normal effect of the mechanism. With an electric motor or a steam motor the conditions are quite different. With the electric motor there is only a certain pressure and volume of current available; this may be used slowly or rapidly, but cannot be increased except by recharging. With the steam motor the maximum effect can be had for a short time only, as the boiler is not at all likely to be made large enough to supply the utmost demands which the engine may make upon it. But it must be remembered that the boiler has sufficient capacity for the normal effort of the engines, and that the extreme of power is only needed for a short time, as in passing through a stretch of very difficult road, or up a steep hill, or through a snow drift. It must also be borne in mind that this extra power demand on the steam boiler merely results in lowering the steam pressure for a short time, and does not in any way affect the range of the wagon, which remains unlimited.

#### The Docile Steam Engine.

Unfortunately, there are very few figures available in regard to the actual performance of steam driven wagons. In his 2:11 mile at Charles River Park, Boston, Stanley had a pair of cylinders 2½ inch bore by 3½ inch stroke, 130 lbs. of steam to begin with, and between 85 and 90 lbs. at the end of his run. His drivers made 720 revolutions to the mile, and they are geared down 2½ to 1, from the engine shaft. The total weight of the wagon and driver was about 665 lbs. The engines made about 830 revolutions per minute, but as the throttle was partly closed all through the run, it is impossible to tell what power the engines exerted.

With the same engines and gear, 2½ to 1 reduction and 150 lbs. of steam, Stanley ran up to the top of the hill in the hill climbing test, as has been previously detailed.

Here there is a piston and cylinder driven wagon with a fixed gear, chain and sprocket reduction, which can make a mile in 2:11, and can climb a hill which looked to be impossible for horses and was, in its final incline of 35 degrees, next to insurmountable for pedestrians. There is no clutch and no change of gear on this wagon, the speed of which is governed solely by moving a single small lever backward or forward.

#### Resources of Explosion Engine.

The Winton motor is as nearly the equivalent of Stanley's as is possible with a single cylinder explosion engine, otto cycle; this form of engine depends so largely on fly wheel velocity that its speed cannot safely be reduced below a certain number of rotations per minute. With the high and low gear and the foot governor, the Winton wagon obtains a great range of speeds, although the gear has but the two changes forward.

Duryea, with his 3-cylinder explosion motor, as made in his new Peoria model, approaches the constant torque of the steam engine, and can of course more nearly approximate steam engine effects. Duryea's gearing is therefore simple, while his three cylinders make a motor more certain in action than the single cylinder explosion engine.

It is a far easier, more certain, and less expensive matter, to change a valve opening than to change a pair of gear clutches, throwing one in and the other out of action, and this constitutes a great point of advantage for all of the piston and cylinder driven wagons, where the motor is placed under control of a hand or foot governor.

It is impossible to imagine a vehicle under more perfect control than the Whitney steam wagon, which has a fixed reduction gear, a pair of cylinders larger than the boiler can supply continuously with the throttle wide open, and is fitted with a link valve motion.

#### Backing Motion Required by Law.

In regard to the backing motion, American motorcycle builders will do well to remember that under the "Light Locomotives Act," which is the English motorcycle law, all motorcycles, no matter of what style or class, must be fitted with a backing motion before they can be allowed on the highway.

The steam engine reverses readily, and the steam engine can be run at as slow a speed as may be desired; these are two points of great advantage for a motorcycle motor. If practice proves that the Stanley automatic boiler can really take care of itself without troublesome repairs, then the steam engine appears to be the best road wagon motor so far shown.

The explosion engine has no boiler, and so avoids all the possibilities of trouble which belong to steam generators at large, and this goes far to make up for the inflexibility of the motor. It is not impossible to construct reliable clutches, and hard-block chains working with hard sprockets can be made to give a silent and satisfactory change of speeds.

From all this it would appear that the probabilities of successful use are in favor of changing motorcycle speeds by means of cylinder governing, rather than by a multiplicity of gear changes and clutches.

It also appears that Duryea has made a step in the right direction by increasing the number of his cylinders up to three.

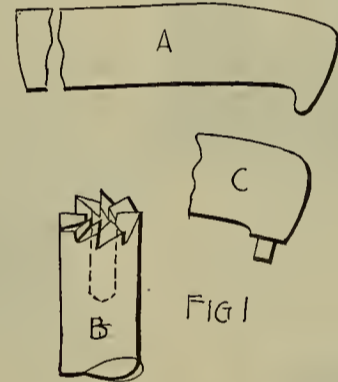
The great variety of rates of travel obtainable by the steam motorcycles is one of the most strikingly favorable features of the action of those vehicles, and very strongly impresses observers previously familiar with motorcycles which change the rate of progress only by shifting gears.

HUGH DOLNAR.

### MAKING A GOOD SPANNER

Those Commonly Sold with Hubs and Hangers Useful for Rapid and Satisfactory Work.

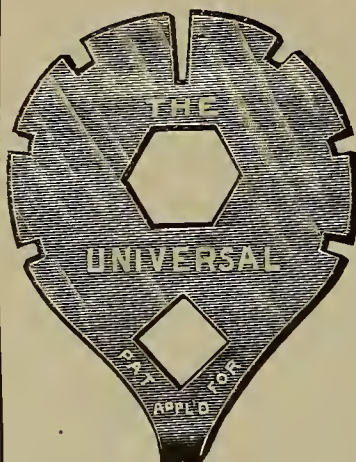
Of all the small tools constantly needed by repairmen and riders and commonly poorly made, the spanner ranks first. Spanners of many kinds have been devised, but it is seldom that a workman has one which will answer the desired purpose in an efficient manner. More than a few repairmen can tell tales of minutes wasted and temper lost in trying to turn in or out some refractory cone or cup with a poorly designed spanner, and of finally resorting to the old blacksmith method of driving the cup around with a punch or small cold chisel and hammer. Several of the well known crank hangers are now so constructed that a spanner is a necessity in assembling them. For that reason it pays a repairer to make such spanners as will accomplish his work in the most efficient manner. Universal spanners have never been successful to any great degree, it having always been found necessary to make individual spanners for the different sizes of cups and cones to be turned. In the illustrations



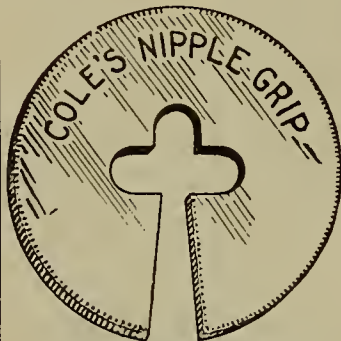
is shown a simple spanner which can be used with cups or cones of the variety now common in hangers in which the spanner holes are on the periphery of the cups and lock nuts.

The first operation is to take a piece of steel about ¼ inch by ½ inch in cross section and start a curve at one end, also upsetting the end to form a rough teat, as shown at A in Fig. 1. With an end or socket milling cutter like that shown at B, the teat on the spanner piece is formed as shown at C. When only one or two spanners are to be made, this work might be done with a file, but if a quantity of spanners are to be turned out, it is best first to make a milling cutter that may be operated in an ordinary breast drill, thus enabling one to form all of the teats exactly alike and of the proper size and shape. Such end milling cutters of various sizes are at all events very handy tools to have around any kind of a bicycle shop or factory. With them any form of stud, large or small, which has to be dressed up projecting from a squared and level seat may be readily formed. The milling cutters are easy to make and inexpensive.

Returning to the spanner, the next operation is to bend it to conform to the cup for which it is designed. This can be best done when more than one spanner is to be made by rigging up on an iron plate a form comprising a thin disk of metal of the same size as the bearing cup for which the spanner is being made. This disk, D in Fig. 2, is bolted, screwed or riveted to the iron bed plate, after a hole has been drilled at some point in its periphery corresponding to the spanner



Patented. Exact Size.  
Price, 15 Cents.



Patented.  
Price, 15 Cents.



NO TOOL BAG COMPLETE WITHOUT ONE

Patented.

REDUCED CUT.

The Victor Concaved-Round Nipple Wrench.  
Price, 15 Cents.



REDUCED CUT



REDUCED CUT.



REDUCED CUT.

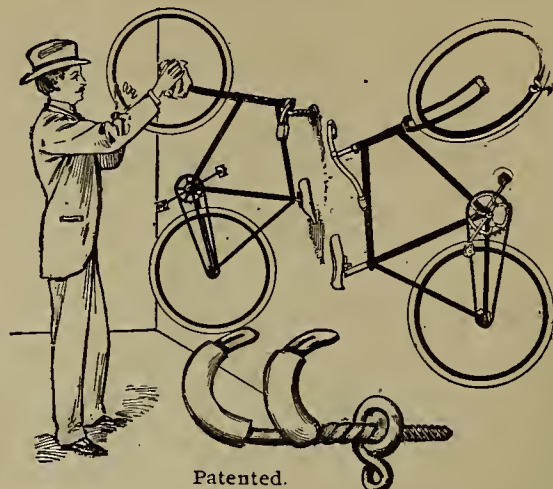
SEE THE BRUSH



REDUCED CUT



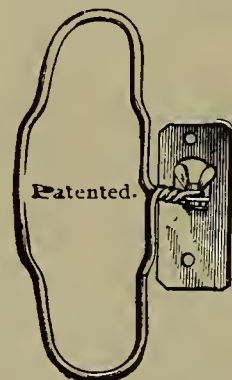
Some of



Patented.

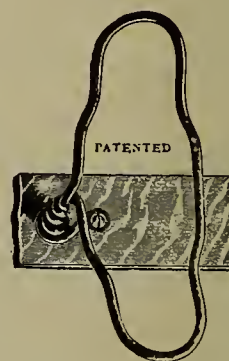
Cole's Twin Hook.

SCREWS IN THE WALL.  
Nickel'd ; Rubber Covered.  
Price, 25 Cents.



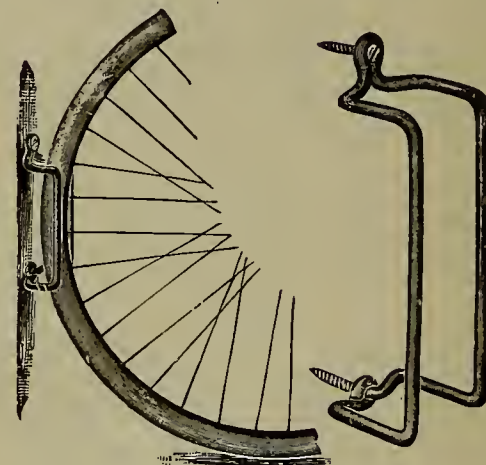
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Cole's Adjustable.  
Price, 25 cents.



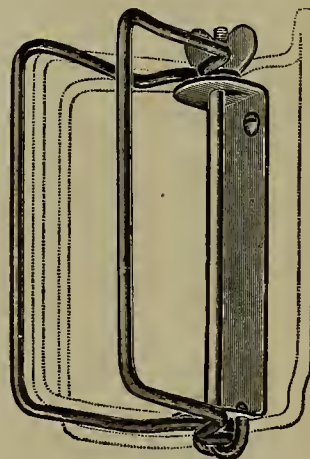
PATENTED

Cole's Holder.  
Price 10 cents.



Adjustable Holder  
Price, 15 cents.

Patented.



Patented.

The "Ideal" Adjustable Holder.  
Price, 25 cents.

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Catalogues and Electro-ty pes Sent on Request.

Mention The Cycle Age

# Anti-Rust SPRING BRASS

The 2-Hooks Prevent Tilting and Hold These Clips Securely to the Pedals.....

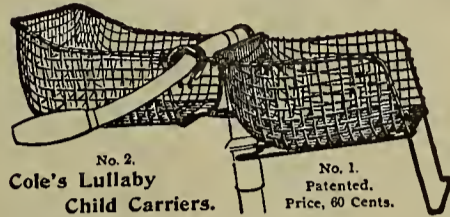
# BABY SEATS Camera and Parcel CARRIERS

# STEEL TOE CLIPS.....

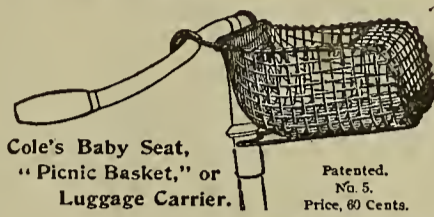
The 2-Hooks Prevent Tilting and Hold Clips Securely to the Pedals.



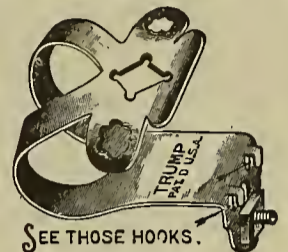
**SEE THOSE HOOKS**  
Anti-Rust Trump Toe Clip.  
Price, 35 Cents per Pair.



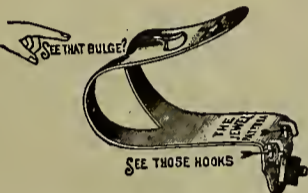
No. 2. Cole's Lullaby Child Carriers. No. 1. Patented. Price, 60 Cents.



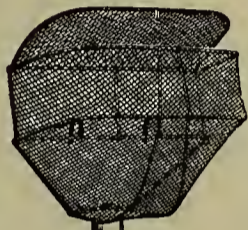
Cole's Baby Seat, "Picnic Basket," or Luggage Carrier. Patented. No. 5. Price, 60 Cents.



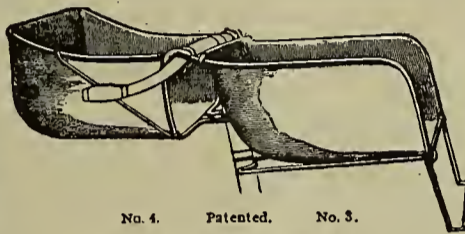
**SEE THOSE HOOKS.**  
Trump Toe Clip.  
Price, 20 Cents per Pair.



**SEE THAT BULGE!**  
**SEE THOSE HOOKS**  
Anti-Rust Jewel Toe Clip.  
Price, 30 Cents per Pair.



Patented. Cole's Package Basket.  
Price, 75 Cents.  
Weight, 10 ounces.



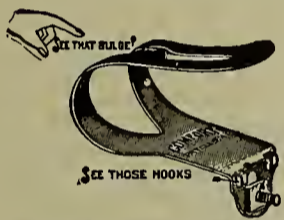
No. 4. Patented. No. 5. Cole's Canvas Baby Seats.  
Price, 60 Cents.



Patented. No. 6. Cole's Baby Seat.  
Price, 60 Cents.



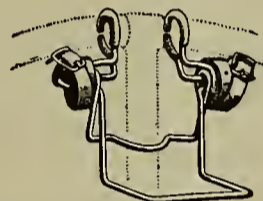
**SEE THAT BULGE!**  
**SEE THOSE HOOKS**  
Jewel Toe Clip.  
Price, 20 Cents per Pair.



**SEE THAT BULGE!**  
**SEE THOSE HOOKS**  
Anti-Rust Comfort Toe Clip.  
Price, 30 Cents per Pair.



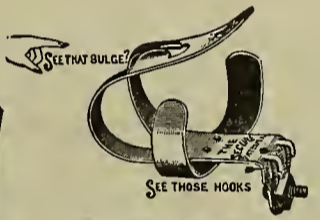
Cole's Camera and Luggage Carrier.  
Price, 40 Cents.



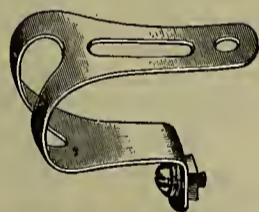
Patented. Cole's Snap-Hook Camera and Package Carrier.  
Price, 35 Cents.



Cole's Child's Seat. No. 7.  
Price, 75 Cents.



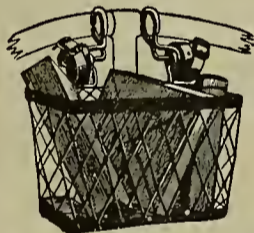
**SEE THAT BULGE!**  
**SEE THOSE HOOKS**  
Secure Toe Clip.  
Price, 25 Cents per Pair.



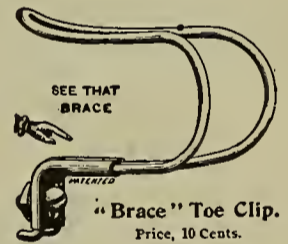
Cole's Anti-Rust Toe Clip.  
Price, 20 Cents per Pair.



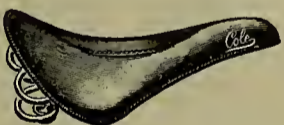
Cole's Snap-Hook Parcel Bag. NETTING—LIGHT WEIGHT.  
Price, 60 Cents.



Valve Caps. PREVENTS: Leakage from the Valve. Loosening of Metal Valve Cap. Dirt accumulating between Tire and Rim.  
Price, 15 Cents per Pair.



**SEE THAT BRACE!**  
"Brace" Toe Clip.  
Price, 10 Cents.



Diamond Clip.  
Price, 25 Cents.



**SEE THOSE HOOKS**  
O. K. Toe Clip.  
Price, 15 Cents per Pair.



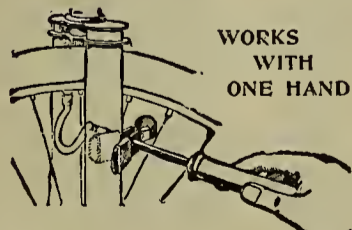
Ideal Parcel Carrier FOR BICYCLES. Pat. Pending. Can be adjusted to fit any handle bar. Made of spring wire, nickel plated.  
Price . . . . . 5 Cents.



The Coronet Coaster.  
Price 15 Cents per Pair.



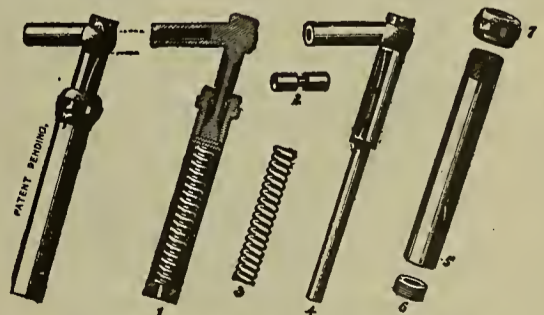
NO EDGE. ITS TURNED UNDER. NO CHAFING. NO BROAD PUMMEL. DEEP CURVE.  
No. 1. Cole's Racer.  
Price, \$2.00



WORKS WITH ONE HAND  
Hercules Hand Pump and Brace.  
As powerful as a Foot Pump.  
Price, 20 Cents.

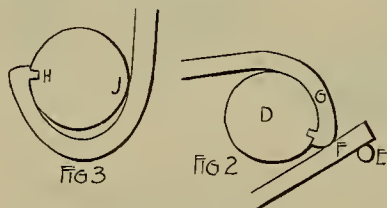


Price, \$2.60



Cole's Concealed Double Roller-Bearing Spring Seat Post.  
Price, \$1.50 each.

hole in the cup. A short way from the disk and about opposite to the hole a stud is erected from the bed plate. The spanner piece, G in Fig. 2, is then placed on the plate with its teat in the hole in the disk, D. A rod of some sort is inserted between the stud, E, and the spanner piece, and by bringing an inward pressure on its outer end it is made to bind against the spanner piece, thus holding the teat from slipping out of its hole in the disk, D. By pulling on the back end of the spanner bar the latter may then be bent to conform to the curve of the disk, and consequently of the cup for which it is intended. It should be bent far enough around to bring the point of tangency between its straight shank and the curved portion to a point nearly diametrically opposite to the teat. As will be seen from Fig. 3, the spanner when in use binds on



the cup at the points H and J, and so pulls the teat tighter against the cup hole the harder the lever arm of the spanner is pulled. The lever arm may be left as long as deemed necessary. A good, long arm is desirable for removing cups which turn with much resistance.

#### COMING MOTORCYCLE SHOWS

International Motor Vehicle Exhibitions for London and Berlin—Space in Ghent and Munich.

The Berlin International Automobile Show, promoted by the Central Europe Automobile Union will open in May. This exposition promises to be the most important motor show ever held in Europe and will be arranged and conducted similarly to the show in Paris last summer, everything being exhibited by classes as follows: motor bicycles, petroleum wagons, steam wagons, electric vehicles, etc.

In June another international motorcycle show will be opened in London, in which forty exhibitors have already applied for space.

At Ghent, Belgium, a provincial exposition will be held in June and July and the motor vehicle section promises to be very important. A special section will be reserved for heavy weight vehicles, and one of the stipulations for these wagons is that they must transport 2,500 or 5,000 kilograms at a maximum speed of twenty kilometers per hour. At Munich, a mechanic exposition will be opened probably in July, and motor vehicles will have a special department.

A cycle and motor vehicle show will be held in Lyons, France, from January 15 to 30.

#### To Try Army Tricycle.

A trial is to be made by the French army of a tricycle which weighs 121 pounds and has two quick firing guns placed in the rear, one on each side, weighing, with their fittings, 66 pounds. A thousand charges, with their cases, are also carried, bringing up the total weight to 270 pounds. Two riders are needed to propel the machine. Upon good roads, experts claim, this device will be very effective.

The cycle market in Germany is said to be overstocked with wheels of 1898 production. It is reported that there are fully 170,000 machines left unsold. This condition of affairs is ascribed to the reckless manufacture of bicycles by small firms, which had no outlet to dispose of their wares.

## ELECTRIC WAGONS IN SNOW

### MAKE A CREDITABLE SHOWING

With Wheels Wound With Rope Electric Cabs Negotiate Slush One Foot Deep—Horses Stalled.

The recent severe snow storm in New York and Boston gave the electric wagons a test which they have not had before in those towns.

The cab company, which now has 35 vehicles in use, wrapped its 5-inch pneumatic tires with chains or with ½-inch cord, so as to obtain a roughened tread, and found that their heavy wagons, when so equipped, would travel through snow of such depth as to keep many of the cab horses in the stable. These electric cabs have only 4 h. p., nominal, as their normal power, but by simply varying the controlled handle position they can exert 8 h. p., for an hour at a time, if needful, without injury or the slightest inconvenience. In deep, wet snow, such as lay on the streets of New York all the week up to Friday night, some electric cabs sent out with no "winding" on their tires, found trouble with wet slush over a foot in depth. But all the wagons with rope or chain on their tires did perfectly well so far as ability to handle themselves was concerned—better, in fact, than was expected. When it comes to such a depth of snow the weight of the vehicle seems to help its wheel-adhesion, and so make the wagon able to run much more strongly than might be anticipated.

The cab company expects to have the full hundred of their wagons in operation by January 15, 1899. The 35 now in use are busy all the time, and the company pay the drivers \$2.00 per day, and add a bonus after a certain per day-earning has been reached; for the month of November over half of the electric cab drivers had a bonus coming to them under this arrangement, and the month of December promises to be even better than November.

#### Delivery Wagons Continue Traveling.

Stanley writes that he saw a Riker electric delivery wagon advertising itself in fine form, by running at a good rate through the snow in Sumner street, Boston, where horses could only make headway with great difficulty.

The three Riker wagons operated by B. Altman & Co., proved much superior to horse drawn delivery wagons in the snow, owing to the fact that the electric vehicle can instantly double its power in a snow drift, while under the same conditions the horses are hardly able to propel themselves, let alone drawing a heavy wagon after them.

This good performance of the automobiles in the snow will be no surprise to those who can remember the Times-Herald contest, November 28, 1895. There had been eight or ten inches of snow before the day of the run, which had been cut up into all sorts of shapes by the wagon wheels, the weather being warm. The night of November 27 this hummocky road had froze up hard, and then about six inches of fine dry snow fell on top of it before morning of the 28th, making a smooth, slippery surface over the very rough road-bed below.

It did not seem possible that any four-wheeled wagon having only two of its wheels driven, could possibly make headway over such a track, but the event proved the ability of the wagons to negotiate a track of this sort without difficulty. The Duryea, and the Benz wagons, all gasoline engine driven, were able to propel themselves with ease, and though all had accidents, none of these were due to lack of adhesion of the drivers.

Probably the easiest way to gain adhesion in wet snow, is to wind the tires

with a small rope. This costs little, is quickly done, and is quite effective.

I do not understand that the Altman wagons had anything done to their wheels, nor did Stanley say that the wheels of the Boston wagon had been in any way given a rough tread.

This eastern-coast snow storm, which was very sudden and severe, and resulted in the loss of 250 lives in the many shipwrecks which it caused, may be said to have fully demonstrated the ability of very heavy mechanically driven wagons to propel themselves over any road where horses can draw a loaded wagon, or where a cab horse can travel with a cab.

On the occasion of the great storm in 1888, the streets were much worse than in this storm, and all horse travel stopped entirely for several days; indeed, business of all kinds was at a standstill, and many down-town stores were not opened for days together.

This present snow fall was not anything like that of 1888, but was still so severe that it is not likely to be equaled very soon, and the work shown by the electric wagons was extremely encouraging.

#### Trolley Lines in Trouble.

The electric street cars did not fare so well, not so much from want of driving power on the passenger cars, as from want of power and weight on the electric snow ploughs, which ran up on the snow drifts and whirled their wheels in vain attempts to move in either direction.

The underground trolleys also had considerable trouble, but not much, if any, more, after all, than the overhead-wire lines.

Taken altogether this severe early snow storm has given mechanical traction advocates great encouragement, and will materially advance the prospects of the electric delivery wagons, which were already favorites with their users, though many feared that the handsome vehicles would be able to do very little in snow covered streets. HUGH DOLNAR.

#### Electric Omnibuses in Paris.

Very satisfactory attempts have lately been made in Paris with electric omnibuses. Each carriage is moved by two motors of five horse-power each, a third motor, situated in front, being specially used for guiding. The vehicle weighs 8,000 kilogrammes, while the speed reached is twelve kilometers per hour. Next spring the regular service of these electric omnibuses will commence.

#### Motor Power for Artillery Transport.

The military technical committee in Vienna has made experiments with motor cars, carrying five tons load, for transporting cannon and ammunition. The trials have been successful and will be continued with a view to using motor power for all artillery transport.

Several bevel gear cutting machines are being shipped to Belgium by Brown & Sharpe, Providence, R. I. It is understood that these machines will be used by Belgium bicycle makers for cutting bevel gears such as are used in bevel gear chainless bicycles as they are now made in this country. Orders have also been received from Belgium for bevel gears already cut.

The automobiles which took part in the Paris-Amsterdam race have been sold at high prices, the average amount per vehicle being \$8,000. Their regular price was \$1,400 to \$1,800 each.

Russian cycle manufacturers have petitioned the government to levy the same tax on bicycle frames as on finished cycles.



**National  
New Ideas..**

ARE FOUND ON NO BICYCLES  
BUT NATIONALS—WE ORIGINATE  
THE IDEAS AND MAKE THE  
PARTS IN OUR OWN FACTORY.

When you sell National bicycles you are making a trade in your town on a distinctive, exclusive line of machines which  
**ARE SPECIALTIES.**

The old National rider buys a new National because he wants a National and not because he wants a bicycle. Practical business men know that that kind of trade is a steady money maker—If you want to get it write us. There's no cross competition in Nationals—every bicycle we make carries our trade-mark.

NATIONAL CYCLE MFG. CO.  
25 BAY CITY, MICH.

Mention The Cycle Age

Andrae Cycles Never Disappoint.

**The Gap the Andrae  
Regent Fills**

The agent of a line of strictly high grade bicycles has always had one trouble—meeting the “low-priced-made-to-order-bicycle” competition. Cheap bicycles could be bought, of course, but reliable agents wouldn't sell cheap wheels—that they didn't know. ❁ ❁ ❁

**THE ANDRAE REGENT**  
(\$30.00 LIST)

is a cheap bicycle in price only. In every other way it is far ahead of the “made-to-order, slapped-together” bicycle. It is made in the same factory in which Andraes are made, on the same machinery, by the same men; as much Andrae quality is put into it as the price will allow. It's the best \$30 bicycle any agent will sell.

ANDRAE REGENTS CAN BE SHIPPED PROMPTLY NOW.

**Julius Andrae & Sons Co.**  
MILWAUKEE, WIS.  
Eastern Export Branch: 95 Reade St., New York City.

Mention The Cycle Age

**THE  
YALE**

**We Have the  
Same Agents...**

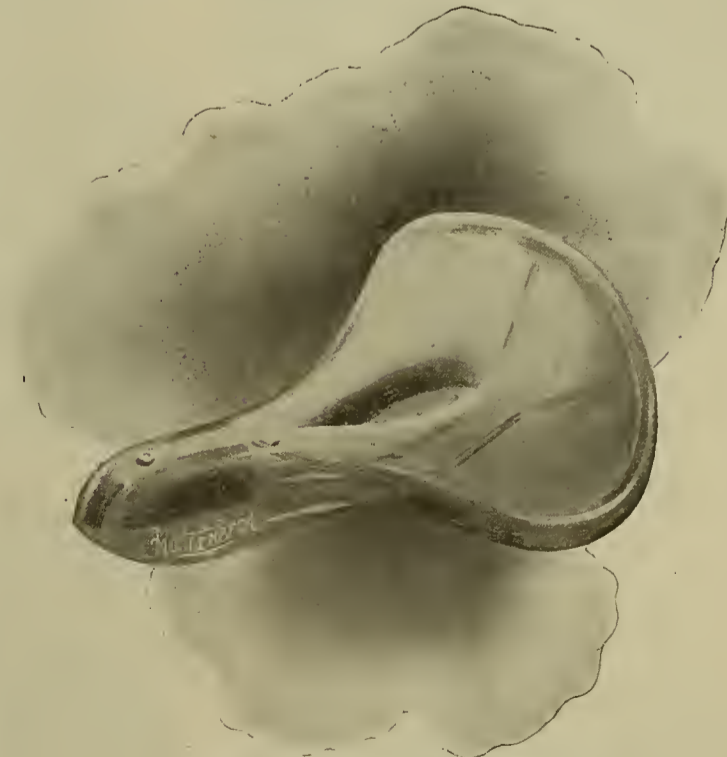
Year after year. There must be a reason for this. It is not difficult to guess. Our BICYCLES always please.

**THE KIRK MFG. CO.**  
TOLEDO, OHIO.

**Distributing Agents:**  
Conroy Mfg. Co., 28 John St., New York.  
H. B. Shattuck & Son, Boston, Mass.  
Jas. Bailey Co., Portland, Me.  
Carlin & Fulton, Baltimore, Md.  
Mistrot Bros. & Co., Houston, Tex.  
Boutell Bros., Minneapolis, Minn.  
Powell & Clement Co., Cincinnati, Ohio.  
P. E. Allison, Louisville, Ky.

Mention The Cycle Age

**How Would This Look  
on Your Bicycle?**

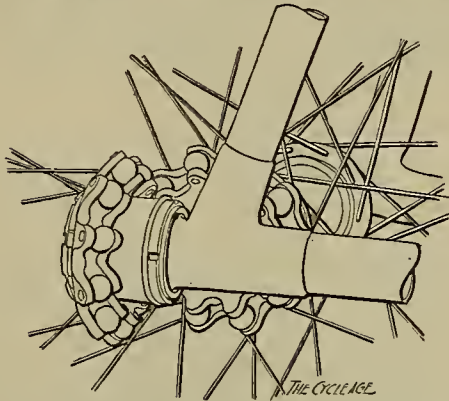


**HOLLENBECK SADDLE CO.**  
Makers of the Famous Twelve Ounce Rawhide Saddle,  
SYRACUSE, N. Y.

# INFORMATION FOR BUYERS

## MINER & FISK'S BALL ROLLER GEAR.

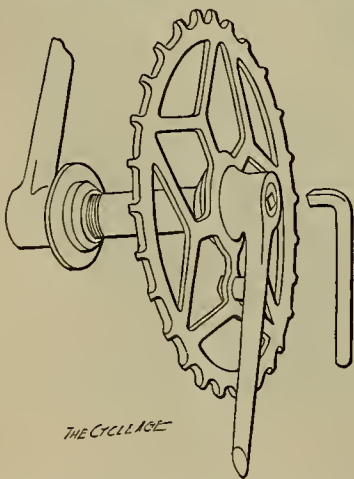
A driving gear of peculiar formation is being placed on the market by the Miner & Fisk company of Rochester. It is of the roller gear type, but has some features in common with the crown gear as well as with the bevel-gear. It escapes the requirement for great accuracy of gear adjustment and frame alignment of the bevel gear, by having the axes of all rollers at an angle somewhere near forty-five degrees with the pinion shaft. This should make the manufacture of the gears convenient and give a wide range of gear combinations without serious trouble for the maker. It goes without saying that the meshing of two gear



wheels of different diameters and both beveled at forty-five degrees cannot be on the principle of line contact without excessive friction being created. The rollers in this gear are therefore in the form of steel balls mounted to revolve upon pins. The steel balls of one pinion engage the steel balls of the other pinion, and both the balls in engagement accommodate themselves by rotation on their journal-pins to the requirements of the gear motion. The contact is always at a single point on both balls, but the rotation causes this point to travel over both balls in an S-shaped line, thereby distributing the wear, which on account of the purely rolling contact is very insignificant anyway. Side thrust is eliminated very largely by shaping each pinion with scalloped edges and mounting the balls in the scallops. By this arrangement the ball-rollers of one pinion are made to reach deeply into the engaging pinion so that the driving force is exerted in an approximately vertical line without marked tendency to push the two pinions apart from one another at point of engagement. The design of the gear has been experimentally developed to such a degree of accuracy it is stated that the inter-meshing is continuous and no backlash is noticeable. In roller-gears of any description this point is invariably one which must be proved by the practical running of the gear, as theory is unavailable, or at least too difficult to apply.

## BUFFALO HANGERS AND FITTINGS.

A complete line of frame fittings for both 28-inch and 30-inch wheeled machines, a one and a two-piece crank hanger and a new



expander handle bar fastening comprise in the main the line of goods which the Buffalo Cycle Supply Co. of Buffalo is introducing to the trade. The new company is composed of men of long experience in the bicycle business who are aiming at the economical production of up-to-date parts.

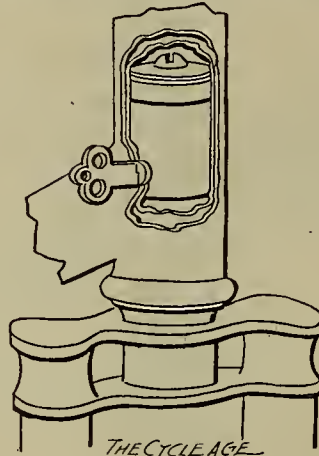
The capacity of the factory is rated as follows: 500 complete frame sets, 600 crank hangers and 1,100 handle bars daily. The hanger, which is here illustrated, combines an original sprocket design, oval section cranks and a two-part axle, the members of which are drawn together by a long bolt running the entire length of the complete axle and screwing into the hub of the left crank. The head of the bolt comes flush with the right crank and is turned by means of a square key used in connection with corresponding hole in the end of the bolt head.

## ELASTIC TIP CO. REORGANIZING.

The Elastic Tip Co. of Boston is now undergoing reorganization, which will doubtless be completed in a few days, when the same general jobbing business in all kinds of bicycle parts and sundries will be taken up again on the old lines. There will be no change in the management and all of the old traveling men will be retained. The catalogue for '99 is now in the hands of the printer and as soon as it is completed copies will be mailed to all bicycle dealers and earnest efforts will be made to push the business even harder than ever before. The line of parts and materials will be complete and as attractive as usual.

## PUSHING GESSLER LOCKS.

The Gessler bicycle lock shown in the accompanying drawing has won favor because it is an invisible preventive against theft. It is provided with a rubber expanding disk or collar which permits it to be fitted into the steering stem of any machine, new or old, in a few minutes without special tools. By the use of a key this lock fastens the front wheel at an angle to the frame, making the riding of the machine an impossible feat. The Gessler lock is very light, and,

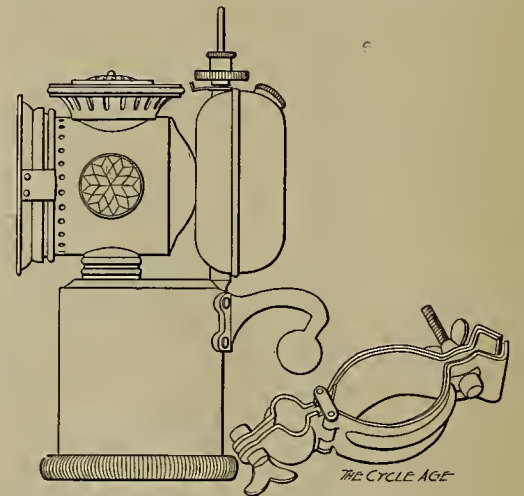


being inside of the machine head instead of in the rider's pocket, cannot get lost and is always just where it is needed. It is manufactured by the Slaymaker-Barry Co., of Connellsville, Pa., and has been subjected to every practical test during the past two years that it has been before the public. As a special feature of their line for '99 the value of this device has been recognized by leading manufacturers, who are fitting them to their machines. John H. Graham & Co., 113 Chambers street, New York, have taken the sole agency for this lock and also for the Gessler bicycle holder and lock, illustrated and described in Cycle Age for September 15. Electrotypes of both these devices in several sizes are ready and will be furnished by Max Gessler, 133 Michigan street, Milwaukee, Wis., to any who wish to insert them in new catalogues.

## THE P. & A. AUTOMATIC GAS LAMP.

It has for some time been evident that a notable feature of the '99 season will be advent and general adoption of acetylene bicycle lamps as a desirable improvement in cycle sundries. Until last season gas lamps were in an experimental stage, and '98 was a probationary period which demonstrated their superiority and safety to the satisfaction of the riding public. Assured of a demand from the latter, lamp makers throughout the country are making energetic efforts to capture a large share of the trade and new gas lamps are being brought out in rapid succession. One of the latest is the one herewith illustrated. It is the product of the Plume & Atwood Mfg. Co. of Waterbury, Conn., having a western branch house at 199 Lake street, Chicago. The arrangement of the water reservoir, burner, carbide chamber and other parts is readily seen from the drawing. No solder is used in the

flame chamber, whose several parts are riveted or pressed together, and the water reservoir is separated from it sufficiently to allow a free circulation of air to keep the water cool. The burner is of the two jet type, producing the satisfactory fish-tail flame now being generally adopted. The top of the chimney is removable and the lens is held in place in the hinged front by means of an instantly removable spring wire. There are several new features in the construction of this lamp. The carbide chamber is proportionately very large and contains a thin metal cylinder attached to the screw-threaded base by means of the



common interrupted flange device. A number of small grooves are pressed in the lower end of this cylinder to admit the water at the bottom of the carbide instead of at the top, the water feed tube from the reservoir entering the gas chamber at the rear side and being prolonged to within half an inch of the bottom. A perforated cap covers the carbide cylinder. Any form of carbide can be used. The advantage in this construction lies in the fact that the exhausted ashes of the carbide can be quickly removed by detaching the metal cylinder from the base and removing the cap, when the ashes can be shaken out. The burner rises direct from the top of the gas chamber and provision is made for inserting a little wad of cotton to filter the gas before it enters the burner. A new form of water feed cock constitutes another new feature. It consists of a metal rod seated in a screw-threaded socket at the bottom of the reservoir and rising through the top. The socket has a central opening communicating to the feed water duct in the carbide chamber. Turning the rod by means of the thumb-screws at the top opens or closes this hole in the socket to admit or shut off the water. The metal rod is bored centrally and contains a spring actuated wire, which, when depressed by the finger pushes out of the end of the water duct any lime that may have collected to clog it up. The lamp attaches to the bracket by a ball and socket joint tightened by a thumb screw, and the bracket is made for both head and fork-side. The manufacturers claim the following exclusive advantages for the Automatic gas lamp: It is self-governing and requires no attention after being once charged and lighted; there is no restriction on the water supply, which is controlled entirely by the gas; it does not use any absorbents, wicks, blotting paper or pads, and has no parts to be replaced from time to time; it stores any surplus generation of gas and consumes it before generation takes place again; it has no gas joints to leak where the lamp separates for charging; the operating parts are made of hard rubber, and will last as long as the lamp; when lamp is open for charging, every working part is within view, and easy reach for cleaning.

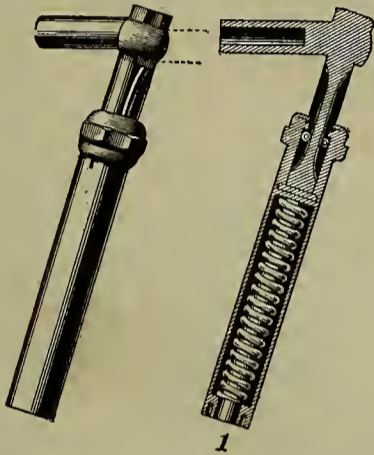
## AMERICAN CYCLE CO.'S PLANT.

The building which will contain the complete manufacturing plant of the American Cycle Co. of Akron, Ohio, is fast being equipped and in the immediate future will be ready to handle a probable output of about 200 bicycles per day. Both the manufacturing and office departments of the plant will be lighted by electricity and all equipments are being put in in first class style. The officers of the company are: J. H. Warman, president and general manager; F. B. Rockwell, secretary; J. Benner, treasurer, and Carl Wenter, superintendent. The line of machines made, samples of which are already on the market, include ladies' and men's patterns of the Pathfinder, listing at \$50. These bicycles are built on stylish lines

with flush joints, arch crowns, large sprockets and other popular fittings and options. A special feature is the handle bar and seat post expander, in which the operating nut screws down into the post, the interior of which is threaded. The nut is turned by a suitable key fitting into a square hole cut in the top of the nut. The angles of the beveled plug and stem end are such that the stem expands against the outer tube for several inches, affording a large binding surface and preventing the bulging of the seat mast. A neat knurled hand nut closes the top of the post, rendering the adjusting means entirely invisible. A tricycle parcel carrier also belongs to the line and is offered at a figure intended to create a large trade in these machines which, being carried in stock, can be delivered promptly. Besides making complete bicycles the company will also market fittings.

**COLE & CO.'S SPECIALTIES.**

As a typical example of the development of the sundries and specialties manufacturing business, it would be difficult to make any better selection than that of G.

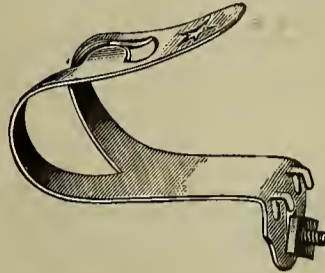


W. Cole & Co., of New York, who have recently moved into new quarters at 141 Broadway. When "Three-In-One" was first put in the market, it was no better than it is now, but its intrinsic merit was backed by judicious advertising and business methods that were sound and honest. It is in consequence of this that today this oil is a widely known articles, used exclusively by many gunners, typewriters and others, as well as bicyclists. A number of the largest makers use it in their factories, fill the oil cans of their tool bags with it, and recommend it to those who buy their bicycles. It has stood the test of time and made itself and the name of its makers famous. The history of the success of Three-In-One is the history of G. W. Cole & Co., a firm that is today one of the largest manufacturers of specialties that caters to the cycling trade. Next year the firm will be before the jobbing and retail trade as the sole manufacturers and sellers of more than fifty specialties. Recently it acquired control of a new toe clip invented by Bach which has patent hooks that keep it from shifting on the pedal. A hook with two forks to hang bicycles on in various positions was also bought in by Cole & Co. as soon as it was seen to be the best thing of the kind. Very recently Colonel Latimer of the Victor Mfg. Co. of Detroit, concluded to sell out because of his regiment being enlisted in the army. The Victor nipple wrenches,



baby carriers, spring seat posts and other articles were recognized by this shrewd firm as superior and in a twinkling the Victor products became Cole specialties. This New York house now practically controls the market on round nipple wrenches. It has an unapproachable line of luggage and camera carriers, toe clips, bicycle racks, lubricants and a score of other articles. Several of its 1899 devices are novel. One is a camera and package carrier that permits of the camera being removed from the carrier or the carrier and all taken

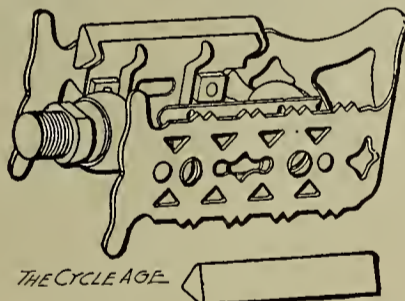
from the bicycle in a second and carried from the shoulder by a strap. A network carrier that weighs only ten ounces yet has a rigid frame of wire is another new thing in this line. A spring seat post with a double roller is not new, but for next year Cole & Co. offer one that has the obvious superiority of having the rollers on the inside of the post tube instead of outside. An article that is likely to be universally popular because of the want that it fills is a toe clip that is light and springy, will not rust and cannot shift its position on the



pedal. These requirements are all fulfilled in their Anti-Rust clips. They are made of spring brass and nicked and are turned out with double hooks that grasp the pedal plate and prevent tilting. Besides Three-In-One, "Pacemaker, the graphite that melts" is one of Cole's famous products. This is now being put out in collapsible tubes having a small brush with a handle that when fitted constitutes the cap. It is also furnished in tubes having a brush permanently fixed in the top through which the soft graphite is squeezed when it is desired to apply it. A new thing in connection with "Pacemaker" is a white preparation off it in which mica forms a component part. This also is put up in the clean and convenient forms mentioned. Last year Cole's saddles were introduced and although they were not "pushed" they made so many friends that they promise to be a leading line this year with this enterprising New York concern. A part of the success of Cole & Co. may be attributed to the care they take of their customers by liberal advertising in their territory.

**WOLFF-AMERICAN MODELS.**

R. H. Wolff & Co., Ltd., New York, offer for the coming season three models of single bicycles built on lines similar to those which have earned wide success in the past. The models, which comprise a racing machine, diamond frame road model, and a cycle for women, retain the main constructive features of last year, the notable exception being the fork crown, which this year is of the hollow arch pattern.



The drop frame has gracefully curved front tubes, and, like the other frames of the line, brings out the distinctive feature of Wolff-American frame designing—the giving of less rake to the seat mast than to the steering head. All frames have flush joints and D-shaped rear forks and stays. The well known eccentric chain adjustment, the flangeless hubs with self-oiling bearings, and the Wolff-American three-piece crank hanger, are also features of the '99 line, which includes besides the single machines two tandems and the Duplex cycle. All machines are fitted with the Wolff-American pedal, the special feature of which is the triangular foot rubber used. Steel plates on the inner side of the pedal side plates hold in place four triangular-shaped rubbers, which can be turned around when worn, bringing a new surface to the top.

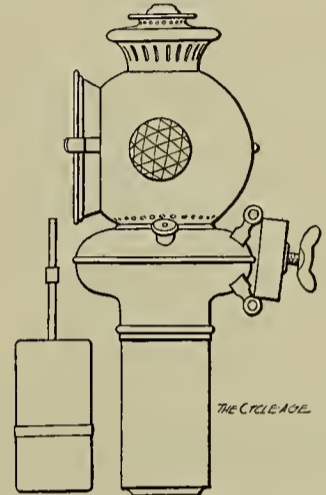
**THE STEARNS CANADIAN FACTORY.**

In 1893 E. C. Stearns & Co. established a bicycle factory in Toronto, being the first of our firms to recognize the value of having a plant so located as to expedite deliveries and escape Canadian duties. The factory is equipped with modern labor-saving machinery, particularly adapted to the manufacture of bicycles, and in it are built each year the same models which are turned out at the Syracuse plant, employing during the season 200 to 250 men. The business of the Canadian factory has increased very satisfactorily each year. Thomas F. Byrne has just been appointed manager of the Canadian

factory. He was once chief shipping clerk, was promoted until he became general purchasing agent, and is familiar with the construction of Stearns bicycles and the methods employed in marketing them.

**IMPROVED ACETYLITE GAS LAMP.**

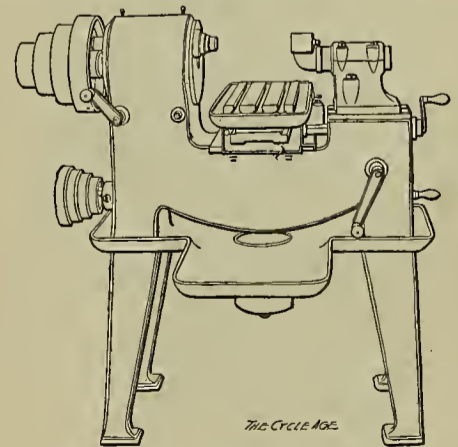
Samples are now out of the new pattern of the Acetylite lamp made by the Schumacher Acetylite Lamp Co., 84 LaSalle street, Chicago. In general appearance and construction the lamp is similar to previous patterns, the main external difference being the dropping of the milled head at the bottom of the carbide chamber. The new cartridge is of tin and is not pierced at its lower end, the gas delivery tube reaching only to the bottom of the cartridge but not passing through it as in former patterns. The passage of the gas tube through a tube running from the top to the bottom of the water reservoir and perforated near its lower end for the passage of water has been unchanged. The spherical combustion



chamber attached to the water reservoir by a bayonet joint, its ornamental chimney top, its flaring lens door, and the straight vertical cartridge chamber below the reservoir, give the lamp a neat appearance which is characterized by its similarity to some of the common forms of carriage lamps.

**GRANT'S NEW MILLING MACHINE.**

The new milling machine here illustrated has an apparent recommendation to bicycle manufacturers since its origin is due to John J. Grant, who has long been identified with the building of machine tools especially applicable to such work as is done in cycle factories. It is built by the Grant Machine Tool Works, Cleveland. One of the most striking features of the new machine is the manner in which the vertical adjustment of the spindle is accomplished. A cylinder mounted in the solid cast head of the machine is bored with an eccentric hole which is fitted with a phosphor-bronze sleeve in which the spindle runs. The bearing is tapered at each end for the taking up of wear, and lock nuts at the rear end prevent end-play. The eccentric is rotated by means of worm teeth formed upon its exterior, these engaging a worm on a shaft passing transversely through the head and fitted with a crank handle, which is seen



at the left of the machine in the illustration. The spindle can thus be set at any desired height above the table and when once adjusted is clamped solidly in position. The spindle is driven by a spur gear from the cone shaft, which is concentric with the eccentric cylinder, and therefore does not move when the spindle is moved for adjustment. At the inner end of the cone pulley is a small flanged pulley from which the feed drive is taken. Four changes of speed are provided for. The construction of the foot stock, as will be noticed from the

illustration, is solid and simple and allows the ready removal of the stock when not wanted. The table feed is managed by three handles. The lower handle at the extreme right of the machine is used for throwing the feed in or out of engagement, while the crank handle above it, also on the right end of the machine, effects the lateral adjustment of the table. The screw which it operates is graduated to thousandths of an inch. The crank on the front side of the machine near the right is used for making the longitudinal adjustment of the table. The spindle has the same hole as the Brown & Sharp No. 2 universal machine, and is threaded to take chucks or face mills. The extreme height of the center of the spindle from the table platen is 65-8 inches. The platen is 7 inches wide, 26 inches long, and the machine will take a cut 16 inches long.

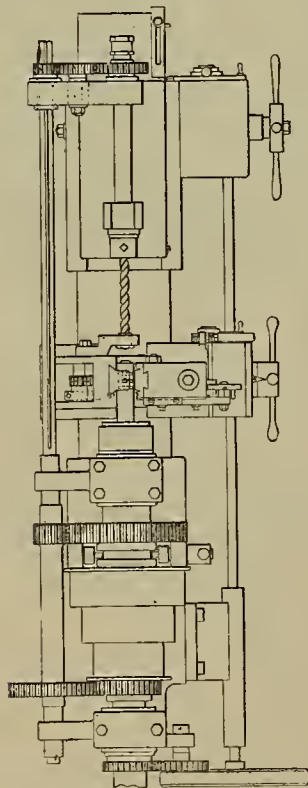
#### CARLISLE LINE COMPLETE.

The building of first class racing machines, tandems, triplets and quads for '99 will be the special endeavor of the Carlisle Mfg. Co., West Jackson and Clinton streets, Chicago. The company's line includes all of the models necessary to answer the demands of discriminating buyers and every machine has been designed to have not only the common popular features, but as many original points in construction as possible. The Carlisle tandem which is built in both double diamond and drop front patterns, is a representative model of latter-day design in the west. The double diamond machine is distinguished by a cross brace tube running from the rear crank bracket, up through the frame to the middle of the steering head. The hanger drop is 2½ inches, with frames built from 20 to 24 inches high. Twenty-eight-inch wheels are used on the tandem though the single racing machine has the thirty-inch rear wheel which was a feature of the Carlisle models last year. Tandem weights run from 35 to 44 pounds. The equipment includes a carefully selected group of well known popular fittings. On both single machines and tandems the special Carlisle seat post and handle bar clamp is used and all machines have reinforced flush joints.

#### PEARSON HUB FORMING MACHINE.

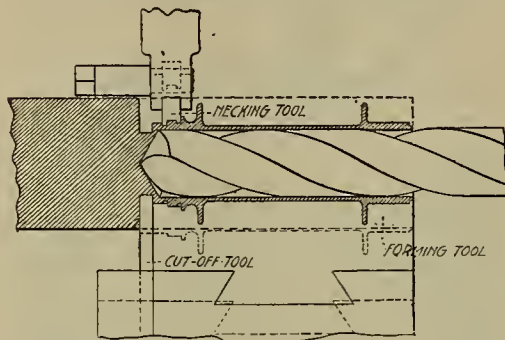
An interesting cycle working machine is the hub barrel forming machine which has the manifold objects of preventing the work from catching and riding on the cutting-tool, of supporting the work against the thrust of the cutting-tool, of causing the forming-cutter and the cutting-off tool to reach the ends of their cuts at the same time and of relieving the delicate necking-tool of all unnecessary work, just allowing it to begin to take its cut in time to finish simultaneously with the forming and cutting-off tools. The designer of the lathe is Walter B. Pearson of Chicago.

The back rest comprises two slides which carry anti-friction rollers one of which



touches the work at the rear and the other on top. The slides bearing the rollers are so fixed in the supporting frame and so arranged with the operating means that the rollers are advanced toward the work at the same rate that the forming-tool is fed into the work. The rollers insure against the work being roughened by their contact as is liable to occur when stationary rests are employed and heavy duty is

required of the machine. The cut-off tool is supported upon the forming-tool slide and the connection between the two tools is made in such a manner that the movement of the forming-tool will impart an accelerated movement in the same direction. The driving connection between the forming-tool and the cut-off comprises a lever, one end of which is fulcrumed upon the fixed saddle of the forming-tool slide, and the other end of which is connected to the cut-off slide. A link connects the lever between its ends with the forming-tool slide. At the fulcrum of the lever a segmental gear formed thereon engages a rack formed in the tool carriage. Provision is also made for the ready disengagement of the two slides should it be desired to



operate them independently. The necking-tool is carried on a slide which is fitted to and movable in guides or ways formed in the horizontal back-rest slide and is operated by means of a segmental gear which engages a rack and is also secured to the hub of a pinion which engages a second rack formed on the back rest slide. The pitch diameter of the segmental gear is greater than that of the driving pinion. Accordingly the necking-tool slide will move faster than the back rest slide, so that by proper adjustment the necking-tool may be kept out of the work during almost all of the entire cut of the forming-tool, being advanced into its cut at a certain time and by its accelerated movement finishing simultaneously with the forming-tool. The necking-tool is thus subjected to light duty in keeping with its delicate construction. The drill which passes through an accurately bushed guide just before entering the work is driven directly from the back gear shaft of the machine. The construction of the lathe embraces several other minor points of novelty and improvement and is built as simply and compactly as possible.

#### ELASTIC TIP CO.'S INTERESTS BOUGHT.

B. H. Pratt, president of the Manufacturers' Agents & Supply Co., of Chicago, has been east for the past few weeks negotiating a deal which has just been completed whereby an eastern party has purchased the Elastic Tip Co.'s interests in the Chicago concern. The policy of the company for the coming season has not been fully decided upon, although it will continue in the cycle supply business and will be one of the largest houses in the west, catering for the jobbing and dealers' trade, both in the sundries and fittings line. The 1899 catalogue will be ready soon after the first of the year and will be mailed to all old customers and to new ones upon application.

#### CONSTRUCTION OF CRESCENT PEDALS.

Additional information regarding the construction of the Crescent pedals, illustrated in this paper December 1, is supplied by the U. S. Mfg. Co., of Fond du Lac, Wis., who make them, as follows: Crescent pedals are made of the best material by skilled laborers on automatic machines and special tools and are finely polished and nicked. The plates are in one continuous piece, and made of Singer, Nimick & Co.'s special cold rolled stock. The pins or axles are carbonized by the company's own method, giving a hard and practically indestructible ball race with a soft core, adding great strength and durability and leaving the threads considerably softer. The cones and cups are treated in the same manner, all ground and polished, making perfect ball races. A shoulder is turned on each end of the barrel and the turned ends are inserted into the frame and swaged over, making a strong and substantial joint, practically as of one piece of metal. Adjustments are made at the outer end. The outside ends of left hand pins are threaded left to prevent any possibility of tightening of the cones. Dust caps are provided at both ends of bearings. The corrugations give additional stiffness to the plates. The finish is nickel on copper. The Crescent No. 1 has large end bearings with 3-16-inch balls, weighs 15 ounces per pair and has the inner bearings close to the crank. The No. 3 is of the popular center bearing design, with large bearings and 5-32 inch balls. It weighs 14 ounces

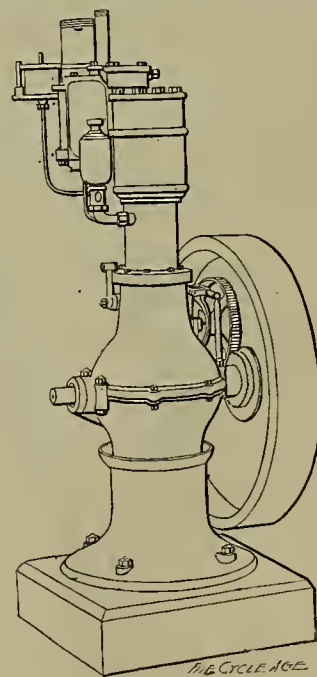
per pair and is furnished in rat trap or combination. The ladies' crescent is a small, neat pedal for ladies' or juvenile machines, and can be used with either No. 1 or No. 3 men's. The design is a combination of the other two styles. The bearings contain 1-8-inch balls, weight is 12 ounces per pair; with rubbers, 15 ounces; furnished in rat trap or plates and rubbers, or with Straus universal rubbers. Pedal pins in all models have shanks ½-inch in diameter, with right and left threads, 20 threads to the inch. For foreign trade special sizes and threads are made. Pedals are adjusted and lubricated before leaving factory.

#### CHICAGO TUBE CO.'S SUPPLIES.

An advance catalogue of material and parts in sets complete for assembling frames, and of made-up frames and stripped bicycles is being issued by the Chicago Tube Co., 217 East Washington street, Chicago, which offers seventeen different styles of 1899 models. This house, which has been in the trade for five years and is known for its production of good goods at moderate prices, is also sending out a handsome sheet to the trade, illustrating its leading bicycles with specifications of full equipment. The company has no traveling salesmen, but its catalogue of bicycles, sundries, materials, bicycle tools, etc., is very complete.

#### KEROSENE MOTOR FOR SMALL POWER PLANTS.

The gradual equipment of repair and other small cycle shops always leads to the establishment of some kind of power for the driving of the lathes, drill, presses, grinders, etc. Power in such shops being required only at intervals, the steam engine has never been and doubtless never will be popular. Among other forms of power that allow the generating plant to stand still at times without waste, gasoline and similar engines have proven themselves very desirable. Lately the Daimler Mfg. Co. of Long Island City, N. Y., have adapted a pattern of their well known and efficient Daimler gasoline and gas motor to the use of kerosene as generating power. The new kerosene motor is constructed especially with the idea of furnishing economical and convenient power for small users. Its operation is simple and safe. The kerosene is carried from the supply tank to the vaporizer and to the burner at a slight pressure which is produced in the tank by a hand air pump. After the motor is started by giving the starting crank a few turns, it supplies itself with the necessary pressure by catching up a part of the exhaust in a pressure-receiving tube and carrying it to the supply tank. The necessary explosive mixture of gas and air is produced automatically in the vaporizer by the first downward stroke of the piston, air as well as fluid kerosene being drawn up and entering the cylinder as explosive mixture. The height of kerosene in the float chamber is regulated by a float valve so that the suction of the kerosene remains even. The further action of the motor



proceeds according to the well known principle of the Otto or four-cycle gas engine. The following upward stroke of the piston compresses the explosive mixture in the explosion chamber, forcing it out into the explosion cap, and this cap being heated by the burner, ignites the mixture, the expansive power of which forces the piston downward again. The next upward stroke of the piston forces the products of combustion from the explosion chamber through the exhaust valve.

The motor is made in sizes from two to thirty-five horse-power. The smallest size,

# Barnes Bicycles

Not on paper but  
in the wheel is  
found quality that  
talks.\*\*\*\*\*

The agency for the White Flyer will make money  
for you because—  
The bicycle sells itself.  
The buyer is proud of its individuality and a staunch  
defender of its quality.  
Advance catalogue containing full specifications  
mailed upon application.  
Secure the agency by mail at once.  
Time is more than money.

## The Barnes Cycle Company

\*\*\* SYRACUSE, N. Y.

# THE STERLING

“BUILT LIKE A WATCH”

STRICTLY UP-TO-DATE!

Our 1899 Catalog will tell you the class of material we use to Build them; also the many changes we have made with a view to pleasing the riders.\*\*\*

**STERLING QUALITY**  
**ABSOLUTELY MAINTAINED**

CHAIN MODELS, \$50.  
CHAINLESS, \$75.  
TANDEMS, \$75.

ALWAYS READY  
TO TALK AGENCY  
TO ENERGETIC  
DEALERS

## STERLING CYCLE WORKS

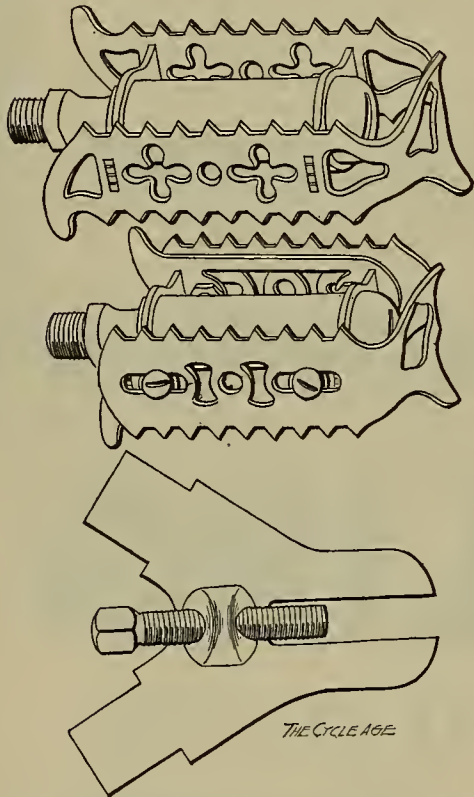
KENOSHA, WIS.



that which is most applicable to cycle repair shops, measures a little over four feet in height and occupies a floor space of but a little over two feet square. It is very compact and is so simple that an ordinary mechanic can soon learn to look after its welfare with confidence.

#### FORSYTH SHEET METAL ACCESORIES.

The Forsyth Mfg. Co., 308 Terrace, Buffalo, announces that its policy for '99 will be to retain as many of its old customers and gain as many new ones as possible by adhering strictly to the making of first class sheet metal stampings which will be sold at the lowest prices admitting of a fair profit. The line catalogued for the coming season includes such fittings and accessories as pedals, wrenches, spanners, coasters, brakes, brake spoons and clamping parts, lamp brackets, mud and chain guards and attachments, ball cups, etc. The Forsyth pedals are made in four patterns; mens ladies' adjustable and men's and ladies' with rigid frames. The adjustable rat-trap pedal here shown is proof against accidental loosening when once adjusted on account of the fact that suitable washers are placed between the plates around each adjusting bolt to keep the bolts from working loose. The parts and lines of the rigid pedals are the same as in the adjustable except that the foot plates being made in one piece have slightly different cuttings in their faces. In the men's pedals 7-8-inch straight steel barrels contain ball cases each taking eleven 5-32-inch balls. One of the company's novelties is the rear fork end fitting.



This is made from one piece of 12-gauge steel with a cup-shaped pressing upon one side through the walls of which is bored and tapped a hole suitable for the reception of the chain adjusting screw. Thimbles slip onto the branches of the piece to form seating for the fork and stay tubes.

#### CARBORUNDUM IN TIRES.

A new method of rendering pneumatic tires puncture proof is made use of by the Milwaukee Patent Puncture Proof Tire Co., of Milwaukee, Wis. The tires made by this concern do not differ from others except in the use of carborundum, a mineral product from which an attempt was made several years ago to manufacture diamonds, but which process proved too expensive to be commercially successful. This substance is forming the tire the tread is built up of five gunpowder and are extremely hard. In forming the tire the tread is built up of fine piles of fabric, interposed between which are three layers of carborundum, so thin as to be scarcely perceptible in the cross section. The side walls of the tire are of only the usual thickness of two layers of fabric and the inner and outer walls of rubber, so that any resiliency lacking in the tread is contributed by the elasticity of the side walls. The special quality that makes the carborundum suitable for puncture proofing material is the extreme hardness and sharpness of the grains which cut into any metal that penetrates the outer skin and by the friction arrest further progress. As the mineral is also harder than glass it prevents cuts as well as punctures by tacks, pins, nails, etc. So small a quantity is used, however, that a pair of these tires is not noticeably heavier than the ordinary road tire. The Milwaukee company has during the past

year placed a large number of these tires in the hands of manufacturers, agents, and riders for practical test by a season's use and it now has on hand a most convincing budget of testimonials from all these proclaiming the positive non-puncturability of the diamond-tread tire. Thoroughly convinced of the merits of its goods and backed up with the testimony of the many who have tried them under all conditions, the Milwaukee Patent Puncture Proof Tire Co. intends to push their sale vigorously for next season.

#### AMERICA AND ORIOLE MODELS.

The David Bradley Mfg. Co., 73 Fulton street, Chicago, lists for the coming season two grades of machines. The America, which is of improved design but is still similar to its predecessor of the past year, retaining the truss frame feature, sells for \$50, while for a popular model selling at \$35, the Bradley company is offering the Oriole, made in both man's and lady's patterns. The Oriole is a flush joint machine of stylish form and with standard equipment. Several colors are offered and a generous line of other options. It is marketed as an honest and reliable machine avoiding extravagant features and intended for all round service.

#### LARGE CAPACITY FOR WALDORF CYCLES.

The Waldorf line of medium grade bicycles with which the Eclipse Bicycle Co., of Elmira, N. Y., will supply all the demands of its customers for machines of lower price than the regular Eclipse, is being made in Oneonta, N. Y. The company has secured the large plant formerly occupied by the McKammon Piano Co., with 300,000 square feet floor space, and has placed W. H. Ives, who has made bicycles for several seasons under the style of the Empire State Cycle Co., in charge of the factory. The facilities are sufficient for a very large production.

#### CAUTIONED AGAINST INFRINGEMENT.

The Safety Oiler Co., 65 Nassau street, New York, has just sent out to the trade a circular letter warning jobbers and dealers not to handle an oiler similar to the one made and sold by the above company which may be offered the trade and which the Safety Oiler Co. alleges is an infringement of the Hirsch patents owned by it. As soon as the decision of the courts is made known the company announces it will take steps to protect itself against all who in any way have handled the infringing device and sue for an accounting.

#### TRANSFERS EXTENSIVELY CATALOGUED.

The Meyercord Co. of Chicago announces that its line of transfer decorations will be catalogued by two or three times as many jobbers as have catalogued same heretofore. Most of the important jobbers in the United States will catalogue the full line of designs. The company distributes electrotypes and samples for salesmen free to jobbers. In addition to the line of decalcomania decorations the company makes nameplates for the jobbers to sell to the small trade.

#### TRADE NOTES.

Arrangements have been made by which Daniels & Fisher, of Denver, become distributing agents for Stearns bicycles in Colorado and Wyoming, as well as retaining the retail agency in Denver. The firm will carry a large stock of bicycles and parts, so that the trade within their territory may be promptly supplied.

The Sunbeam twisted or drill shaped spokes made by the American Specialty Mfg. Co. of Hartford, Conn., are meeting with a growing demand. The attractive, glistening effect lent by them to the wheels of a bicycle has won them many admirers.

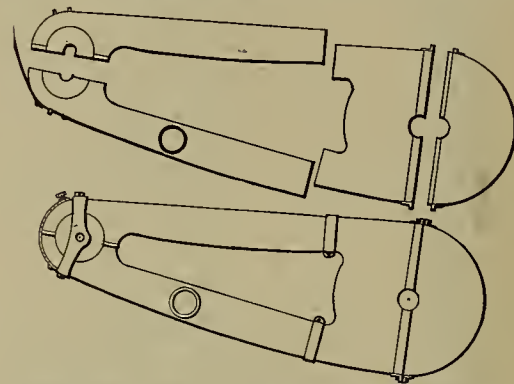
A. S. Noonan, of Rome, N. Y., manufacturer of cycle shop tools, etc., has secured the exclusive right to manufacture the Conn cycle chain cleaner, formerly made by J. C. Conn, the patentee, Ilion, N. Y.

#### FROST'S NEW GEAR CASE.

Is Wholly of Metal Yet Noiseless—Rear Wheel Removed Without Detaching Case.

This gear case shown in the accompanying illustrations is the result of two years' experience of its inventor in developing and marketing gear cases for American bicycles. Probably no other man in this country has had so broad opportunities as W. H. Frost has enjoyed for the practical study of the enclosing of running gear. Supplying manufacturers, jobbers, dealers and riders, fitting cases on over 200 makes of bicycles and in constant communication with the users,

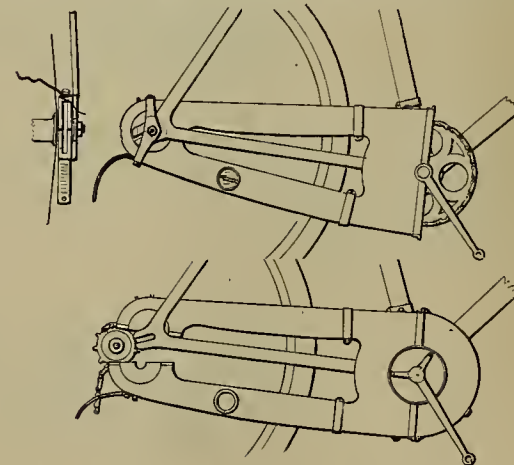
every phase of the question has been brought before him. The original Frost gear case manufactured by the Frost Gear Case company for two years proved to riders that a gear case, even if somewhat difficult to attach and separate, and with some perishable parts, may be made to do its work perfectly when attached. About 8,000 of this older pattern are now in use. The shortcomings in attachment, however, and the criticisms and wants of the different branches of the trade, carefully collected and studied by Mr. Frost, suggested a new construction that should please everybody, resulting in the invention herewith described. It is superior to the older forms, especially in allowing removal and replacement of rear wheel by the rider without lengthy instructions. The principle of its operation is self-evident and the operation



is simple. The chain is always in sight and easily accessible. It has no perishable rubber parts, is light in weight, noiseless, and susceptible of quick alignment if displaced by accident. Both sides of front sprocket may be readily uncovered. Another valuable feature for commerce is that it can be decorated by manufacturers to match varying grades of bicycles.

The case consists of four principal parts, as shown in the first illustration. The chain runs telescope with the ears on front box and the two parts of front box fit together with a groove and knife edge joint, as do also the two parts of the rear box. These joints packed with rubber are water and dust tight, and destroy all resonance in the case. Around the crank hanger is placed a narrow rubber band about 1-16 inch thick. The two parts of the front box are brought together by the screws and the edges of the opening are set singly into the rubber band, making a tight joint. The clamps binding the chain runs and front box together are also rubber packed, and the joints are sufficiently yielding to allow of separating the rear box, as in the first cut. In order to make it feasible to remove the rear wheel when a sprocket of large diameter is attached, the rear of case is slotted, as shown in the second illustration, and the slot is closed by a rubber strip covered with a flexible strap fastened to the lower part of rear box and secured by a thumb nut to the upper part of box.

The rear support of the case, which is held on by the axle nut, is a metal strip, whose ends are turned at right angles and are slotted to receive the screws that bind it to



the case. The slots allow for quick and exact alignment of the case at the rear, and also for the complete removal of the rear support when rear axle nut is off. An adjustable system of clamps that are adapted to various sizes of tubing and adjustable as to length attach front box to frame. The ends of these braces are slotted and allow of alignment of front of case.

Noiselessness is secured by a novel arrangement of pads in the chain runs. A mica window in the lower chain run gives a constant view of the chain, and may be unscrewed for the application of lubricant. W. H. Frost, the designer of this much improved case, desires to open negotiations for having it manufactured. His address is 2933 Prairie avenue, Chicago.

# PRICES LOWER--QUALITY HIGHER

WE CHALLENGE THE WORLD TO PRODUCE BETTER  
BICYCLES AT ANY PRICE ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁

## Monarchs

WILL BE SOLD EXCLUSIVELY THROUGH OUR REGULAR LOCAL AGENTS. ❁ ❁ ❁



## Our List

IS ATTRACTIVE AND OUR NET PRICES LOWER THAN THOSE OFFERED BY ANY MAKER OF BICYCLES OF EQUAL MERIT.

Mr. Dealer—Drop us a line and if located in open territory we can make you an interesting proposition. 1899 Catalogue ready January 1st.

**RIDE A MONARCH AND KEEP IN FRONT**

Monarch Cycle Mfg. Co., Lake, Halsted and Fulton Streets, Chicago. NEW YORK, HAMBURG, LONDON.

## Decalcomania Name Plates...

## and Their Ever Increasing Use

**W**ITHIN the past few weeks there has been a marked increase in the demand for transfer name plates for bicycles. Quite a number of the large manufacturers and jobbers have placed orders with us. Nearly every manufacturer is gradually tending toward the use of a trademark, that is to be noted by an inspection of the '99 catalogues now being distributed to the trade. Manufacturers who have been figuring for name plates and receiving designs, realize that to bring out a name plate in nice style, colors are necessary. Of course the use of a metal name plate precludes the use of colors. Naturally the manufacturer who is adopting a trademark wants to see it in first class style. A transfer is really, therefore, the only plate he can use to secure a perfect blending of colors in his trademark.

The fact that the use of color is of course, the first and most important point in favor of the use of a transfer, is not all there is in favor of the transfer. There are other important advantages in the use of such a transfer; you can secure a finer design for less money than with a metal name plate; a metal name plate can be taken off by any dealer or rider, in fact is jerked off, or falls off of most wheels after being ridden any length of time; a rider cleaning a wheel finds the cleaning rag constantly catching in the name plate. Then again the metal plate naturally tarnishes very easily and presents an exceedingly shoddy and dirty appearance, no matter how bright and flashy it was when shipped from the manufacturer. It shows up very dirty after a short time under the average rider's care. On the other hand, the points in favor of a transfer name plate are first and foremost, the beauty of the design; as the name plate is transferred under the enamel it remains bright for a long time, then again the transfer lying under the enamel, close to the surface, presents no obtruding edges, and cleaning the frame is made easier. The transfer name plate cannot be shaken or taken off, without marring the finish, which no rider will do.

A constantly increasing field for the use of a transfer name plate, is that of the dealer and jobber. We are selling large numbers of name plates to small dealers and jobbers, who have had designs made, and instead of "Made By" in the name plate, they have used the words, "Sold By" or "Repaired By". This is an excellent advertising medium, and we should like to hear from all the jobbers and dealers. We will submit designs free of charge, and further more will accept orders for from fifty name plates, on up.

Write for samples and prices, and also for catalogue of our '99 line of high art frame decorations.

## THE MEYERCORD CO., Inc.

AMERICAN MANUFACTURERS, GUARANTEED DECALCOMANIA TRANSFERS,

ST. LOUIS OFFICE:  
621 Holland Bldg.

Main Office: Chamber of Commerce Bldg., CHICAGO, ILL.

NEW YORK OFFICE:  
805 St. James Bldg.

# THE PASTIME AND SPORT

## MILLER'S DOUBLE VICTORY

Chicago Gripman Wins Six-Day Race and Becomes a Happy Groom—A Pretty Romance.

New York City, Dec. 12.—Cupid, Mercury and Hymen made Madison Square Garden a temple unto themselves on Saturday afternoon, when C. W. Miller won for himself a bride, the world's 142-hour championship, \$1,700 in purse money and various valuable incidental emoluments at the conclusion of the six-days' grind.

Pat Powers had developed an unquenchable match-making mania early in the week and set out forthwith to overcome the seemingly insurmountable obstacles to his suddenly inspired scheme of wedding Charley Miller to his pretty Chicago sweetheart, Miss Genevieve Hanson, who had been applauding the conqueror of her heart all the week, there in the hour of his triumph.

Just before 5 o'clock in the afternoon the brass band "choir" broke into the wedding march and a "congregation" of five thousand into cheers. The bride in a bewitching dove-colored, fur trimmed, afternoon costume, leaning on the arm of Arthur Gardiner, the best man, wended her way through a crowded aisle to a box decorated with flags and flowers—the altar of the ceremony. Across the home-stretch were drawn up the eleven other contestants, who had called off the cycling contention for the moment in honor of the occasion.

Then came the gallant groom in afternoon garb of flowing bath robe, soon cast aside and leaving him standing in full racing togs of many colors. Alderman Wentz performed the ceremony with due solemnity and then the great throng burst into cheers as the groom gallantly saluted the cherry lips of his bride. "Dutch" Waller made a wild dash across the track, shook Miller's hand and landed a resounding smack on Mrs. Miller's mouth. Arthur Gardiner claimed a best man's privilege and Tom Cooper responded readily to the bride's invitation to do likewise.

Miller quickly mounted his bicycle and rode off on his wedding journey, leaving his bride behind thus quickly deserted. His ride from here on was to down the records. The old figures—1983 miles—were wiped out at about 6:30 and at 7:41 he had completed his 2,000th mile.

The last hour the twelve men still in the race were on the track, all shaved and dressed in clean suits for the occasion, and all marvelously free from signs of the "torture" so vividly portrayed by the yellow journals. At 10 o'clock the outfit paraded in the order of the finish and were cheered separately. The score was as follows:

Miles.	Leader.	Time.
100	Frederick	4:49:00
200	Miller	10:04:00
300	Waller	15:30:00
400	Pierce	20:54:32
500	Pierce	27:29:00
600	Pierce	33:34:00
700	Pierce	40:06:00
800	Pierce	46:47:00
900	Pierce	54:31:00
1,000	Miller	61:05:30
1,100	Miller	68:50:00
1,200	Waller	76:42:00
1,300	Miller	84:34:00
1,400	Waller	91:48:00
1,500	Miller	99:28:00
1,600	Miller	105:55:00
1,700	Miller	113:39:00
1,800	Miller	120:51:00

The record by each 100 miles is:

Miles.	Leader.	Time.
100	Frederick	4:49:00
200	Miller	10:04:00
300	Waller	15:30:00
400	Pierce	20:54:32
500	Pierce	27:29:00
600	Pierce	33:34:00
700	Pierce	40:06:00
800	Pierce	46:47:00
900	Pierce	54:31:00
1,000	Miller	61:05:30
1,100	Miller	68:50:00
1,200	Waller	76:42:00
1,300	Miller	84:34:00
1,400	Waller	91:48:00
1,500	Miller	99:28:00
1,600	Miller	105:55:00
1,700	Miller	113:39:00
1,800	Miller	120:51:00

1,900	Miller	129:30:00
2,000	Miller	139:41:05

The 24-hour record was broken by Pierce, 457 miles 176 yards; the 36-hour by Pierce, 638 miles 704 yards; the 48-hour by Pierce, 812 miles 704 yards; the 120-hour by Miller, 1,786 miles 1,584 yards, and the 142-hour by Miller, 2,007 miles 4 laps.

From the start on Monday morning Miller had 9¼ hours' sleep, Walter 8½ hours, Pierce 14 hours, Albert 14 hours, Gimm 8½ hours, Lawson 10 hours and Aronson 18 hours. Each of these was off the track from three to six hours more than the time spent in actual sleep. Albert spent the longest time off the track. In the 142 hours he was absent 22 hours.

Fred Schinnerer quit long before the end of the race upon the request of his wife and the advice of the physicians. Many of the other contestants were ordered off the track by the board of health at the suggestion of the examining doctors. Lawson, who showed the effects so badly in the middle of the week, recuperated remarkably and finished in sixth place.

It will be noted that there is a strange absence of the names of the French, Swiss, Australian and other foreign riders among the leading six at the finish.

## Bald's Company Goes Broke.

The "Twig of Laurel" company, in which E. C. Bald played the star part, has "gone broke" on the road. It had been out only a month and had been playing one-night stands until it reached Boston, where it was billed for a week. Whether the Bostonians failed to appreciate the fine points of the play, or there was some reason dating from further back, is not quite clear, but the money failed to hold out and the troop was paid off and returned to New York. The Luescher-Heffron company of Syracuse, which was backing the show with Bald as the other partner, it is said, lost in the neighborhood of \$8,000 on the venture. There were twenty-three high salaried persons in the company. It is possible the play may be rewritten and the company started out again the first of the year if any capitalists can be found to back it.

## Paris Cycling and Motorcycle Income.

In the sporting budget of Paris just prepared for 1899, it is estimated that one-twentieth of the tax on motor vehicles will bring an income of \$8,920 and one-quarter of the bicycle tax \$17,500 into the city treasury. The bicycle stand at the Palais de la Bourse is cited to return \$300, the buffet of the municipal track at Vincennes \$300 and the track itself \$2,000. Thus the city anticipates an income of \$28,020 from cycling and automobiles. In 1898 the quarter of the bicycle tax alone returned \$28,000 to the city treasury. The expenditures that Paris will make for cycling are \$2,000 for the Grand Prix du Paris and \$460 for service at the municipal track.

## Cycle Paths in Belgium.

Cycle paths are reported to be in more general use in Belgium than in any other country, though little information regarding them has reached here. They are constructed of stone, brick or cinders out of the proceeds of a small tax that is levied on all cycles and are very general throughout the country. Their character is said to be so good as to induce many Europeans to tour through the sections where they are found.

## OPPOSITION ORGANIZED

National Cycling Association Formed to Control Racing in the East—Adopt Constitution Later.

New York City, Dec. 8.—Opposition to L. A. W. racing control took formal and aggressive shape at a meeting of representatives of tracks, race promoting clubs and the American Racing Cyclists Union here to-day. An organization was formed, to which was given the name of the National Cycling Association, memorable to old timers as the title of the cash prize league, which first undertook to formally promote professional racing. The tracks and organizations actually represented were the Park, Washington, D. C.; Hills Grove, Providence, R. I.; Hillsdale, to be built at Belleville, N. J.; Waltham, Waltham, Mass.; the New Jersey, Vailsburg, N. J.; Ambrose Park, Brooklyn, N. Y.; American Cycle Racing Association; American Racing Cyclists' Union; Kings' County Wheelmen, Brooklyn, and Quill Club Wheelmen and Riverside Wheelmen, New York. Letters expressing a desire to join in the movement were read from the managers of the following tracks: Athletic Park, St. Louis; Colosseum, Baltimore; Newby Oval, Indianapolis, Ind.; the athletic track, Buffalo; and Tioga, Philadelphia.

J. D. Lasley, Washington, D. C., the temporary chairman, read an address setting forth the situation. This was followed by a long discussion and review of racing conditions, in which every one present freely gave his experience and views with regard to league mismanagement of racing matters.

Resolutions were then passed declaring that a new association should be formed and that the National Cycling Association was then and there organized.

As the representatives of the promoting clubs and of some of the tracks were not authorized to bind their organizations before reporting to them, it was decided that the officers elected should fill temporary positions until the adoption of a constitution and by-laws at an adjourned meeting to be held at the Fifth Avenue Hotel on January 4.

The election was practically unanimous and resulted as follows: Charles A. Johnson of Buffalo, N. Y., president; C. D. Bloemecke of Vailsburg, N. J., first vice-president; Fred House, Harlem Wheelmen, New York City, second vice-president; A. G. Batchelder, New York, chairman of board of control; R. F. Kelsey of Hartford, Conn., chairman of district A, embracing all of New England; Walt. Wilson of Buffalo, N. Y., chairman of district B, embracing New York and New Jersey; J. D. Lasley, chairman of district C, embracing the southern middle states; George Bahl, Jacksonville, Fla., chairman of district D, embracing the southern states; and Charles P. Root of Chicago, chairman of district E, embracing the northwestern states. Tom Cooper of Detroit was elected a member of the board, representing the interests of the A. R. C. U. A committee on constitution was appointed, consisting of A. G. Batchelder, C. D. Bloemecke and Jay Eaton.

The constitution and by-laws outlined in Cycle Age of December 1 will be revised and submitted for adoption at the next meeting.

The meeting lasted nearly four hours and every point of the situation received serious discussion. There was remark-



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AND SHOW YOU THE \*\*\*\*\*

## '99 ORIENT

THE WHEEL ITSELF IS A CON-  
VINCING ARGUMENT.\*\*\*\*\*

YOUR NAME AND  
ADDRESS IS ALL THAT  
IS NECESSARY....



**Waltham Mfg. Co.**

WALTHAM, MASS.

Don't forget that the wheel  
that "stands the test" will be  
Equipped in '99 with a Coaster,  
& Brake that has had a years  
test. No Experiment! The  
Morrow Coaster & Brake is  
as reliable as a grindstone.  
Agents looking for a money  
maker should get the ECLIPSE  
Write for prices to Eclipse Cycle Co.  
Elmira, N.Y.

able unanimity as to the general plan proposed, though there were differences as to the details.

### KEENAN'S BOOM LAUNCHED

Pittsburg Man is Unanimous Choice of Pennsylvanians—State's Delegates Uninstructed.

Philadelphia, Dec. 12.—At the annual meeting of the board of officers of the Pennsylvania division last Saturday the boom of Vice-Consul Thomas J. Keenan, Jr., of Pittsburg, for next president of the L. A. W. was officially launched by a resolution offered by Mr. Knapp and seconded by George D. Gideon, presenting his name as Pennsylvania's candidate. Mr. Keenan was present, and was evidently gratified when the resolution was unanimously adopted.

Among other interesting items in Chief Consul Boyles' report was the showing made in the matter of legal protection to League members during the year, when of the 277 cases handled but 11 were decided adversely.

Secretary-Treasurer Collins' report showed that the Pennsylvania division, unlike those of Massachusetts, New York and other big states, had met all its financial obligations and still had a snug balance on the right side of the ledger.

The anticipated resolution in favor of the League abandoning racing control was not forthcoming, and the forty-seven Keystone State delegates will go to Providence uninstructed on that question.

For the first time in the history of the National Assembly Pennsylvania will have a larger delegation than New York—47 as against 46. A majority of the total vote will be 132, which augurs well for Keenan's chances, while to carry an amendment to the constitution 176 votes will be necessary, which seems to indicate that a motion that the League abandon the control of racing will have an exceedingly hard time in passing.

### Minnesota Votes for State Aid.

Minneapolis, Dec. 12.—One of the questions before the voters at the recent election in this state was a proposed amendment authorizing state aid for building wagon roads. The returns are all in, with the exception of Watonwan, St. Louis and Lyon counties. The vote stands 65,041 for the amendment and 36,466 against. The question has been raised, however, whether or not the amendment carried, as the vote in favor of the measure is short of a majority of all the votes cast in the election. A. B. Choate, the attorney and one of the leading L. A. W. members of the state, holds that it has carried. The act submitting the measure follows the language of the constitution as to the necessary majority, and reads as follows: "If a majority of the voters present and voting shall vote in favor, etc., it shall take effect and

force, etc." This language, Mr. Choate holds, has been construed by the Supreme Court in a case where the amendment to the constitution submitted at a general election received less than half the number of votes cast for governor, which held that since the amendment received a majority of the votes of those who voted on the measure, it was immaterial that the votes in favor of the amendment were not a majority of the votes cast on some other question submitted at the same election.

### BANKER TAKES LARGE PRIZES

Popular American Wins at Montpellier and Breziers from Second Raters—Shows Good Form.

George Banker has shown an evident return to good form by winning several big first prizes recently, though the victories lose somewhat of their honor by the fact that he was not pitted against any of Europe's best men in the races. He won the 2,000-meter Grand Prix at Montpellier, France, by more than twenty lengths, November 24, on a slippery track. Tommaselli ran second and Cambelles third. Banker took the lead from Cambelles at the bell and sprinted away splendidly on the last turn, much to the surprise of Tommaselli.

The first prize of 1,000 francs in the Grand Criterium du Midi run at the big race meet in Berziers, France, November 27, was also won by Banker. In the first heat of 1,000 meters the American led all the way and won easily by half a wheel. Tommaselli and Geo qualified in their heats and Leynard qualified in the consolation heat. In the 3,000-meter final Banker took the lead a lap and a half before the finish and balked every attempt of his opponents to jump him, but in the sprint Tommaselli made a desperate effort and ran the American almost a dead heat at the tape.

Banker also won the 333-meter heats against time in :24 3-5, with Tommaselli second in :25 2-5.

Geo and Merle defeated Banker and Tommaselli by a wheel in the 3,000-meter tandem event in 9:30.

### NEWS IN BRIEF.

Buffalo is making strenuous efforts to secure the League meet next summer.

A. A. Zimmerman does not intend to return to the track, but will be joined by his brother-in-law, Joe McDermott, in the manufacture of bicycles.

The Touring Club of France, during the year ending September 30, 1898, added \$32,904 to its treasury. Receipts of the club were \$119,574 and expenditures \$86,669.

John E. Wing, San Jose, Cal., on December 4, broke Wilbur Edward's quarter-mile record of :24 2-5 made in '94 on the straight away of a mile horse track. Wing's trial was made on a circular track and his time was :24 flat. Other records secured by Wing were the third-mile in

:34, the half in :52 2-5, and the two-thirds in 1:11 2-5, all previously held by George P. Fuller.

Some of the New York women members of the League have recommended to Chief Consul-elect Belding the formation of a woman's L. A. W. consulate in that state.

The Associated Cycling Clubs of Montreal has forwarded an application to the C. W. A. for the Dominion meet, to be held in that city under the auspices of the clubs in 1899.

Charles Barden, the once celebrated English record man, has abandoned the track and will soon open a soft drink and paper stand in his little town of Putney.

It is reported that two new tracks will be built in New York next year to be run under League control in opposition to the Manhattan Beach and other tracks now blacklisted and used by the N. R. C. W.

Miller says he will probably enter no more six-day races, but will go after world's records behind motor pacing with wind shields in Europe, where he also hopes to meet Huret, Rivierre, and Cor-dang.

The seventy amateurs who competed at Madison Square Garden have been suspended by Chairman Mott, who also fined the competitors in the six-day race \$50 each and placed the track on his blacklist under \$1,000 fine.

An effort has been made in Hartford, Conn., to govern the riding of bicycles to fires, but the committee to which the subject was referred reported that the matter was covered by a state law controlling nuisances which could be enforced to remedy the trouble.

Tim Hurst of St. Louis is seeking to make arrangements for Powers and Brady, who managed the Madison Square Garden race, to conduct a six-day go-as-you-please in the Missouri town some time in January. Plans for the Chicago affair are said to have fallen through.

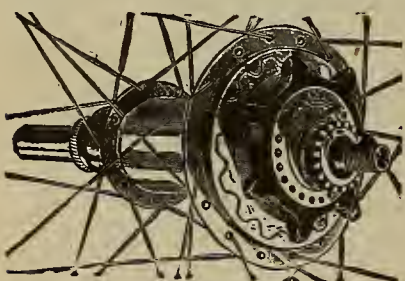
Eros and Prisini, the Italian riders who started with Momo for South America on November 14, suffered so with sea sickness that they hastily debarked at Barcelona and declined to proceed, forgetting baggage and everything in their hurry to get on land again. Momo continued his trip to Buenos Ayres.

While in Paris Jimmy Michael said to a reporter for Le Velo, "Two canards have been constantly going the round of the press and I want to put an end to them. First of all, I have never been married and have no intention of getting a wife just yet. Secondly, Tom Linton and I are the best of friends."

Charlie Hadfield and W. F. Sager have tied up for tandem work this winter and are planning to attempt a mile a minute on a road down one of the Orange mountains in New Jersey, across from New York. Both are expert on multicycles and claim to have the nerve to ride that fast, if the wind is favorable to the undertaking.

George D. Locke, C. W. Mears, F. D. Valkenberg and Wallace Sherwood, respectively, chief consuls of Illinois, Ohio, Wisconsin and Indiana, held a conference in Chicago Sunday to discuss plans for recruiting the division membership and other matters pertaining to division affairs. Informally the chief consuls declared themselves in favor of the continued control of racing by the League.

## EXCLUSIVE TERRITORY



### To Bi-Gear Agents for '99

We will make a good proposition to responsible dealers. Apply for the agency before others get in ahead.

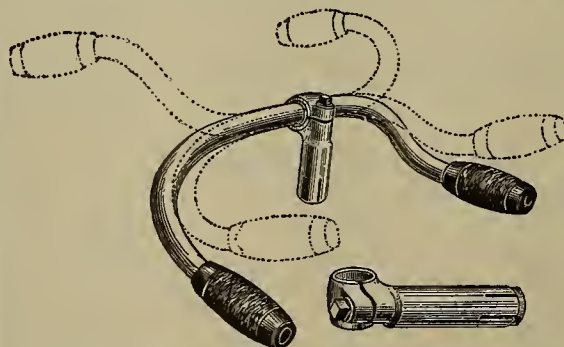
**BI-GEARS REDUCED TO \$15.00**

The price has been reduced to \$15, which is \$5 less than heretofore. We will exhibit at space No. 94, New York Cycle Show, and be pleased to meet old friends and form new ones.

"Sure Thing" Tire Mender, rubber band kit. Postpaid, 10 cents.

**Brown-Lipe Gear Co., SYRACUSE, N. Y.**

## The Oldest Handle Bar Manufacturers in Business



Don't be misled to use bars that are unknown and of inferior quality when you can buy the

**Ideal Adjustable and Internal Binder Bars**

for the same money. Our bars are made of the best seamless tubing, and the stems of one-piece forging. All styles. All bars heavily coppered before being nicked. Guaranteed the best finish and most perfect bar made. Get our prices and circular for '99.

**IDEAL PLATING CO., 7 Appleton St., Boston, Mass.**

# THE CYCLE AGE

## AND TRADE REVIEW

VOL. XXII—No 8.

CHICAGO, DECEMBER 22, 1898.

NEW SERIES No. 57.

### FAIL TO DISSOLVE THE BOARD SEVENTEEN STOCK VOTES SHORT

Another Effort Will be Made Early in January to Disband the Association.

New York City, Dec. 20.—This was the day appointed for choking the life out of the National Cycle Board of Trade. The strangulation was vainly attempted.

For the rope slipped.

Hangman and doctor and jurors were punctually on hand. The pretty stenographer wept. The amiable secretary took on an appearance of unutterable woe. The unobtrusive bookkeeper nervously fingered his petty cash. The massive frame of the president heaved with such sighs as are suited to dissolution. The sprightly office boy was as dejected in mien and air as a chicken with the pip.

All were there to mourn.

#### Six Stockholders Were Present.

Six radiant stockholders lightened the general gloom by their presence. They had heard of the matinee performance and journeyed from Jersey and the lower end of Broadway to see it. There was no throng, no tumult,—there were no flowers save those of speech.

"Call the roll, Mr. Secretary," said the headman, stifling a sudden gust of grief. "I guess we're all here," was the response.

"Then lock the doors," was the rejoinder.

It was moved and seconded that the doors be locked, and the motion prevailed. Accordingly the doors were locked.

Then it was moved and seconded that the Board should forthwith be dissolved.

"Count the vote, Mr. Secretary," said the president, as the tears coursed down his sunken cheeks.

#### Short of Two-Thirds Stock Vote.

"Seventeen shy of the necessary two-thirds," came the answer.

The blow almost killed Harry. Harry is the office boy. But joy seldom kills. Harry is still on the pay roll.

It was then decided that on January 3 in the next year of grace another hack would be taken at the Board. The failure to secure sufficient proxies, despite the most vigorous efforts on the part of the secretary and the members of the executive committee, has transformed what was designed to be a tragedy into a roaring comedy.

#### Want Revenue Tax Removed.

Washington, Dec. 19.—There is a general desire among manufacturers and business men that the stamp taxes required on bank checks, drafts, certificates of de-

posit, bills of exchange, and promissory notes, by the war revenue act, should be repealed, and a determined effort will be made during the present session of Congress to bring about this end. Representative Lloyd has introduced in the house of representatives a bill to repeal that portion of the act covering these forms of exchange paper, and the ways and means committee has the measure under consideration, and it is thought that the committee will recommend its passage.

#### NEW ENGLAND DEALERS CHEERFUL

Trade Conditions Have Improved and Good Demand for Chainless Machines is Anticipated.

Springfield, Mass., Dec. 19.—Dealers in such New England centers as Worcester, Springfield, Hartford and New Haven are unanimous in the opinion that the chainless will have a good sale next season. Because of the numerous hills in and about Springfield, the tendency toward chainless bicycles is strong here, and dealers report a large inquiry for information concerning this class of machines. A leading Hartford dealer, in conversation with a Cycle Age representative last week, estimated that the sales of chainless bicycles in his city next season would not be less than 25 per cent of the total sales.

Another Hartford agent, who has recently returned from a business trip to the principal places in the state, is confident that next season will be a good one throughout Connecticut for the retail trade. Business, he says, is better in the cities than it was a year ago, and in addition there is more money in circulation in the small towns.

Springfield dealers are congratulating themselves that there will be a considerable diminution in the number of agencies in this city next season. The popularity of the sport in Springfield resulted in the opening of a much larger number of agencies than the city could support, and some of the agents have opened repair shops and given up the sale of bicycles, while others have abandoned the field. A number of branch houses have been closed, only two remaining. Branch houses, with a few rare exceptions, have never paid in the Connecticut valley.

### OUR CYCLE TRADE IN ITALY SALE METHODS UNSATISFACTORY

Chicago Firm has Control of the Northern and Central Markets—The Tire Situation.

Milan, Italy, Dec. 2.—American manufacturers could do a nice business over here if they would deal more freely and with better knowledge of the circumstances. American machines are now very highly appreciated in this country, but some firms should be in better hands, that is to say, should have agents handling only their goods.

A well known Chicago firm has already got a firm hold on the northern and central Italian market, just because its Italian agent spends all his time in pushing the goods. Such is not the case with a large Connecticut firm, which turns out a better machine than the Chicago house, because its agents, besides pushing an English machine, are dealing in and manufacturing a thousand articles for industrial use.

#### Assembling in Italy is Urged.

Other American machines could become well known here if their makers would send over the parts separately and then have a small shop to assemble these components, and sell the machines directly to customers for cash. By this method a good deal of miscellaneous expense could be avoided and the duty would be lessened. Mounted wheels, or rims with tires on, pay like a full machine. This is already being done by an Austrian house which has a well equipped shop at Turin to put up complete cycles and make repairs of all kinds.

Nipples, spokes, washers, nuts, handles, saddles, bells, spanners, lamps, etc., unless of special pattern, can be bought here at very low prices.

#### Chance for Our Tire Makers.

There are in Italy two important tire firms. One firm, besides manufacturing their own tires of cheap quality and sold at very low figures, make tires with any trade mark. There is, therefore, keen competition between tires of the same quality made by the same firm, but sold under different names, each of them being advertised as the best. This firm, being the only house engaged in rubber manufacture in this country, has a certain advantage.

On the other hand, the goods of the foreign competing house are costly and not at all suitable for a poor country like Italy. Many cycle houses would have long ago turned their backs on this firm if they could have found a good tire at a reasonable price. Certainly this tire is well introduced and adopted by the best

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cycle makers of Italy, as well as by agents of most foreign manufacturers, except, of course, those handling American machines.

If a single tube tire maker would take advantage of this state of things, and would open a depot at once and sell tires at a reasonable price, good business would ensue.

#### Poor Place for Tire Manufacture.

Any tire company starting business in this country should import their tires complete and avoid the big mistake of manufacturing, duty being less on complete tires than on parts thereof. Complete tires pay 50 lire per 100 kilos, while manufactured rubber pays 50 per cent ad valorem. Besides this, there is solution, benzine, thread, etc.

#### Object to Repairing Our Machines.

American bicycles should also be easily repaired. Brakes, cranks, etc., should be of the European pattern, so that a cyclist in Palermo should not be obliged to send a machine up to Milan or Turin to get it repaired because the broken piece is of too complicated a design and is not to be had anywhere else than from the general agent of the machine. Many instances are on record in which cyclists sold their American machines just because it was too troublesome and expensive for them to get them repaired, and other instances are known in which cyclists have found it best to change the rims and fit them with Italian or English tires because they could not easily replace a pair of American tires. The roads being generally very hilly and rough, tires should be very strong and the tread very thick.

Every machine here must be fitted with a lamp bracket, because, according to a new police regulation, cyclists are fined if they have no bracket and no light at night.

### NO INTERNATIONAL BANKS

#### Bill for Their Establishment in Latin-American Countries Defeated in Congress.

Bicycle houses which have export relations with Latin-American countries will regret to learn that the bill providing for the establishment of the International American Bank failed to pass the national House. The measure was skillfully handled, but a feeling appeared to develop that the bank might prove a dangerous competitor of the existing national banks because of the power conferred to establish branches. Representatives criticised this provision and offered amendments abolishing the branch privilege or extending it to all national banks. None of the amendments was adopted. Several of those who voted against the bill will not be members of the next House, where another effort is likely to be made to secure its passage.

It was not the original purpose of the bill to go beyond the Latin-American countries, and it was only an afterthought by which a provision was added that branches might be established in other foreign countries. The whole subject is likely to be taken up in the next Congress with a view to systematic legislation and may be referred to a special commission for consideration and report.

The opposition to this bank, the fear that it would become a monopoly and fix the rates of interest, is all due to the most ignorant and stupid misconception of what a bank is. It would be painful enough if this superstitious fear of a bank were merely encountered here and there, but to find it strongly entrenched in the House of Representatives of the most intelligent nation on earth is discouraging indeed.

## CUBAN TRADE POSSIBILITIES

### THE THREE DEALERS OF HAVANA

#### American Bicycles Not Represented—Live Manager Must Educate the Public—Time is Favorable.

Havana, Dec. 15.—After making inquiries and giving close attention to everything pertaining to the bicycle, covering a period of two weeks, the investigator is uncertain whether Cuba really has a bicycle trade or not.

A round up of all the bicycles in the hands of riders in this city, shows three of the Dayton pattern of 1897 (one held by the writer brought from the States, and two held by Cuban residents purchased in Jacksonville, Fla.), and two Columbias (owned by a gentleman and his wife from the States, on duty here with the Peace Commission). Besides the above, three other machines were noticed, but they were so ancient that it was impossible to tell when or where they were made.

Yet it cannot be said that Cuba has no bicycle trade inasmuch there are three bicycle stores, or rather three stores that handle bicycles, in the city. One of these is a sewing machine agency which carries a line of bicycles displayed in the usual fashion of the States at one side of the store; another is a notion house, which had but one juvenile on hand, but promised to have a new stock shortly; the third is a general variety store in which the cycles were relegated to the back part of the room, where they were accidentally discovered from a back street.

#### Nameplates to Order.

The sewing machine agent had sixteen bicycles on the floor nicely arranged. Business, he said, was very slow. There were no two name plates alike in the line, and some of the machines had no nameplate. "A nameplate goes with every wheel," said the dealer, "but we wait until the purchaser signifies what nameplate he wants on his wheel. We have a very fine workman who makes a specialty of that kind of work. Don't you think he does fine work?"

"But don't you like to show your customers who makes the machines?"

"Oh, that makes no difference, so long as we put a nameplate on for them."

The bicycles in his establishment were all English made, none of them weighing less than 35 to 40 pounds. The dealer was asked if he could ride a bicycle, and he answered that he had never learned, as he could not afford to ride one. The prevailing price for his machines was \$75 gold. He carried a small line of sundries and had very limited means for making repairs. One young Cuban complained bitterly because he was forced to pay \$2 in Spanish silver for the repair of a puncture, but he could not repair it himself.

#### Demand Must be Created.

The great trouble with the Spanish dealer—all the merchants in Havana are Spaniards—is that he will not move out of his way to make a sale. The goods are in his store, and if anybody wants them he has to find them.

Cuba is today just about where the United States was in 1892, shortly after the safety made its appearance. The Cubans and Spaniards are a pleasure loving people; they have good roads, and the streets of Havana are rideable, but the trouble is that they do not know the utility of the bicycle and the pleasure it gives; and they will never know if it is left for the Spanish merchant to enlighten them.

Havana is a city of 250,000 people. The means of transportation inside the city

are limited to the little cabs, with a fare of 20 cents per ride. There are great numbers of these cabs, and they all do a thriving business. There is also a steam dummy line and a horse car line, both of which run out into the suburbs, and are practically useless, as they do not touch the center of the town.

It would be useless for manufacturers to send their traveling men here to establish agencies; what is needed is for some manufacturer to start a branch, managed by a live bicycle man, who will go out among the people, teach them to ride, put a few advertisements in the papers, and generally stir things up.

#### Conditions Are Encouraging.

It may take a year or two to initiate the people into the charms of cycling, as it did in the States, but Cuba will have the advantage of present rock bottom prices. Another thing in the Cuban's favor is that there is hardly a day in the year when he cannot ride. There is wet weather, it is true, but the rains are not incessant; it may rain for a half hour and in another half hour the roads are dry. The weather is sometimes very warm in the sun, but there is never a time that there is not a fine breeze from the ocean, and it never seems as hot as the summer weather in the States.

It has been reported that two gentlemen from Jacksonville have been in Havana looking over the ground for the purpose of establishing an agency for a well known line of bicycles, but they could not be found. So far as could be learned there are no American machines here for sale.

### AMERICAN AND ENGLISH EXPORTS

#### Week's Shipments to North European Countries Are Large—English Returns for Ten Months.

Exports of bicycles and bicycle materials from the post of New York for the week ending December 13, are recorded as follows:

	Bicycles.	Materials.
Argentina . . . . .	\$ 8,190	\$ 1,792
Belgium . . . . .	70	1,875
British Guiana . . . . .	700	20
Australia . . . . .	115	115
Brit. West Indies . . . . .	78	78
Africa . . . . .	9,554	395
Brazil . . . . .	2,227	15
Brit. East Indies . . . . .	3,706	177
Germany . . . . .	33,961	10,699
Cuba . . . . .	276	....
Central America . . . . .	46	68
Denmark . . . . .	32,520	7,875
Sweden . . . . .	18,137	3,455
Dutch Guiana . . . . .	155	....
Ecuador . . . . .	120	....
Italy . . . . .	75	272
France . . . . .	300	....
England . . . . .	215	1,778
Switzerland . . . . .	373	....
Mexico . . . . .	300	100
New Zealand . . . . .	30	....
Russia . . . . .	100	2,839
Peru . . . . .	50	25
Uruguay . . . . .	....	192
U. S. of Colombia . . . . .	208	....
Austria . . . . .	50	....
Totals . . . . .	\$111,363	\$31,680

The total exports of bicycles and materials from the United Kingdom for the ten months ending with November, 1898, are compared with the complete returns for 1897 and 1896, as follows:

Month—	1896.	1897.	1898.
January . . . . .	\$624,435	\$763,820	\$480,465
February . . . . .	706,125	688,195	474,225
March . . . . .	891,875	855,830	482,245
April . . . . .	786,335	698,085	522,340
May . . . . .	793,765	697,940	434,700
June . . . . .	772,285	583,050	371,280
July . . . . .	716,755	566,850	383,475
August . . . . .	650,140	483,165	287,535
September . . . . .	683,560	430,460	316,870
October . . . . .	893,320	497,845	314,565
November . . . . .	720,600	446,410	....
December . . . . .	1,060,555	444,785	....
Totals . . . . .	\$9,278,020	\$7,155,645	\$4,067,700

Acetylene cycle lamps are rapidly becoming popular in Australia and large numbers of them have been recently received in Melbourne.

**MORE CYCLE SHOW OPINIONS****EXHIBITIONS HELP DEALERS****Manufacturers Still of Opinion That the Benefits of Shows Are Local in Character.**

No sane tradesman will believe that the manufactures are half so enthusiastic about cycle shows as their promoters or apologists. That the exhibitions in New York and Chicago will be trading places where agents can select their stocks to the best advantage is disproved by the fact that many makers will be conspicuous by their absence. Still enough support has been promised to make it certain that in each city tolerably good counterfeits of past shows will be presented.

Letters recently received on the subject of shows are herewith printed:

**Shows Are of Local Benefit.**

There is no doubt but what a cycle show in New York or Chicago would be beneficial to the trade of the dealers in those cities, but from our experience in the past we are led to believe that the benefit to be derived does not warrant the expense attending such an exhibition. It has been the custom in the past to dump into the markets of these cities the bicycles of defunct manufacturers, which naturally affects the sale of regularly made bicycles at prices that would pay a profit. Unless we change our views in the matter very materially we will not exhibit at either of the cycle shows referred to.

THE BARNES CYCLE COMPANY.

**Their Dealers Will Exhibit.**

We do not believe that a show is either necessary or desirable. Neither do we believe that it will repay the cost and effort necessary to make it a success. In a local show our dealers may see fit to take part, but we will not be directly represented in any of them.

NATIONAL CYCLE MFG. CO.

**Favors a Trade Convention.**

Cycle shows operated locally at reasonable expense to the exhibitor are undoubtedly valuable to the adjacent trade, and should be encouraged till such time as some radical change may ensue in the cycle trade generally. Such a show is for the public and in the interest of the retailer.

Regarding shows from the view point of manufacturers or national jobbers, the very success of the effort to interest the public is a bar to the proper issue and effect of the exhibition. Manufacturers have felt it incumbent on themselves to make display commensurate with their trade importance; hence they have been led into expense which might be compared with gunning for snipe with an eight bore.

The trade cycle show should be confined to the trade exclusively, and operated with the purpose of obtaining the greatest results with the smallest expense. The meeting should embody as a vital feature the getting together of all connected with the trade. Mutual acquaintance, information and negotiation should be the general features, while exhibition of samples would spread the goods before all interested. Agents and jobbers would naturally be present, and the public would be excluded. This exhibition could take place in any large hotel, the parties attending showing samples in their own rooms, which could be secured contiguous to one another.

W. W. STALL.

**Decision Under Universal Contract**

Buffalo, Dec. 19.—Supreme Court Justice Titus, sitting in equity term last Thursday, handed down a decision that will be of interest to dealers who sell bicycles on the installment plan and under the universal contract system. The decision was a reversal of a judgment given by the municipal court against a Mrs. O'Sullivan in a suit brought by Sweet & Johonnot, bicycle dealers, to recover a balance due on a bicycle. The woman bought a bicycle of this firm in May on the installment plan for \$60. She paid \$15 down and signed an agreement to pay the balance in monthly installments. She made no payments on the contract and when the firm undertook to collect from her she refused to pay on the ground that the weight of the machine had been misrepresented to her. The machine was taken from her and

suit brought to recover the balance due. The judge rendered a decision in favor of the plaintiffs for the full amount. The woman took the case to the Supreme Court, where the judge held that according to the contract upon which the bicycle was sold and which reads in part, "although the bicycle hereinbefore referred to shall have been retaken and any payment or payments that shall have been made thereon shall be deemed as the reasonable rental value of said bicycle," the firm has all that is due them under the contract, having retaken the goods.

**INTEREST IN LOCAL SHOW****Most of the Space at Philadelphia Already Taken—Department Stores and Holiday Trade.**

Philadelphia, Dec. 19.—Never before has so much interest been manifested in a local cycle show here as the tradesmen and bicycle public are now showing in the exhibition to be held in this city during the week of February 18 to 25. Former local shows, as a rule, have been held much too early and it is probably owing to the comparative lateness of the coming exhibition that the local dealers and out-of-town manufacturers are of the opinion that money invested in it will be well-spent as the local riding season usually opens the first Sunday in March. According to President "Pop" Brewster, of the local cycle board of trade, 75 per cent of the 200 spaces have already been engaged while the opening is two months away.

The insidious methods of department-store competition are well exemplified by the following remarks of the manager of the bicycle department of one of Philadelphia's largest general merchandise houses:

"I venture to say that we are doing more holiday business than many concerns handling only bicycles, and which are making a feature of the holiday trade. For instance, we have recently booked many orders for bicycles—intended for Christmas presents—from old customers having monthly, bi-monthly or tri-monthly accounts. No interest is charged by us, whereas if a customer of ours had gone to a bicycle store and bought a \$50 wheel, he would have been compelled to pay cash, or a bonus of \$5 if he asked for time. Many of our customers have tumbled to this fact, and have, besides, told their friends, who have opened accounts with us, for the sole reason, I truly believe, of getting a bicycle on time without being compelled to pay a bonus. The majority of these people could just as readily pay cash, but for some reason they prefer to take their time and save their \$5 besides. We profit in the long run, however, by reason of the other goods we sell these time buyers."

**Hampshire Cycle Co. Retires.**

Northampton, Mass., Dec. 19.—The Hampshire Cycle Company of this city will close out its business. The action was not compulsory, but was taken in the belief that the manufacture of bicycles will not be profitable in the future, except to companies which have large capital. The company was organized in 1895 and its output has borne a good reputation. The company has been well managed and its retirement will throw a considerable number of men out of employment. The stock of the company was held principally by residents of Northampton.

A company with a capital of \$40,000 has been started at Milan for establishing a public service of motor cabs.

**HUMBER TROUBLES BLOW OVER****INVESTIGATION IS ABANDONED****Martin Rucker Gives Security for His Heavy Overdraft—Small Sum Carried Forward.**

The poll of the shareholders taken at the meeting of the Humber Cycle company held in London on December 3 for that purpose, resulted in the defeat of the motion adopted at the meeting of directors held on December 8 to appoint a committee of investigation to inquire into the company's affairs, and into the acts of Managing Director Rucker. The majority of shares voted in opposition to the motion was 42,536. The annual report, which showed a general decline in business of the company, was adopted.

**Serious Reduction in Profits.**

The report of the directors of the company states that they very much regret the serious reduction in the profits, which is owing to the falling off in sales. In order to meet this condition of affairs, various economies have been effected in the working expenses, and the directors intend to still further pursue this policy during the current year.

The accounts show that the trading profits, after discharging working and management expenses and making provision for bad and doubtful debts, and with balance brought forward from last year, make a total of \$127,305. From this has to be deducted directors' remuneration, law costs, etc. This leaves a balance of \$100,715. To this sum the directors have transferred \$10,000 from the reserve fund for equalization of dividends, making the disposable balance \$110,715.

**Small Sum Carried Forward.**

The balance is recommended by the directors to be appropriated in the payment of interim dividends on preference and ordinary shares for six months, announced in June last, and a further dividend on the preference shares, making 6 per cent for the year, leaving a beggarly \$4,465 to be carried forward. No depreciation has been allowed on the machinery, etc., owing to the exceptionally bad year.

**Security for Rucker's Overdraft.**

With reference to the paragraph of the auditors' certificate (in which the auditors point out that the managing director's commission account was overdrawn to the extent of \$12,895), the directors explain that the remuneration of the managing director is dependent largely upon the result of the trading. It has, consequently, been the custom for him to draw, from time to time, sums on account of commission on profits, which he continued to do, although on a reduced scale, during the past year. Owing, however, to the unexpectedly large decrease in the profits, it was found, upon arriving at the result of the year's working, that his commission account was overdrawn by the amount named. The directors are pleased to state that security has been given for this amount.

**To Make Motor Vehicles.**

As foreshadowed last year, certain expenditure—about \$14,000—has been incurred in connection with motor work, which has resulted in the directors being able to place Humber motors on the market, and it is expected that a considerable trade may be done in connection therewith in the future.

A large number of new agents have been secured, and they have confidence in the current year's accounts showing much more favorable results.

# Crescent Juveniles

## WITHOUT A COMPETITOR

Miniatures of full size Crescents in outline, style and construction.

FLUSH JOINTS  
TWO-PIECE CRANK AXLE

LARGE SPROCKETS  
HANDLE BAR POST EXPANDER

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**\$25**

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**\$25**

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MODEL No. 3.

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**The Record of the Past, Makes Crescents the Bicycle of the Future**

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**\$25**

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**\$25**

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MODEL No. 6.

Fitted with Crescent Dunlop Detachable Tires.

Light, easy running, durable.

Juvenile Wheels That Can Be Recommended.

**CHICAGO—WESTERN WHEEL WORKS, Makers—NEW YORK**

# THE CYCLE AGE

## AND TRADE REVIEW

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### PROSPECTS FOR THE COMING YEAR

Everybody in the trade looks for a large volume of business in the coming year. Their hopes are solidly founded, for all the elements which conspire to bring about a season of prosperity are at hand. The buying capacity of the people is at the high point; there is an abundance of money in the country; industries which have languished for a long time are showing astonishing signs of activity; and, what is of more importance than all else, the belief is current that these happy conditions are not transitory or illusive, but destined to last for a long period.

It is this large faith in the future which sustains makers and agents and causes them to be cheery in advance of a season that, with less propitious omens, would produce alarm. Prices are low, but they have not yet reached that degree in descent where the industry is threatened with the extinction of all but the rich. There is still a safe margin in the manufacture of bicycles if rash speculation is closely guarded and sober judgment is exercised in marketing methods. On the other hand, there are certain forms of manufacture which by the friction of competition have become so worn that the profits are microscopic. The whole trade is aware of the difficulties which beset pedal, hub, and small parts makers, particularly when they seek the custom of people producing cheap bicycles. On the whole, however, the manufacturing end of the business is in sound condition. Goods are sold earlier, more safely and in undiminished quantity in the home market, while abroad they are in strong and increasing demand.

The agents, who are in sympathetic mood with the makers at all times, have a surprising confidence in their ability to make headway next season. So far from being discouraged at the low prices which rule, they cherish the hope that the lowered lists will provoke an unusually heavy demand. They are certain of selling to better advantage, both in the matters of time and profit on investment. In buying stocks they have gained some valuable experience during the past few years. As business risks for the makers to carry they are vastly improved, needing less and less help in the way of extension of paper each year. Formerly they had little else than enthusiasm to offer as security for a bill of goods consigned; now they have ratings in the books of the commercial agencies and are anchored quite as securely as the houses from which they buy. They are alert, cautious, modern.

### TRADE PAPERS AND CYCLE SHOWS

What the Cycling Gazette—the scavenger among trade journals—says about the editors of this paper is delivered at a safe distance. Let it go. Readers of the Cycle Age are not looking for that class of reading, or replies to it.

On the subject of national cycle shows the Gazette says: "The satisfactory demand for space and the widespread interest the shows are creating prove conclusively that the trade is willing and the public anxious that we return again to the custom of placing the very newest models on exhibition for a week in the two greatest cities of the country." The Cycle Age does not deal in flimsy, irresponsible assertions of that kind, but has printed

impartially what many manufacturers have had to say on the subject, and the whole trade knows whether they are for or against shows. The majority are against them."

The Gazette further says:

And another thing that strikes us forcibly is that if \$70,000 is to be made out of a cycle show at which space is sold at reasonable rates and exhibitors are well taken care of and protected against the ravages of outfitting concerns, wouldn't it have been a reasonable and proper movement for the Age's editor, while he was the Board of Trade's secretary, to have taken up the show project and organized exhibitions in New York and Chicago, thus at once benefiting the Board, while some reason for its existence still remained, and keeping out of the field such speculative gentlemen as Mr. Sanger, et al., who are willing to supply a want and pocket the earnings or pay the losses, as the case may be?

This shows very plainly that the Gazette looks upon the Board of Trade as an organization which was called into existence to make money for itself without regard for the permanent interests of the trade. The Board held the more responsible view that however possible it might be for its directors to prey upon the weakness of the trade by again resorting to cycle shows and playing the part of the trade sharks who snatch a bite here and there by working upon the mutual misgivings of competitors for trade, it was not in conformity with its purpose to rob its members for the idle satisfaction of filling the Board's exchequer. The directors were not embezzlers of the trade's money. Neither did they want to take two dollars from one pocket in order to enrich the other pocket with one. They were neither lunatics nor embezzlers, as the Gazette would have them be.

"The promotion of cycle shows is a legitimate business; may success attend the efforts of the managers," adds the Gazette in conclusion. The promoter's "legitimate business" is to make money out of the cycle trade, not for it. The cycle trade's business is to make money for itself. The majority of the trade have declared that the two things cannot be combined. That arraigns the show promoter against the trade. The Gazette sides with the promoter by its own confession. The Cycle Age is with the majority of the trade.

Local shows, on the other hand, are generally regarded with favor. Their value has not yet been thoroughly tested.

If the promoter of national shows can make his individual enterprise a success, he should do so. That is his business. But the trade has no reason whatever for helping him along against its own interests. A cycle trade paper has no business to help the promoter against the trade.

### SETTING THE PRESS ARIGHT

The daily press must be counted among the factors which have an effect upon cycle trade. At one time its services were of great benefit. The attention which was given to the cycle in the daily newspapers removed prejudice and created sales. But the daily press blows hot or cold according to the interest that the reading public is supposed to take in a subject. When the price question in regard to bicycles began to overshadow the more general questions of speed and utility and construction, the daily press made it part of its work to run prices down to an unprofitable level.

When the novelty of bicycle performance commenced to wear off, the daily press echoed the voices which cried the decay of the bicycle industry. The war diverted the public to subjects of more momentous importance. It became very clear that the bicycle was not first among subjects for talk. It is still of interest, but nearly everything that can be said about it has been said. On account of their mutual competition the newspapers cannot drop it from their columns, but they are in trouble to invent something to write about it. As a sporting instrument it does not lend itself to variegated writing like base ball, golf or other games. The sameness of the pedal-sport offers no inducements to the word-slinger; no large class of readers can derive special gratification from being able to understand and explain cycle phraseology, because there is none, except what is borrowed from the horse races. Cycling is too common to have a language of its own. Thus the very popularity of cycling operates against it so far as publicity is concerned.

Chainless machines presented a variation of the theme for a while, but have already entered among the acknowledged and therefore hackneyed facts which make tiresome reading. Mecha-

ical pacemaking machines have given a little zest to the appetite of the cycle column readers. But altogether there is a danger of tedium in those columns, and tedium is a mortal sin in newspaper work. It is to avoid this threatening tedium that daily newspapers are now catching at every straw that will allow them to say something about bicycles without causing their readers to fall asleep. In their difficulty they have found no line of thought so well adapted for this purpose as "the decadence of the bicycle."

This tendency of the daily press it is which must be reckoned with as a factor in the cycle trade. The bicycle trade requires no irrelevant publicity, no more than refiners of sugar or makers of shoes. Bicycles are henceforth a staple article like watches or sewing machines. To make bicycles a fad again and to boom their sale beyond certain reasonable limits would be a hopeless task. The marvel and the romance are no more shedding luster over bicycle enamel. Steel tube lightness and ball-bearings are work-a-day realities. There is more live interest in tires than in any other part of bicycle equipment, simply because tires are still considered imperfect.

In the long run the daily press cannot injure the bicycle industry by proclaiming the decadence of the bicycle, but temporarily it can cause a set-back if it continues to distort the healthy transition which is taking place into a sign of decay. It is in reality a sign of strength, but the public at large cannot be supposed to interpret the sign with better understanding than does the press itself, and thousands of sales may be lost in 1899 if little stupid reading notices as well as lengthy and grave articles are permitted to appear in print promiscuously bearing the message that cycling has seen its best days.

More sewing machines are sold and used today than when their mechanism and performance were the subject of wonderment and comment. More watches are used than in the "halcyon" days when the first steps were taken to manufacture them cheaply by automatic machinery and when half of the population were adepts on watch "movements." Hundreds of other articles, the products of modern ingenuity and skill, have been nine-days wonders and have afterwards settled down to an ever-broadening usefulness. And the press has had nothing to say to discourage people from purchasing them. That it has chosen to act differently in the case of bicycles seems to be properly a condition of affairs to which the attention of managing editors might be properly drawn by the trade. If each manufacturer and dealer will explain to the press in his locality the harm that is needlessly and unintelligently done to the trade by the reprinting or rewriting of articles in which cycling is represented as on the wane, a large share of trade which might otherwise be lost for the season of 1899, may probably be saved.

\* \* \* \* \*

At the end of the fiscal year, June 30, 1898, the exports of bicycles and bicycle parts were shown by the government statistics to fall only slightly short in money value of those for the fiscal year of '96-'97, although a very considerable price reduction had notoriously taken place. The same encouraging condition is noticed now by comparing the exports for the ten months ending October 31, 1898, with those for the corresponding period of 1897. The figures are respectively \$5,958,213 and \$6,139,844, and when the reports for the entire calendar year shall be accessible, it seems almost certain that the total for this year will be found to come within \$300,000 of the 1897 mark, or in the neighborhood of seven million dollars. In other words, despite the steady export of American bicycle-making machinery and price reductions by foreign manufacturers, the American bicycle has continued to make friends abroad. The number of them which has been sold in 1898 must exceed that sold in 1897 more than fifty percent, and when the healthy and cautious business methods are considered which have been followed by our manufacturers in the home market, it is almost a certainty that practically all the sales made abroad have been made at a good profit.

\* \* \* \* \*

Just to emphasize the reigning conditions in parts of the country which in other years have been regarded as rather barren soil for bicycle cultivation, let it be known the southern

banks, which usually have been large borrowers from New York at this season, have found it necessary to notify depositors that they are so crowded with funds that interest cannot be paid on balances. In the west similar conditions have prevailed for months past. Two leading western states have announced that school funds, hitherto much in request by borrowers, must now be kept unused, because the legal rate of interest required by statute cannot be obtained. The western borrower can now easily procure all the capital he needs at 3½ to 4 per cent. Indeed, so changed are the times that those who were formerly among the heaviest western borrowers are now become lenders. Thus, in the state of Kansas, where up to within twelve to eighteen months the banks were strained to the utmost to do their local business, these same institutions are now so abnormally crowded with deposits that they are totally unable to use their funds locally and are eager buyers of commercial paper in the open market. Such is the wonder wrought by rich crops and good prices for agricultural products.

\* \* \* \* \*

Representative manufacturers are noting that the wholesale business is opening earlier than in any previous season. Shipments of samples and stock to agents have in some cases been actually made, and it seems that manufacturers in the light of previous experience consider this brisk determination of the agents an unfailing sign of a large volume of business in 1899. The general prosperity of the country undoubtedly has something to do with the fact noted. Coupled with the low prices it brightens the dealer's prospect for holiday trade. Hereto comes that it has been accepted as certain that no construction changes of great importance will appear in 1899 patterns, so that early ordering is not attended with risk of missing a sensational improvement, and, furthermore, the relations between agents and those manufacturers who have treated their agents in a business-like manner during this and previous years have been cemented to a degree that induces stock orders where trial orders and negotiations were formerly the rule.

\* \* \* \* \*

That a certain article has never been sold in a town, and seldom if ever called for, does not necessarily argue its lack of value as a sideline. An occasional sale of such article does not interfere with other stocks and helps to swell the sum total of profits. The solicitations of traveling salesmen should not be allowed to determine of what a dealer's sidelines shall consist, local conditions and opportunities being weighed in the balance with good judgment. Neither is a visible demand essential to the adoption of novelties in sidelines. Oftentimes a sufficient demand to make a particular venture a success on a modest scale may be created by judicious reference thereto, without additional expense, in the regular advertising space, supplemented by good store display and personal efforts.

\* \* \* \* \*

When the government of a nation signals its people to expect the dawn of a new era of prosperity is the time to prepare for participation in its bounties. The authorities say that the general exports from the United States in 1898 will exceed those of any earlier year. Only twice have the exports in a year passed the billion-dollar mark; in 1898 they will be a billion and a quarter. The imports for the year will be less than in many years. The result will be the largest favoring balance of trade in the history of the nation.





# THE KING IN YELLOW

The time and money expended by the dealer in popularizing the wheel he represents is capital invested.

That capital will return dividends according as the bicycle he handles shall establish its value before the people.

The bicycle is a machine that deals with complex problems of mechanics and motion. Its builders must possess a deep acquaintance with the possibilities and limitations of the art—and, knowing them, must apply them rightly.

The makers of Stearns Bicycles have studied the needs of the business—their every improvement is toward the simplifying and perfecting of the bicycles they build.

The dealer who desires to maintain a successful business will build the structure of that business upon a good and permanent foundation.

The agents for Stearns Bicycles have found in the wheel they handle the full pledge of its value.

The trade on the Pacific Coast supplied from our branch store, E. C. Stearns & Co., 210 McAllister Street, San Francisco.

**E. C. Stearns & Company,**  
Syracuse, N. Y.

The trade in the Dominion of Canada supplied from our Canadian factory, E. C. Stearns & Co., 67 Adelaide St. West, Toronto, Ontario.

NEW TESTIMONIALS EACH WEEK.

# MILWAUKEE TIRES

PUNCTURE PROOF

**Pneumatic  
Single Tube**

**Resilient  
Easy Riding**



F. B. Marshall, Architect, Milwaukee, Wis.  
MILWAUKEE, Wis., Dec. 1, 1898.  
MILWAUKEE PATENT PUNCTURE-PROOF  
TIRE Co., Milwaukee, Wis.  
Gentlemen: Replying to your inquiry as to my experience with your puncture-proof tire, I desire to state, that it has exceeded my expectations, and has proven eminently satisfactory in every respect. This is the first season I have ever finished without a puncture. Yours truly,  
(Signed) F. B. MARSHALL.

HOMESTEAD, PA., Dec. 13, 1898.  
MILWAUKEE PATENT PUNCTURE-PROOF  
TIRE Co., Milwaukee, Wis.  
Gentlemen: I received your letter a short time ago requesting me to give you my experience with your tire the past season but neglected to do so until today. I am not in a position to give the mileage covered while riding your tires, but wish to state that your tire has given the best of satisfaction and I appreciate its fine qualities and can recommend it to any one. I have ridden your tire from the time of purchase up to December and have ridden it through the yards of the Homestead Steel Works over cinders and scrap steel and other things of that nature found about a steel works and liable to puncture a tire. I have not had a single puncture during the season and there is no rider who has used a wheel about the premises without receiving one or more punctures every week. I consider it the best tire made. I have had experience with a great many tires, and find your tire to be the only tire that would do the work.

Of course, it is very hard to convince people of the facts. I remain, Truly yours,  
(Signed) WM. GLUCK.

DOUD SONS & CO.,  
Manufacturers of Flour Barrels and Stock.

WINONA, MINN., Nov. 25, 1898.  
MILWAUKEE PATENT PUNCTURE-PROOF  
TIRE Co., Milwaukee, Wis.  
Gentlemen: Replying to your favor of 19th inst. as to how I like your tires, I am pleased to say that I like them very much. I have ridden a pair of them on my wheel for the past four or five months constantly, and have never had a sign of a puncture, which is a great pleasure in riding, and I have no hesitation in recommending them. Yours very truly,  
(Signed) R. T. DOUD.

PETTIS DRY GOODS CO.  
INDIANAPOLIS, IND., Dec. 10, 1898.  
MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.

Gentlemen: In giving you a statement of my experience with your Milwaukee Patent Puncture-Proof Tires, I will state that they are the best tires out. Judging from my experience with your tire I do not believe that it could be punctured by ordinary usage. I ride on an average of 15 to 20 miles every day. They seem to run easier than other tires and are not so easy to slip on asphalt pavements. It is a reliable tire and worthy of great success. Yours truly,  
(Signed) GUY SHUMM, Ass't Advertising Manager.

Representatives Wanted. Write for Prices and Other Information.

**MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.**

## EXORBITANT EXPRESS RATES

### Tradesmen of All Kinds to Combine and Lower Charges by Using Fast Freight

Retailers of bicycles, more than any other class of tradesmen, will welcome the news that at length a determined effort is being made to compel the express companies to moderate their extortionate charges for carrying goods. The bicycle makers, too, will wish the enterprise the fullest measure of success, for though they are often indifferent to the results of the harsh practices of the carriers, since they seldom pay the bills for transportation, yet their interests are so inseparably bound up with those of the agents that whatever threatens or improves the fortunes of the retailers exercises a corresponding influence upon their own affairs.

#### Volume of Express Business Increasing.

The campaign against the express companies will be conducted by the Merchants Association of New York, which is seeking an equitable adjustment of rates, in view of the increasing volume of merchandise sent by express. Emphasis is laid on the fact that by reason of radical changes in modern methods of doing business express service has become indispensable to merchants, who have been compelled to ship hundreds of packages by express which formerly went by freight. At the same time the price of merchandise thus shipped has steadily fallen, while in general express rates have not decreased. It is further stated that today merchants of nearly all classes are compelled to pay from 5 to 15 per cent of the value of goods for express charges, where formerly only a fraction of 1 per cent was paid. Express charges, it is asserted, are from three to more than 200 times as much as corresponding freight charges.

#### Fast Freight to Supersede Express.

It is the purpose, therefore, of the association to bend the energies of the entire mercantile class of the United States to substituting for the express companies an efficiently organized fast freight service, which can perform practically the same function as the present express companies at far less cost and with much greater benefit to the railroad companies by whom the service is performed, and, for small package service, to bring about the substitution of the United States postal department in place of the express companies.

#### Elastic Scale of Charges.

The association proposes to show that the express companies sometimes value the terminal service as low as four cents for individual shipments and sometimes as high as several dollars for precisely the same work. While they have a public schedule of rates, they charge what they can get, and under the stress of competition will do for 8 cents or 10 cents what they would otherwise charge from 25 to 50 cents for. It is desirable that the express companies should show to the legislatures of the several states what the conditions are that warrant an elastic scale of charges, varying several thousand per cent for precisely similar service.

#### The "Terminal Charge" Racket.

To let light into the "terminal charge" stronghold of the express companies the association can produce the records of more than 20,000 individual shipments, if necessary, which will show that the market value of the terminal services per-

formed by the express companies, as shown by the rates of competing local express companies, is only about one-half of what the express companies charge. The express companies, themselves, under those conditions of competition, cut their rates one-half; but when competition does not exist their charges increase in proportion to the weight of the package to the extent of several thousand per cent for a service whose cost is not increased in the slightest degree. To illustrate this the railroad companies receive \$1.44 for carrying about 100 pounds 900 miles. The terminal charges of the express companies upon the same package are \$2.17. It requires a high degree of assurance to attempt to justify this terminal charge as equitable.

The express companies increase their terminal charges in proportion to the distance traveled by the package. Can the ingenuity of man demonstrate that the cost of that terminal service is increased because the railroad transports that package one thousand or ten thousand miles?

#### Methods to be Pursued.

The purpose of the Merchants' Association is to require the express companies to justify practices of this sort. To do this it will shortly have organized, in every election district in each of the states where it proposes immediate action, a committee of the most reputable and influential constituents of the respective assemblymen, every one of whom will be a sufferer from the exactions of the express companies.

It is the purpose to point out these abuses to the legislatures, which are able to apply the cure, and to organize the business interests of this country, in every state if necessary, so that the legislatures shall not longer overlook the evil effects of permitting such abuses to continue undisturbed their pleasant and profitable occupation of "standing up" the public on the one side and diverting the just earnings of railroad properties on the other.

#### Railroads Have a Hard Time.

The association believes that, as a whole, the railroads of this country are not overpaid for the services they render to the public, and that they are fairly and justly entitled to a remunerative rate upon the greater portion of their traffic; and that if such remunerative rate were established under such conditions as to be uniform and certain it would be one of the greatest benefits that could be conferred upon the people as a whole. For there is no greater fallacy than to believe that very low rates of transportation, in themselves and without reference to whether they are performed at a profit, are desirable. It can easily be shown that so far from being desirable they are a curse.

#### How the Trouble Was Precipitated.

The exactions of the express companies have been imposed in such petty amounts that individuals could not afford, however they might resent the imposition, to resist it; but the last straw was piled upon the patient camel's back when they undertook to impose upon shippers already burdened almost beyond endurance the payment of the stamp tax required by act of congress upon express shipments. A similar duty was imposed

upon the non-prosperous railroad companies, already staggering under deficits and insufficient earnings, paying little or nothing to their stockholders, and supplying to the public a service of great efficiency at rates so small as to be astonishing. The railroad companies did not attempt to avoid their just share of the public burden, but the express companies did attempt to evade and are still evading it, and they were able so to do simply and solely because by the oversight of legislatures which have set down their foot upon extortionate and prohibitory charges for transportation service by public carriers, the express companies have hitherto been independent of all legal restriction.

#### Some Curious Revelations.

In conducting this controversy the Merchants' Association is circulating widely a statement of the reasons for legal regulation of express companies under the title, "The People Against Transportation Abuses." A point is made on the authority of the last census that while the various companies were capitalized at \$55,000,000 in 1890, their actual investment was less than 10 per cent of that amount. They place the capital of the Adams Express company at \$12,000,000, giving their investment as \$1,128,915, their 8 per cent dividend on capital stock thus virtually being 80 per cent on the investment, besides having accumulated a surplus of \$15,000,000, of which sum \$12,000,000 has recently been distributed to the stockholders. The American Express company is said to have an actual investment of \$1,276,619, on which they pay \$1,080,000 in dividends annually, in addition to accumulating a surplus. The nominal capital of the United States Express company is given as \$10,000,000, with an actual investment of \$700,000, while the figures of the Wells-Fargo company are given as capital \$6,250,000, on an investment of about \$725,000.

#### What the Railroads Receive.

It is further shown that the railroads get only 40 per cent of the express charge for rail transportation, while the companies get the remaining 60 per cent for terminal transportation, which after paying the cost of the service is said to yield an annual profit of 150 to 175 per cent on their actual investment. These are a few of the reasons given for requiring a more equitable adjustment of rates in the interest of the merchant and consumer, and it bids fair to be a bitter struggle between good fighters and powerful interests on both sides.

#### Parts Jobbers Abandon Their Scheme.

New York, Dec. 19.—The committee recently appointed by the local jobbers of parts and sundries to sound the trade on the question of forming an organization to promote harmonious relations between members and to establish a scale of prices for small and large quantities, reported last Tuesday that it was not feasible to form the contemplated association, and so the scheme has been formally dropped.

#### Bankrupted by Elbridge Company.

A petition in bankruptcy was filed December 15 by Reuben B. Sweet of Elbridge, N. Y., who was formerly connected with the Elbridge Cycle company, which suffered financial embarrassment. He made himself personally liable for the debts of the company and has already paid a number of obligations so contracted. He seeks to be discharged in the United States Court from the judgments now standing against him.

A promoter is asking Conneaut, O., people to take \$20,000 of stock in a proposed bicycle manufactory at that place.

## COMMERCE IN FOREIGN MARKETS

### IMPORT DISTRIBUTING POINT

Hong Kong is gradually becoming an important distributing point for American cycle exports. Within the last three months, the agent of an American house obtained an order for 1,200 sewing machines from an English firm and at the same time an order for a considerable number of bicycles. A careful survey of the economic conditions of Hong Kong reveals two facts: First, a general, permanent increase of trade; second, unusual activity in mercantile circles, owing to the great demands made on the local market by the large American squadron and army on this coast.

Our forces of occupation have done more than conquer a country; they have made an impression on Asiatic markets that can never be effaced. When our fleet first arrived there were a few sample cases of American tinned milk, fruits, meats, whisky, beer, etc., in the big English and German wholesale houses. The imports from America were made up almost wholly of California flour and American kerosene. Today every steamer and ship from America brings cargoes of American goods. While their ultimate destination is Manila, they are handled by European firms and come before the public in such imposing quantities that first curiosity is aroused, and demand follows.

Our merchants never seem to realize that Hong Kong (the feeder of southern China) is an absolutely free port, and that goods manufactured in the United States come from a country in which a tariff prevails. If the American manufacturer wishes to compete in these markets, he must deduct from the price of his goods the extra amount he usually adds on account of this protective tariff.

### LECTURING THE ENGLISH TRADE

Now and again a trade journal is found in England with sufficient courage to proclaim the true state of the cycle industry over there. It was recently written that there are some in this English trade who assert that the demand for bicycles is on the decrease, and that British manufacturers are being beaten by foreign competitors. Others, more optimistic, aver that the trade has reached a certain point at which it will stand for a time, and then either decrease or increase in importance according to the abilities or enterprise of those who control the industry. Certainly, no one can look upon the almost wholesale reduction in the prices of bicycles which has taken place during the past few months without some feelings of alarm.

One is inclined to think that the leaders of the cycle trade at length realize that the days of big profits and fat dividends are gone by, and, noting the keen competition which is springing up all around, are prepared to face it and fight it, and sell good goods at prices yielding a profit sufficient to pay an honest dividend on fair capital and without so much of the swagger and boom which unfortunately has been part and parcel of a good percentage of the cycle trade in the past. This means settling down. There will be less braggadocio in the future than there has been in the past. There will not be so much buying of shooting boxes or trips to various resorts on the Continent, not so much hobnobbing and scraping to the patricians, but there will be a more earnest endeavor to work.

English manufacturers are awaking to the fact that too long have they neglected foreign buyers. Content with a big profit from local and comparatively safe purchasers, they have been prone to give the foreigner the go-by, since he is a long way off, and his check may be uncertain. They have neglected to send out competent travelers abroad, and have in ninety-nine cases out of a hundred only dealt with the foreign agent, who comes, almost on his hands and knees, to annual exhibitions, and has been invariably snubbed. Trade of America is completely lost; at the present time it is almost lost in France, Germany, Italy, Spain, Russia, and other countries of Europe. With the colonies a fair but a diminishing trade is being done and at last, now that the manufacturers find it is necessary to compete with foreign makers, they find also they must give a larger output, which cannot be consumed alone by England, but which must be distributed over the world.

The trade has arrived at a point of its career which means its making or marring.

### DISPLAYS FOR CAPE TOWN INVITED

The Colonial-American Importing company of Cape Town, South Africa, writes under date of November 8, that it believes it is in a better position to look after the interests of the American bicycle manufacturers than any other party there. The company has men on the road looking after the trade of the American manufacturers and will soon open a permanent exhibition of American products and manufactured goods in Cape Town. This exhibition is to be centrally located and to be made attractive for visitors so that it will be an advertisement to all who exhibit. Manufacturers will be charged only the actual rent of the building divided according to the space each one's display takes up. For the work of introducing the goods a commission of 5 per cent for all goods sold will be charged. The Canadian manufacturers already have such an exhibition there and are doing very well. They are taking a lot of trade that was once done in the States. This Canadian exhibition is showing some very fine machines. The Colonial-American company is doing all it can to hold the trade, but it must have the support of the manufacturers of the United States if the position of the United States bicycles is to be maintained. The makers are therefore invited to send samples for exhibition purposes, and the company promises to give them every attention and to push sales.

### GERMAN DUTY WILL NOT BE INCREASED

There is now little fear that the German government will increase the duty on American bicycles. It has once practically discountenanced the project. The subject has been taken up and discussed by the chambers of commerce at Bielefeld and Chemnitz, and other important commercial centers, and condemned. At a meeting of manufacturers during the recent show at Leipsic, a motion favoring the change was suggested, but so overwhelming was the opinion that there was no chance of success, that the motion was withdrawn. The German dealers and manufacturers who attended the Stanley and national shows in England were unanimously of opinion that the movement is dead. The trade has heard a great

deal more than it should about a project which had no chance of success from the start, merely because the German manufacturers kept up a continual agitation in the press.

### SPACE AT THE PARIS EXPOSITION

The area allotted by the French government to the American exhibitors at the Paris exposition of 1900 has been increased over 40 per cent. This concession was only made after the French officials had been informed by our representatives that the value of the manufactures of the United States amounted to 35 per cent, or over one-third, of the total value of the manufactured products of the world; that our agricultural resources represent nearly 40 per cent of those of all countries combined; that in railroad transportation the mileage of the United States exceeded that of the whole of Europe; that our mines produce more than those of any nation on earth, and equaling those of all Europe; and that there is a steady export trade of pig iron to Germany and England; that the wealth of the United States amounts nearly to 400,000,000,000 francs, or twice that of France, equal to that of Russia, Austria, Italy and Spain combined, and 25 per cent more than that of Great Britain. These and many other facts, indicating the importance of our nation and the basis of our demands at the exposition, were laid before them. The French press published the startling figures presented, and they were known throughout Europe. Within 48 hours the French government officially requested the exposition authorities to concede to the United States the demands we had made. It was the greatness of our country that secured the results achieved.

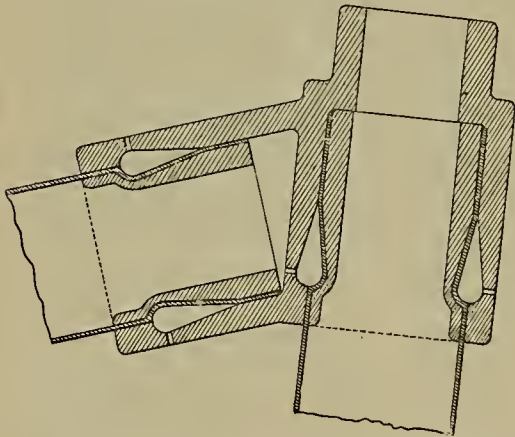
The phenomenal growth in our foreign trade since 1893 must be attributed to some extent to the stimulating influence of the World's Fair, which so conspicuously introduced and advertised the merits of American manufacturers and other products to the world. There was a factor at work to produce this remarkable growth in our foreign trade, which is the greatest factor in all branches of trade. This factor is advertising, and, in this instance, advertising in the most advantageous and influential manner—viz., by exhibiting our manufactures and products beside those of other nations. A strong stimulus and growth have also been imparted to our home trade in every department by the exposition of 1893.

If the Columbian exposition of 1893 has assisted in producing such results, the Paris exposition of 1900 will produce far greater results, chiefly in our foreign trade. That exposition will offer to exhibitors of the United States an opportunity to present their exhibits to many times the number of foreign purchasers who visited the Chicago exposition. The number of foreigners who attended our exposition of 1893 did not probably exceed 100,000. The number of individuals not American who will attend the Paris exposition will probably be 4,000,000. Consequently the opportunity for exhibitors of the United States to present their goods to foreign buyers at Paris in 1900 is safely 20 to 30 times greater than at Chicago in 1893. This argument should be a most pertinent inducement to all exhibitors of the United States to display their goods at the Paris exposition.

## RECENT PATENTS

### Soldered Mechanical Joint—Ball Bearing Roller Gear— Spring Cushioned Handle Bar—Automatic Pump

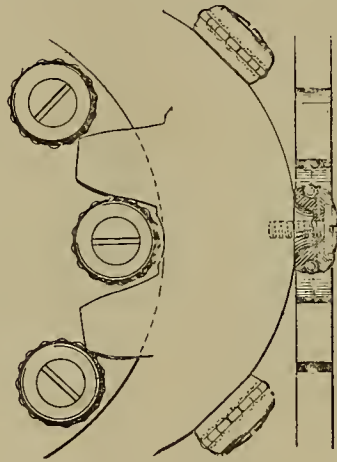
**German Mechanical Joint.**—It is common in brazeless or mechanical joints to use fastening means which put a severe expansional strain on the surrounding lug. In this joint, known in Germany as the "Naturverband," or "natural joint," no expansive strain is placed upon the lug beyond that which would have effect in an ordinary brazed joint. The interior of the lug is hollowed out after the lug has been bored. A tapering sleeve is driven down inside of the tube end and by compression in dies the tube and ferrule are partially collapsed so that when the tube is placed in the lug the hollow formed by the collapsing process and that made in the lug will match each other, forming an open space between the tube and lug wall, the large end of the space being toward the outer end of the lug. Small holes leading to this open space having been previously drilled in the lug, some form of easily fusible metal is poured in a molten state into the space, forming a tight joint. Soft solder is a suitable metal to use for the filling-in process. The collar which will lie around the tube in a finished joint making it im-



possible for the tube to be withdrawn under any circumstances there is but little tensional strain placed upon the soldering metal so that with its very slight tensional strength it is able to do all that is required of it. The joint as shown or in a similar form is used by several German bicycle manufacturers. In its original form an externally visible bead in the tubing indicated the place where the solder was poured in. The inventor is Reinhard Felsche, Magdeburg, Germany.

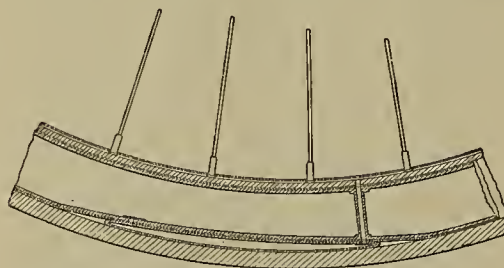
**Ball Bearing Roller Gear.**—The invention is a development of roller gears such as are used to take the place of bevel gears in propelling chainless bicycles and aims at the reduction of friction between the teeth of the driving gear and the pins on the pinion. The driving gear has the approximate form of an ordinary spur gear. The pinion which runs at or nearly at right angles to the gear, is fitted with radial studs on its periphery. Over each stud is set a cup having a circular groove around its outer edge to form a ball race. A similar cup, but inverted in its relation to the stud, is placed on the stud above the first cup, a row of balls having been placed between the two. The outer face of the second cup is countersunk, allowing the screw which binds the cups to the stud to come flush at the head end. The two cups when in place form a ball race, which keeps the balls from falling out yet al-

lows the balls to project enough to form the contact surface with the driving gear teeth. The balls when the gear is in operation will roll in two directions; that



is, they will roll circumferentially around their races to accommodate the motion of the teeth of the driving wheel and will roll laterally in their races to accommodate the motion of the pinion itself. This double motion of the balls in a race which embraces the balls for more than half of their diameter seems bound to cause the balls to slide as well as to roll; and sliding balls are no more anti-friction features than sliding teeth or pins. Wear on the cups may be taken care of by occasionally turning the cups in their relative positions to each other. The inventor is F. G. D. Holmes, Phillipsburg, N. J.

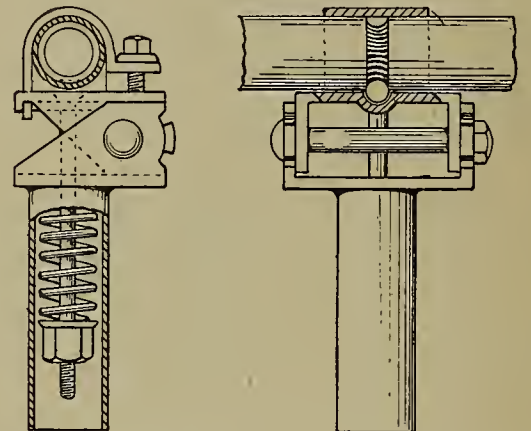
**Automatic Pump.**—It is common in the automatic inflator devices attached to the bicycle, which have had but partial success, to have one or more pump cells built into the inner tube of the tire either left unsupported or supported by a solid piece of rubber. In the first place the semi-inflation of the inner tube prevents the complete pressing together of the pump cell walls, while the pressure of air in the inner tube prevents the re-expansion of the cell and the perfect drawing in of fresh air. In the second case the action of the pump cell is hindered by the pressing in of its walls on increasing



pressure in the inner tube, and since the solid supporting piece displaces the center of gravity of the wheel from the axis successive jars are caused as long as the pump is in operation. The inflation of a flat tire by this process is slow and uncomfortable by reason of the small delivery of the pump and the violent shocks. In order to obviate these objections the inventor places the pump cell outside of the inner tube. The tube is contracted for a distance at any point, and its walls made heavier along this contracted portion so that it there possesses greater elasticity than at other points. In the free space between the contracted tube and the outer cover lies the pump cell which

has at one end an opening into the inner tube and the proper valve for the discharging of air. At the other end of the cell is an opening which is extended by means of a tube through the tire and rim of the wheel. The walls of the cell are secured to the inner surface of the outer cover and to the inner tube so that they are automatically extended after having been pressed together. The walls of the cell may, however, be made to have sufficient elasticity in themselves to make unnecessary their attachment to the tube and outer cover. Since the air which the cell contains is forced through the delivery valve into the inner tube when the pressure of the former is only a little higher than that of the air already in the tube, the pumping action of the cell is independent of the pressure which may exist at any time in the inner tube. The elasticity of the contracted portion of the inner tube will at all times offer a certain excess of resisting power, so that the resistance of the delivery valve will be overcome and the pump cell emptied as long as the tire is sufficiently pressed together for this purpose. All these devices are of doubtful value, as the inventors seem to be working on the wrong principle. Tires should be so easily repaired that automatic pumps would be unnecessary. The inventor is Joseph Kersting, of Berlin, Germany.

**Spring Handle Bar.**—On the upper end of the stem is arranged a head plate having upturned flanges on its ends. A similar plate, though free and inverted, with end flanges which fit inside the flanges of the head plate, is hinged to the latter by a transverse bolt running through the two. A clip which hooks under the front side of the upper plate passes over the central part of the handle bar tube and is retained by a screw passing through its



ear and screwing into the plate underneath. Around the center of the bar is a threaded annular groove the threads of which mesh with the threads of a screw laid in a groove in the top of the upper plate. This screw may be turned by a screw-driver to adjust the tilt of the bar. Running downward from the top of the upper plate is a bolt with a nut at its lower end and a surrounding spiral spring retained between the nut and the plate. The spring limits the swing of the upper plate and thus cushions the handle bar. The inventor is W. A. Marbach, Cleveland.

#### Another Firm of Assemblers.

The organization of a new assembling company in Peoria, Ills., is about completed. A half dozen workmen, formerly connected with the Ide company, along with several capitalists, were in conference recently and in a few days it is expected the new company will be formed. It is the intention to use the old watch factory building for the work. It is expected that the business will be in running order by the first of the year.

The first petroleum bicycle made its appearance in Vienna November 28.

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TRADE MARK



THESE ARE THE ONLY TOOLS YOU'LL NEED.



41

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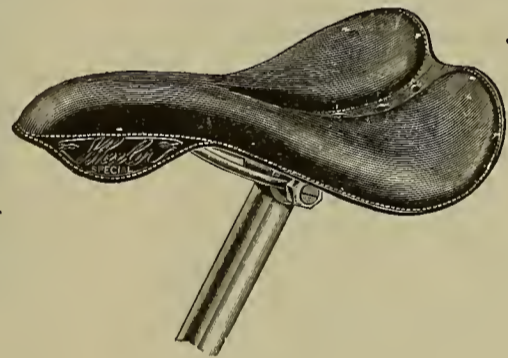
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HAVE ALWAYS BEEN MADE WITH THAT  
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OUR LINE FOR '99 COMPRISES BUT FOUR DISTINCT MODELS:

- "EXTRA" Woman's . . . . . Broad, Soft and Easy.
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- "SPECIAL" Roadster . . . . . An ornament to any wheel.
- "CORK-TOP" Racer . . . . . Light and Graceful.

These saddles are made and finished in the careful and stylish manner that has always characterized Wheeler Saddles.

Send for samples of the most popular saddle on the market.

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## CONDITION OF MOTOCYCLE PROBLEM

### Summary of Progress Made Toward Producing a Mechanical Wagon of Unlimited Range

There is no doubt as to the demand for mechanical vehicles. The public is ready to buy, but where is the wagon to sell?

Some of the papers say that this public demand for automotors is due to the influence of the mechanical press, but if anyone will look back for fifty years he will find quite the same interest expressed in automobilism then as now, and the troubles with the early mechanical wagons were just the same as those existing today, and the real reason that the motorcycle has not "arrived," is simply because it doesn't exist, so far as a wagon of unlimited range is concerned.

#### Facing the Situation.

For limited ranges the electrics, although seriously handicapped by their weight, are usable machines. They are clean, silent, and powerful. They are compatible with that degree of elegance which the American demands. But 25 or 30 miles is their limit; after a run of that length the electric carriage demands a stop of not less than three hours, if the accumulators are to be efficiently recharged.

But the electric carriages are clean and do not leave a trail of offensive odors behind them, and although they are very expensive they make a fine appearance, and in certain fields they are wholly satisfactory. True, they would have a much larger use were they not so heavy and costly. But the electric carriages and the electric delivery wagons may be fairly said to be acceptable; if they were not acceptable buyers would not be paying from \$2,000 to \$3,000 apiece for them.

Here we stop. The electric wagons begin and end the list of clean, silent, and inoffensive mechanical vehicles.

I am perfectly well aware that it is regarded as treasonable for an ardent advocate of automobilism like myself to say that there is no such thing on the market as a clean, silent, and inoffensive motorcycle of unlimited range. Nevertheless I make that assertion here, and I am fully convinced of two things: First, that the American public will never accept the explosion engine driven wagons so long as they are dirty and deliver vile odors in abundance; second, that the correct thing to do is to face the situation, to fully recognize, both in the factory and in print, the faults which all who are informed in the matter well know are now present in all automotors of unlimited range, and so take the first step towards producing a really satisfactory road wagon to go any distance.

#### Electric Vehicles in Use.

We began here in the United States to work on motorcycles in the '90s. What have we done?

It was told me at Hartford the other day that the Pope company had sold about 35 electric carriages, mainly abroad. I did not understand that these carriages had all been delivered. Riker has furnished Altman of New York with six electric delivery wagons, has sold two to the Gorham company, and has partly filled orders for thirty or forty electrics in France and England. The Electric Vehicle company has thirty-five electric cabs and broughams in operation out of the hundred which were to have been running the first of last May, and which are slowly being finished. The Fisher Equipment company of Chicago is, as I am told, sup-

plying a considerable number of wagons to purchasers. Several physicians have bought electric carriages, and express great satisfaction in their use.

All of this shows well for the electrics, and this good showing is due simply and solely to the cleanliness and elegance of these wagons. In point of fact the electrics are far from ideal creations; they are too heavy for pneumatic tires, they cost too much, and they do not run far enough. But they are clean and still, and fine, and these virtues overbalance their faults, and they find purchasers.

When we come to American explosion engine driven wagons, there is very little evidence of their acceptance.

The Duryea brothers, Charles and Frank, have produced some fine gas engine driven wagons, fully equal to anything ever produced anywhere, and when driven with deodorized gasoline the Dur-



Duryea's Three-Wheeler on Muddy Road.

yea wagons give off very little offensive odor. I have never been able to obtain any exact information in regard to the sales of Duryea wagons, but I do not believe there have been more than twenty or so of them sold. If I am wrong, I shall be happy to correct the error. The Springfield Duryea company has spent about \$70,000, and neither of the Duryea brothers are now personally connected with the Springfield company. Charles Duryea is building 3-cylinder explosion engine tricycles at Peoria, Ill. The three cylinders give a much more nearly constant torque than two cylinders, and are far superior for hand driving to a single cylinder. The single cylinder Otto cycle gas engine depends so much on fly-wheel momentum that it makes a weak drive in mud or snow, as the fly-wheel velocity must be maintained and this is, of course, impossible when the wagon travels at a slow rate. With three cylinders the wagons are strong in mud or snow. Duryea's information to me is not quite explicit. It seems to be as follows:

"The picture herewith shows our 700-pound motor trap as it appeared on a

rainy day in October on Malvern street, Peoria, Ill. For a full week the sun had not been visible, and rain had fallen every day. This street is black loam, without gravel or other supporting material, and the wet weather preceding had rendered it very muddy. It was selected as being the muddiest street available, and was in worse condition than is commonly found, except in the spring of the year, when the frost is coming out. The depth of the mud is shown by the photograph, and the vehicle, after being photographed, started easily and freely, showing that much deeper mud could be traversed. It is on this point that most of the motor vehicles yet shown have failed. They have been so heavy they had not power sufficient to push themselves even through ordinary mud. Our experience during seven years of work in this line has shown us the necessity of building a vehicle that can traverse the average road and this necessitates passing through considerable mud. Being light, our trap does not sink deeper than horse vehicles, and the high power is ample to drive where horse vehicles go."

#### Deodorized Gasoline.

I believe Duryea's increase of the number of cylinders is right, and I also believe that six cylinders would give better results, cost less, weigh less, and be in

every way more satisfactory than three cylinders. But it certainly requires a very strongly driven wagon to travel such a road as is shown in the illustration.

Duryea writes that his Peoria wagons give out little or no smell, when properly managed, and I rode on a Duryea wagon, Frank Duryea's last Springfield model, early this year, which gave out no odors perceptible to the passengers. This wagon used deodorized gasoline, as previously mentioned. If the Duryea wagons can be regarded as inoffensive on the score of evil smells, then they come near to filling the requirements of the American public at large.

Winton, of Cleveland, has sold, as I am informed, somewhere about 25 wagons. These are good strong wagons, but not clean. The best evidence of the good qualities of the "Winton" are found in the fact that his sales have been made principally through the recommendations of users to prospective purchasers.

The Victor, Chicopee Falls, has three experimental wagons on the road, which I was not allowed to see, and in regard to which no information was given be-

yond the statement that the prospect was encouraging.

The Pope company, which does everything on a magnificent scale, must have spent well towards half a million of dollars in its search for the satisfactory mechanical wagon. I have no authoritative information, but I know what such things cost when handled on the Pope scale of operations, and I am confident that the motorcycle must have a debit on the Pope books of not very much less than \$500,000, all told. In return for this very great expenditure the Pope company has its electric carriage to show, and their explosion engine driven parcels carrier. They also have, not ready for description, a 2-passenger gas engine phaeton, and a novelty, which is really a revival of one of the earlier forms of the gas engine, which is now being licked into motorcycle shape. The Pope policy does not permit public notice until manufactures are ready for sale, hence it is impossible to speak except in the most general terms in regard to the Pope experimental work. It is of great interest, costs a great deal of money, and will undoubtedly result in final success. Up to the present time I am not informed that the Pope company has sold any explosion engine driven passenger wagons.

The Haynes & Apperson (Kokomo) factory has sold some vehicles, explosion engine driven; the number was not stated in reply to a request for exact information. The Boston Hayes & Apperson company is now engaged in completing its first wagon.

In regard to other gas engine driven wagons, I have no definite information.

#### Not Fundamental Novelty in Motors.

There are a considerable number of new gas engine driven wagons in course of construction, none of them, so far as I am informed, showing any fundamental novelty, all using the Otto cycle, and none of them being odorless.

From all of this, which is not very far from the actual condition of the explosion engine driven wagon in the United States, it appears that this vehicle, as offered up to date, does not meet the views of American purchasers.

#### Equal to Best Foreign Product.

This lack of American disposition to buy gas engine wagons is not due to inferiority of American wagons. The De Dion wagons, 4-wheels and tricycles, have met with no more favor than our own production. I endeavored to obtain some information as to sales from Mr. Skinner, who has been handling the De Dion in Boston, but he declined to make any definite statements. The De Dion machines are very strong and fast, but are not the shape to suit us. They carry the passengers too near the ground, and the 24-inch wheels do not meet our ideas, although they are probably right from an engineering standpoint. The De Dions are noisy, and do not carry the passengers in comfort and worst of all emit unendurably offensive odors.

Two attempts have been made in New Jersey to use a carbonic acid gas driven motor for road wagons. The carbonic acid gas motor is a very old invention, has frequently been exploited, and has never met with any real success. There is nothing in the past history of this motor to justify any hopes that its use will prove a success in road wagons.

Many people believe that compressed air can be successfully used in driving motorcycles, and such a wagon has been built by Hoadley, or Hoadley & Knight, at Worcester, Mass. This carriage is very large, seating six persons, and it is heavy, though not heavier than the electric carriages. I have been unable to obtain any detailed information in regard to this carriage, and do not believe that its builders regard it as an unqualified success. It

would be difficult to find a motor for a road wagon offering fewer obvious advantages than compressed air, because a supply of compressed air is obtainable at very few places. The use of compressed air in piston and cylinder engines involves some peculiar features, and these things, together with the difficulty of obtaining a fresh supply of compressed air when the tank becomes exhausted, make a hopeless case for the compressed air driven road wagon. The whole history of compressed air driven vehicles, which is more extensive than is generally known, is composed of a series of disastrous failures, up to the present time. Now Hoadley & Knight are engaged in applying compressed air to street railway car propulsion in New York—and the outcome remains to be seen.

#### The Diesel Motor.

The much mentioned Diesel motor, which gives power with less fuel expenditure than any other form of heat motor, does not show anything encouraging when considered as a motorcycle driver. The Diesel engine works on the Otto cycle, and is heavier and more expensive than a steam engine and boiler to furnish the same power; these points are against the Diesel motor for road wagon use, but the most serious objection to the Diesel motor seems to me to lie in the extremely heavy initial pressure on the piston at the beginning of the working stroke. This is no less than 500 lbs. to the square inch, and this great pressure, intermittently applied to the piston, causes a plainly felt shock at the beginning of each working stroke, which can hardly fail to produce an unpleasant effect in carriage driving. This high initial pressure is accompanied by a correspondingly high temperature, which is favorable to the perfect combustion of gasoline, which is the fuel employed, hence the Diesel motor exhaust is almost odorless. The Diesel motor depends wholly for efficiency on the maintenance of conditions, which steam engine builders go to great expense to avoid by compounding their engine cylinders. Under these conditions the Diesel motor does not seem at all likely to be used on road wagons, where all jar, shock, and vibration must be avoided.

The initial gas engine piston pressure is somewhere about 175 lbs. with the compression commonly given, and this is most economical of fuel. By giving less compression a smaller initial pressure results, and this gives a smoother working motor. Frank Duryea, in his last Springfield wagon, made the cylinder clearance equal to one-half the piston displacement, and so obtained about 125 lbs. initial piston pressure. This gave his motor a very smooth action, and prevented the extremely unpleasant "kick," or sudden forward impulse of the carriage which is so disagreeably in evidence when single cylinder motor driven wagons are running at slow speeds. Of course, this very large cylinder clearance and low initial pressure are unfavorable to fuel economy, but comfort and elegance of transportation go before fuel economy, when the loss is only a small fraction of a cent per mile.

#### Will Steam Engines Prevail?

Leaving the steam engine out of the play, there is no motor at present in sight which is so suitable for a road wagon as the gas engine, and it seems to me that the first step towards the best form of gas engine road wagon motors, is to multiply the cylinders to such an extent as to produce a continual torque; this gains two great advantages: First, the motor will drive the wagon strongly through mud or snow or uphill. Second, the cylinders need not be more than 2½ inch bore, and so can be perfectly safe without cooling water, if provided with

splash lubrication, all as is now a matter of common practice. Five cylinders appear to be the proper number to be applied to driving the wagon. Then, if electric ignition is to be used, it is probably cheaper and better to generate the current by means of a sixth cylinder and a little dynamo, than to try to drive the dynamo from the main engine shaft.

HUGH DOLNAR.

#### The London Motor Car Exhibition.

No striking novelties were shown at the recent motor vehicle exhibition held in Agricultural Hall, London, though there were several types of French cars shown, none of them, however, built on handsome lines. Speed, more than elegance, seems to be the great desideratum on the Continent. A Vallee car shown had a "low" speed of twenty-five miles and a high speed of forty miles per hour. Of course, it was only a box of machinery on wheels, and was intended for racing pure and simple. The workmanship of motor cars made in England was in advance of that of any of the imported cars, the Daimler models being especially noticeable for their attractive lines and finish. The show was unsatisfactory for the reason that the vehicles were not exhibited in operation, as at the recent Boston show, where the various contests were especially interesting.

#### Motocycle Hill Climbing Contest.

Paris, Dec. 4.—On Sunday last a motorcycle mounting contest was held in the outskirts of Paris at Chanteloup. The winner accomplished the ascent, a distance of 1,800 meters, in 3:52, representing a speed of thirty kilometers an hour, on an 11 per cent grade. The first three were: Jenatzy, electric automobile, 3:52; Jamin, Bollee tricycle automobile, 4:02 4-5, and Osmont, electric tricycle, 4:18 2-5. The race will probably become an annual event. The winning carriage is of the same type as the first cab put into service in Paris. The contest brought together almost eighty competitors.

#### Vienna's First Motor Cab.

The Egger-Lohner electric car is the first public motor vehicle to be introduced into Vienna. It has forty-two batteries, weighs half a ton, and has ninety-five volts capacity. A twenty-seven kilometer speed is claimed, with variations down to the merest crawl. A slow reverse drive is also possible, and the electric brake is stated to work instantaneously. The foot brake is for cases of emergency and also for cutting off the supply of electricity. The steering is by the back wheels, but this will be altered in the next cars, front wheel steering being substituted.

A company has been formed with headquarters in Paris to operate motor transportation lines in France. It has been granted authority to run omnibuses from Antibes to the Cape, from Nice to Mentone, from Nice to Fontain, and from Nice to St. Martin-Vesubie. Fares are fixed at the rate of 2 cents per kilometer.

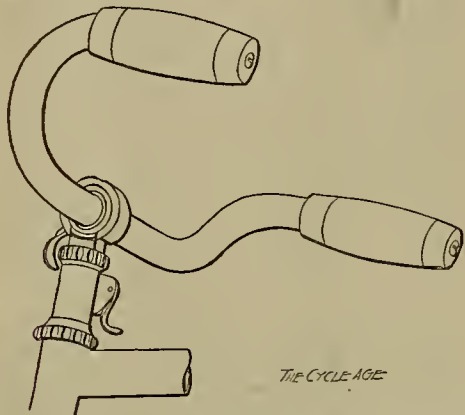
Two motor wagons of six seats and six-horse power were sold in Paris, December 5, at public auction. Two hundred persons attended the sale. The wagons were bid in for \$2,050 and \$1,940 respectively.

The municipal council of Pau, France, has voted \$400 for the organization of an automobile race from Toulouse to Pau, in January.

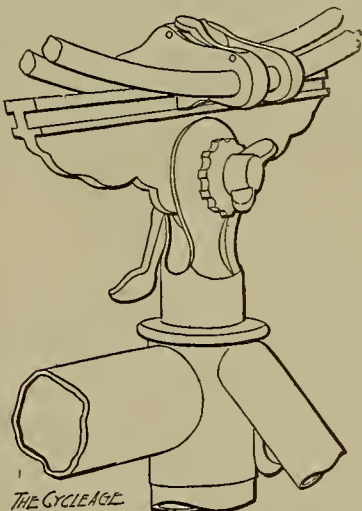
# INFORMATION FOR BUYERS

## CHAPPUIS SEAT AND HANDLE CLAMP.

To obviate the necessity for using a wrench, either rightly or without the skill necessary to avoid rounding off nut corners and unsatisfactory tightening, and yet to permit the rider to make whatever handle bar or seat adjustments he desires without the handling of any tool or device separate



from the parts to be adjusted, E. H. Chappuis & Co., Marysville, Cal., offer their hand operated clamp. Thumb latches control all the movements and adjustments of the seat post, saddle, handle bar stem and bar, it being possible to raise either the seat post or the bar stem or to tilt the bar, or to move the saddle forward or back, by merely lifting the proper latch, making the adjustment and then releasing the latch piece. The clamps are slightly and the adjustments when once made are positive, being held by engaging corrugations which cannot accidentally slip. All parts are readily accessible and there are no springs which can rust and thus lose their value. The ease with which the bars can be entirely removed from the machine allows the rider to protect himself against



theft when he is compelled to leave his bicycle standing in public places by taking the bars with him.

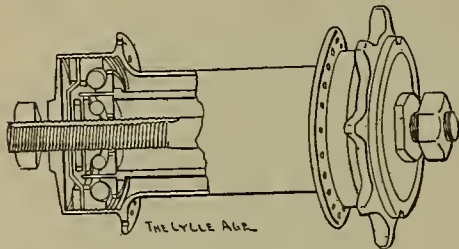
## BIG SHIPMENT OF TUBING.

Quite recently the Shelby Steel Tube Co., of Shelby, O., shipped a carload containing 150,000 feet of tubing to one of its customers. It was the largest single car shipment of tubing ever made in this country or abroad. The stock was forwarded to the Chicago Handle Bar Co., which concern will use it exclusively in making handle bars. The value of the shipment was \$15,000, and the bill was discounted by the purchasers. The Shelby people have been given a contract by the same firm for another carload shipment, to be made early in January. The tube company's ability to handle such orders promptly is not surprising when it is known that the capacity of its mills is in excess of 54,000,000 feet of tubing a year. The company states that three days after an order for a carload of tubing is placed with it the shipment can be made, and that the three days' delay is not owing to unreadiness to deliver, but because that time is consumed in loading the stock into the car.

## J. P. THOMAS'S HUBS AND HANGERS.

Believing that there is a demand for bicycle parts of the best possible grade and which have features that recommend themselves to the builders of first class machines,

J. P. Thomas & Co., 439 Thirty-first street, Chicago, are placing on the market hubs and hangers for which are claimed superior easy running qualities and first class material and construction which make them desirable parts for those makers who do not sacrifice grade at the altar of expense. The feature of the bearing, as illustrated in the accompanying sectional view of one of the hubs, is the revolving sleeve. This sleeve is interposed between inner and outer rows of balls, the inner cone for the outer and the outer cone for the inner bearing being held by the sleeve. The sleeve rotates in the same direction as the hub barrel and has a speed of from 25 to 40 per cent of that of the hub, according to the accuracy of adjustment. The advantageous claim made for the sleeve is that by rotating within the hub it overcomes the resistance to pure rolling motion of the balls, which resistance in relation to ordinary bearings is termed sliding friction. The further claim is made that while dirt and hard stresses may cause the plain ball bearing to bind and drag, the revolving sleeve in the Thomas bearing allows that bearing to turn with equal ease under hard or light stresses. The construction of the hanger bearing is similar to that of the hub and both are made with view to avoiding the mistake of spoiling a good idea or principle with poor design and workmanship. The bearing is highly dust proof and needs oiling but once in a season. In exterior appearance the parts do not vary from standard patterns. It is stated by the makers that the bearing runs with from 25 to 40 per cent added ease over other bearings because of the fact that the revolving sleeve reduces the amount of sliding friction to



that degree. The hubs and hangers are now ready for delivery in both large and small lots, and are built to fit any ordinary bicycle. Choice of frame angles at the hanger bracket may be had.

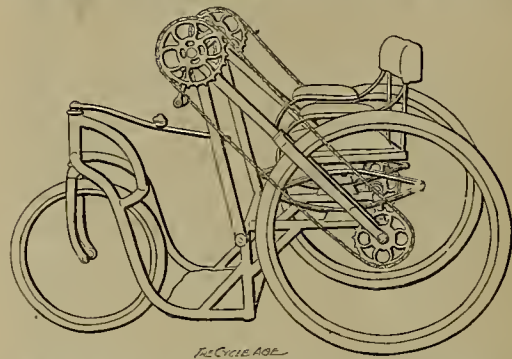
## IMPROVEMENTS IN GRAHAM TIRE.

The Graham detachable tire, which can be cemented on to any crescent shaped rim instead of requiring a specially made rim with beaded edges or special grooves and mechanical methods of fastening, is a novelty in itself, but the Graham Tire Co., of Toronto, Canada, has now made this tire still more unique by putting several new wrinkles into use for next year. The most important improvement is perhaps the use of corkaline strips in the thick parts and in the flap which covers the central clinching groove, thus reducing the weight by 1½ pounds to the pair and at the same time making the tire even more easy riding than ever. The flap is now made a part of the tire instead of being cemented to the cover as last year, and a very thin wire runs from edge to edge all the way round, thus preventing any possibility of the flap curling and interfering with the inner tube. The clinching grooves are made more dovetail and when the tire is clinched it is impossible for it to come undone. Special rims are not required with the Graham tires, and since there is no side-wise splitting strain they permit the use of one-piece crescent rims. Manufacturers and repairmen will therefore find in them an economical way of fitting a detachable tire without making any changes in the rims. The numerous inquiries from manufacturers indicate a good season for the Graham company next year.

## IMPROVED TRICYCLE FOR CRIPPLES.

Since the wide adoption of the bicycle for other purposes than that of mere sport, pleasure or pastime, other branches of vehicle building have profited by the great advances that have been made in bicycle construction. A notable example is presented in vehicles for cripples, especially those who have full use of their arms but only limited use of their lower limbs. Up to a few years ago such machines were very crude, heavy, and so hard to operate that the rider could maintain but little speed. Now machines for cripples are being built which by having incorporated in them some of the features of bicycles furnish the cripple with means for easy and fairly speedy self transportation. A late vehicle of this type is shown in the accompanying

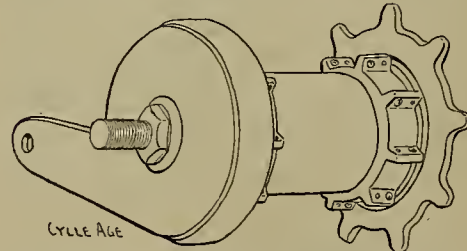
drawing. The machine was built in Miller's Repair Shop, 214 E. Ferry street, Buffalo, for the use of one of the proprietors of the shop who is himself a cripple. The front wheel is eighteen inches in diameter and the two rear wheels twenty-eight. The front sprockets have each twenty-four teeth and the rear sprockets each twenty teeth, thus gearing the machine to thirty-three and a fraction. The steering head being vertical



and the swing to the forks being backward, the steering wheel will run steadily with but little attention from the operator except when the latter wishes to make a turn, which he then accomplishes by the long steering rod held between his knees. Every precaution has been taken in building the frame to brace it thoroughly without adding unnecessary weight. The owner states that he has been able to run the vehicle at a speed of ten miles per hour on a smooth macadam street and to take some quite steep grades. The finish is in enamel and nickeling with striping and ornamentation, giving the machine the same appearance as regular cycle work. Other machines in various styles will be made upon order.

## NEW DEPARTURE COASTER AND BRAKE.

A coaster and brake device whose mechanism is contained entirely within the hub of the driving wheel of the bicycle has just been brought out by the New Departure Bell Co., of Bristol, Conn. The device is a modification and improvement of the well known New Departure brake which was put on the market in 1897, and adopted by many manufacturers. In the present hub the brake has been transferred to the left side and mechanism inserted in the right end which allows the wheel to run forward while the sprocket remains stationary, constituting the coasting device. Every action is automatic and there are no levers, toggles or connections to operate by hands or feet. When the rider wishes to coast he simply stops pedaling and keeps both feet on the pedals and may resume pedaling at will without the pedals jumping forward, all the while having control of the machine through the brake. By a slight backward pressure on the pedals the brake is applied and as soon as the pressure is removed



the brake is automatically released. The braking action is always positive and uniform, whether on dry or wet roads, as the mechanism is wholly within the hub where it cannot be affected by external conditions. The bicycle can be wheeled forward or backward whether the coaster is "on" or "off," and there is no change in appearance and action from the ordinary bicycle. The hub is the same size as regular hubs and can be assembled in the wheel in the usual manner, so that it can be applied to various makes of bicycles economically and with no change in the frame or crank hanger mechanism.

## CHANGE IN LEAGUE TIRE AGENCIES.

The New York Belting & Packing Co. has arranged with A. G. Spalding & Bros., 147-149 Wabash avenue, Chicago, Ill., to act as their distributing agents to the trade in the west and middle west. Spalding & Bros. will attend to all replacements and repairs of League tires sent to Chicago. This arrangement does not apply to bicycle manufactur-





# This Car Contains 150,000 feet Shelby Seamless Steel Tubing

## FOR HANDLE BARS

Shipped to the Chicago Handle Bar Co., Chicago. This is the largest shipment of tube ever made in a single car. In buying Handle Bars insist that same be made from SHELBY TUBING. \* \* \* \* \*

**WRITE US FOR '99 CATALOGUE OF TUBING, FORKS, STAYS, Etc.**

# SHELBY STEEL TUBE CO.

**OFFICES:**

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 NEW YORK, - - - - 144 Chambers Street  
 CLEVELAND, - - - - American Trust Building



**FACTORIES:**

Shelby, O.; Toledo, O.; Ellwood, Pa.; Greenville, Pa.  
 FOREIGN OFFICE AND WAREHOUSE:  
 29 Constitution Hill, Birmingham, Eng.

1 7/8 x 20 or 22 GA.

7/8 x 3/4 16 or 20 GA.

1 1/8 x 20 or 22 GA.

1 7/8 x 20 or 22 GA.

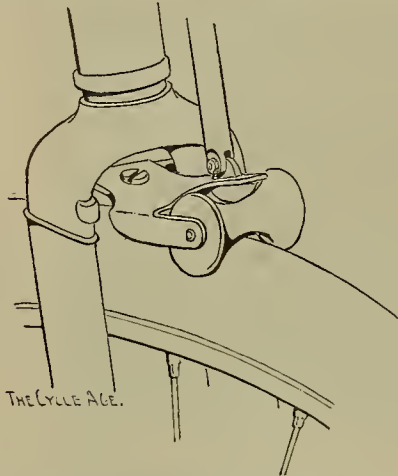
3/4 x 5/8 16 or 20

1 7/8 x 20 or 22 GA.

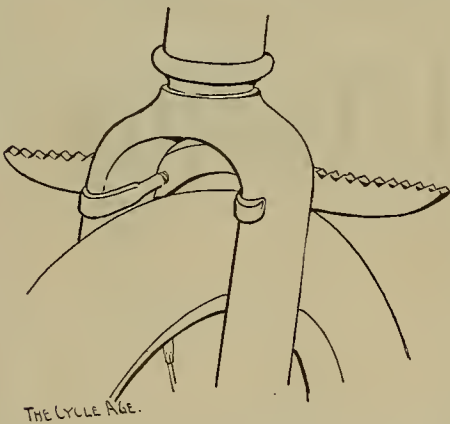
ers, whose trade will be handled as hitherto, by the New York Belting & Packing Co. direct through the New York office. A similar arrangement has been made with George F. Kehew & Co., 129 Pearl street, Boston, Mass., to represent the League tires to the trade in New England and to attend to all repairs and replacement for that section. Manufactures will continue to be handled direct by the N. Y. Belting & Packing Co. from their New York office.

#### PUSHING "FAULTLESS" ROLLER BRAKE.

The Sundry Co., of Baltimore, Md., is actively pushing for the coming season the new models of its "Faultless" roller brake, which,



while the principle of construction remains the same as formerly, has been improved upon in the matter of workmanship and finish and is now offered in a durable and very attractive form. The brake body, both for the foot and hand patterns, is made of one piece of spring metal which is clamped to the forks by a simple positive clamp. The frame carries a hard rubber roller which presses on the tire when the brake is in operation and spins on its axle, the motion being communicated by the tire. The brake shoe strikes the roller on its top and gradually slackens its motion, thus also retarding the motion of the wheel, but without causing a harmful friction between the roller and tire. The Sundry company also lists a one-piece coaster which is attached to the forks



by a clamp similar to that used on the brake. Prices on both brakes and coaster have been reduced.

#### THE NEW TUCKER RIM PLANT.

The Tucker Wood Rim Works at Urbana last Wednesday bent the first rims since its removal from Roachdale, Ind. There are 27,000 strips in the factory to commence work with, and 200,000 more ready for shipment from Roachdale as soon as they could obtain cars. Fifteen experts are now at work, and a number of others will come as soon as they finish some orders upon which they were at work at the old factory. In all fifty men will be employed this season at the new factory. Orders for 100,000 pairs of rims are on hand and the factory will, in all probability, have all it can do to get them out, as moving has caused some delay. The plant occupies two buildings, the main one being a two-story structure, 100x50 feet. Both stories of this building are occupied by machinery for binding, planing and sanding rims. The other building is two stories in height and 30x46 feet in size. The first floor is used for packing and shipping and the second for the finishing department. In the power house are two 75-horse power boilers and a 165-horse power engine. In the rear of the main building is the drying kiln, containing four compartments, each 40x8 feet, and each independent of the others. The buildings are lighted by electricity, furnished by a 150-light dynamo, operated by the company's own power. The plant is very complete in every detail. J. B. Tucker, president of the company, and Harry Putnam,

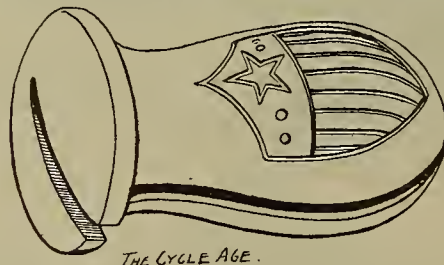
secretary, are the managers of the concern, which promises to add a thriving industry to the little city of Urbana.

#### MORRIS FITTINGS CO.'S LINE.

Three models compose the '99 line of the S. G. Morris Fittings Co., 70 E. Prospect street, Cleveland. Model A, the highest priced machine, lists at \$50, and has 30-inch wheels, 46 inches wheel base, and a 4-inch drop of the hanger. The specifications are standard and the options liberal. The Model B, which is to be retailed at \$35, has the same general specifications as the Model A, but has a 48-inch-wheel base, 2½-inch drop and 28-inch wheels. The third model, C, is made in standard heights of frames, is equipped with Akron India Rubber Co.'s 3M guaranteed tire, Fairbanks-Boston one-piece rims and is sold so that it can be retailed at \$25. The machines are fitted with either the Fauber or the Modan hanger. The company is ready to deliver these machines promptly and is also prepared to furnish the fittings from which to build them.

#### NEVERSLIP NIPPLE GRIP.

A new thing in nipple wrenches is the Neverslip grip illustrated herewith, just being placed in the market by the Buffalo Specialty Mfg. Co., 1445 Niagara street, Buffalo. This wrench is of entirely new form, being cast hollow of steel with a longitudinal tapered slot for the reception of the spoke. The face is slightly convex so that the operator can get a grip on a nipple that protrudes only a little way through the rim without scratching the enamel with the edges of the wrench. The jaws are hardened and will take any size of nipple. The



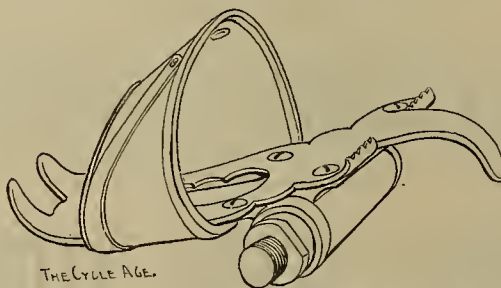
whole device is nicked and the face polished. The bulb end is made of a size to just fit the hand, and after the grip has been placed on the nipple it is easily revolved by the fingers until the proper tension is secured without readjusting. The makers pack the Neverslip in counter display boxes containing a dozen each.

#### WANT TO CATALOGUE PARTS.

The Sidney B. Roby Co., 67 Mill street, Rochester, N. Y., an old and well established firm of jobbers in saddlery and coach hardware and of steel and iron, has decided to handle a complete line of frame fittings, parts and sundries, and is now completing arrangements with several manufacturers of these goods to job their product. The Roby company will soon issue a catalogue and invites correspondence from parts makers who desire representation in that vicinity.

#### SIDWAY SPECIALTIES FOR 1899.

The Sidway Mfg. Co., 240 Lake street, Chicago, has added a new article to its line of cycle sundries in the form of a combination pedal and stirrup toe clip. The new pedal comprises a plain round barrel in which the pedal pin is mounted on three-point ball bearings of usual construction. Secured to the barrel is a flat plate with a backward tongue extension bent downward on a curve. An extension riveted to the

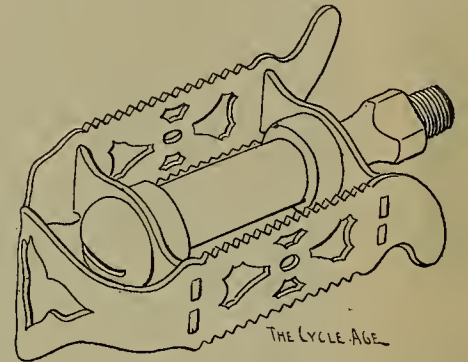


forward end of the plate carries an S. & G. stirrup toe clip. The combination pedal is readily caught by the foot, it being raised to a riding position by means of the tongue at the rear of the plate. At either side of this tongue saw teeth are formed at the edge of the plate, thus helping the long, flat bearing afforded by the plate to hold the foot securely against slipping on the pedal. The stirrup clip offers the same advantages in the way of being sufficiently yielding not to cause pain to the foot and yet rigid enough to allow the rider a firm pull in hill climbing as does the regular S. & G. stirrup clip, with the added advantage of insuring

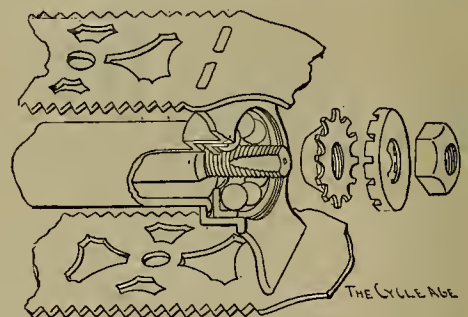
against any possible loosening of the clip from the pedal. The pedal as well as all of the stirrup clips for the coming season is furnished in three sizes, accommodating shoes running from No. 5 to No. 10 in size, and the leather stirrup on all clips is furnished in either russet or patent leather. Besides the combination pedals and the stirrup clips the Sidway company also catalogues the S. & G. spring grips which afford resiliency under the pressure of the hand for their entire length, and a direct saddle clamp intended for use on machines in which the frame is too high to allow comfort to the rider when the saddle is secured to the seat post in the usual manner.

#### STOCKTON HUBS AND PEDALS.

The Stockton Mfg. Co., of Newark, N. J., is looking for '99 business with popular goods at popular prices. The well known



Gem hub, which is the company's finest and which was widely indorsed last season, is similar in appearance and principle to the previous pattern. The barrel is turned from solid bar steel and is equipped with bearing parts, the main features of which are the oil reservoir, which makes oiling necessary only once during a season, and the device whereby the balls do not fall out when the axle is removed. Acting upon the ground that "nothing succeeds like success," the Stockton company appreciates the success of its Leader hub during '98 and runs it again for '99. The Gem pedal is distinguished by the bearing locking device which makes it impossible for the cone to move in either direction after the adjustment has once been made and the locking nut tightened. As shown in the illustration, the flange of the cone is notched, the notches engaging corresponding notches in the flanged washer which is held from turning on the axle by a



small interior projection entering a longitudinal groove in the axle. The ball cup sockets and the frame cross arms are drawn in one piece, thus making the loosening of the cup seats impossible. The hub and pedal line is supplemented by the Stahl repair chain links, which have been previously illustrated and described in Cycle Age. They are made in two sizes and are sold in both small and large lots.

#### CHAINLESS UNION WHITEHEAD.

The Union Cycle Mfg. Co. of Highlandville, Mass., will continue the manufacture of the Union Whitehead, with some decided improvements and the best equipment throughout. The list will be \$65. The Union Redhead for '99 is the new member of the line and will be built on much the same style as the Whitehead, having flush joints at all connections; expander fittings to handle bars and seat post; drop forged arch fork crown of a new, light design; Fauber pattern one-piece cranks, and axle of home manufacture, with several previous objectionable features eliminated; best quality Excelsior spokes; Kundtz rims; adjustable or stationary handle bars; Record pedals, and a finish of lustrous black or Brewster green enamel. The list price of this machine will be \$50. The Whitehead will also be built in a chainless pattern, in which the Sager roller gear will be used, the company being convinced that it is the best form of chainless cycle gear extant. Speaking further on the subject, President Stokes says: "Its speed and easy running qualities have been fully demonstrated by Major Taylor in his recent record-breaking feats at Philadelphia. This gear develops the

# Barnes White Flyers

Let us send  
you an Advance  
Catalogue

Certainly, they are in the front rank !  
Why? That is where they belong.  
They will retain their prestige and sustain their  
reputation.

The word "BARNES" on a bicycle is the best  
guarantee of quality.

We have a complete line for '99.

## The Barnes Cycle Company

\*\*\* SYRACUSE, N. Y.

# THE STERLING

## "BUILT LIKE A WATCH"

### QUALITY

From its very inception the Sterling has been essentially High Grade, always constructed of the Best and by the best that money could secure.

### OUR POSITION IS UNIQUE....

The Sterling has ever been strictly One Grade.

At no time have we been identified with a cheaper construction.



### GUARANTEE

The well known Sterling Quality will be Strictly Maintained in our 1899 Models despite the reduced selling price.

### EQUIPMENT

Our options cover a larger range than ever before of High Grade Tires and Saddles.

**Energetic Agents Desired.**  
Send for Catalog and Proposition.

## STERLING CYCLE WORKS, KENOSHA, WIS.

least amount of friction. It accomplishes what no form of angular gear has done, viz., showing but the friction of a roller and at the same time having the teeth in contact with the roller along their entire length, thus affording an abundance of wearing surface. In all other forms of angular pin gearing the point-contact alone has been secured, the rollers crossing each other as they mesh, and the point of contact being very small, the wear is correspondingly great. In the bevel gear, the surface of the teeth being sharply inclined, they have a pronounced tendency to force themselves out of mesh when under pressure, and the metal surfaces must rub past each other to allow a tooth to enter into mesh, thus adding materially to the friction. The roller gear, having a much more gradual tooth inclination, overcomes the wedging tendency and permits the rollers to revolve into mesh very easily. The roller gear is not nearly as delicate a mechanism as the bevel gear. It is not necessary to advise riders to let it alone as cautiously as they would the works of their watches. It can be as easily adjusted as a chain. We will be in position to furnish roller gears in almost any size, varying from 66 to 108, or even higher if wanted. With an ordinary bevel gear it is almost impossible to change the gear, and it can only be done by sending the machine back to the factory. With the Sager roller gear any rider can have several gears and change them himself in a few minutes without any difficulty. The changes are made by substituting sprockets which are secured to the hub in the same manner as the sprockets of an ordinary chain bicycle." The chainless Whitehead will list at \$75.

#### THE BUESCHER SPECIALTIES.

A toe-clip that will not work loose and turn on the pedal is made by the Buescher Mfg. Co. of Elkhart, Ind., and is shown in the first drawing herewith. It has three bolt holes so that it can be attached to the side-plate by two bolts or by one when there is but one hole in the pedal plate. Another Buescher clip has wings reaching down on either side of the foot to prevent side motion of the shoe. The company's No. 3 toe-clip, which is radically different in principle from these and others on the market, was illustrated and described in Cycle Age of October 20. Another new article com-



THE CYCLE AGE

prised in the line of specialties is the No. 3 instantaneous pump coupling described November 17. A floor pump of new design, though practically similar to Nos. 2 and 9, has been added to the line and designated as No. 16. It has a 22-inch barrel of 1 1/8-inch diameter, having a cast base and three feet of hose. Quality of material and workmanship rather than novelty of form is the claim upon which the company is soliciting and securing business.

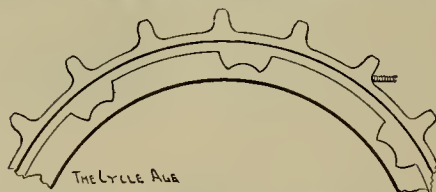
#### UNIFORM TEMPERING METHOD.

The main difficulty in tempering small articles of steel by flame, forge or furnace heating is due to the necessity of keeping the heat applied within the narrow limits of 700 and 750 degrees, so that the article to be tempered may be neither hotter nor colder than this temperature when dropped in oil or water. This difficulty has led to the use of lead alloys that fuse at the desired temperature for conveying the necessary heat to the steel. The method is described by the Lozier manufacturing company in its publication, On The Square, being applied to the tempering of ball cups and cones for Cleveland bicycles. Each ball cup is immersed in a pot of molten lead and held there until it has become heated through and through to a cherry heat. It is then quickly taken from the molten lead and dropped into a tank of cold oil. This tank of oil is surrounded by a jacket of cold running water which keeps the oil cold and of the same temperature at all times. "The object in tempering ball cups," says the company's writer, "is to make them so hard that the balls will not wear grooves in them, but at the same time they must not be so hard as to be brittle and crack, crush or crumble under heavy strains or jars. Case hardening simply tempers or hardens the outer crust or shell of the cups and the tempering is frequently uneven. If the cups are not left in the ovens long enough this crust of hardened metal is so thin that it is liable to allow the balls to crush through into the soft steel. On the other hand, if the cups are left in the ovens too long the tem-

pering is too severe, and the cups become brittle and will break. For this reason case hardened cones depend for their quality entirely upon the skill of the operator, and while some are good, many are defective and imperfect. But by the process of lead tempering, the cups can not become any hotter than the molten lead in which they are immersed, no matter how long they are left in it. The molten lead gradually heats the cups through and through and as they are taken from the lead and dropped into cold oil they are slowly tempered almost to the core. Every Cleveland ball cup is tempered exactly alike. There can be no bad ones. After tempering the ball cups are ground true to correct the warping which is a frequent result of the tempering process, but even a perfectly ground cup will not permit absolutely accurate adjustment in the hub unless the cup in the opposite end of the same, besides being equally perfect in itself, is also equivalent at all points with the corresponding points in the first cup. If this condition is not observed the cones must be left loose enough to allow for wobbling." The Cleveland people therefore make it a point to grind both cups at the same time after they are placed in the hubs, using a special machine for this purpose.

#### RICHARDS DETACHABLE SPROCKET RIMS.

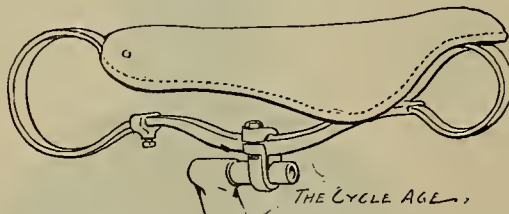
The Richards sprocket rim for raising the gear of a bicycle is made in sizes which permit the raising of any sprocket from three



to five teeth, as may be desired. The rim is held on by its own wedging power, the groove in which the teeth of the original sprocket fit being cut on a taper. When the rim is being placed in position the only work necessary is to hold a piece of wood on the teeth of the rim and to drive with a hammer till the rim is wedged tight in place. Three countersunk set screws are then screwed down through holes provided in three of the rim teeth, these screws being not for the purpose of wedging the sprocket, but merely to insure against the loosening of the rim by back pedaling. The rims are made to fit 3-16, 1/4, 5-16 and 3/8-inch sprockets. A screw driver and two extra links of chain are furnished with each rim. Tower & Lyon, 95 Chambers street, New York, are the sole eastern selling agents of the rim.

#### THE NEW KIRKPATRICK SADDLES.

Since 1883 T. J. Kirkpatrick has been an exponent of the hammock saddle, and up till about 1893 the Kirkpatrick saddle was a familiar sight on all kinds of bicycles. The latter day demand for comfortable saddles and the widespread attention that has been given to the production of seats which relieve bicycle riding from the disagreeable feature of saddle soreness and other harmful effects has led Mr. Kirkpatrick to again bring forward the hammock principle and incorporate it in saddles which are up-to-date in appearance and in keeping with all of the modern requirements in saddle design and construction. The new Kirkpatrick saddles, which have been on the market during 1898, are being pushed harder than ever for



the coming season and the maker, the Kirkpatrick Saddle Co. of Springfield, Ohio, feels confident of rapidly increasing business. A second edition of the booklet, "Scientific Saddle Making," in which the principle of the hammock saddle and its relation to the jars and jolts it is intended to compensate are carefully figured out and placed before the reader in mathematical form, has been issued and is being mailed to the trade. Several forms of Kirkpatrick saddles, all built on the double spring hammock principle, but varying in the shape of tops and the form of springs, are offered for '99. The standard pattern is here shown.

#### GROWTH OF NATIONAL CEMENT & RUBBER CO.

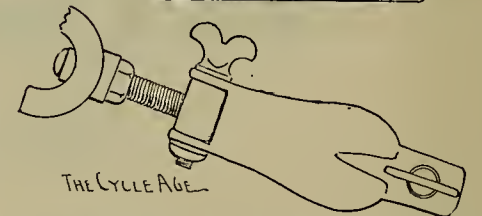
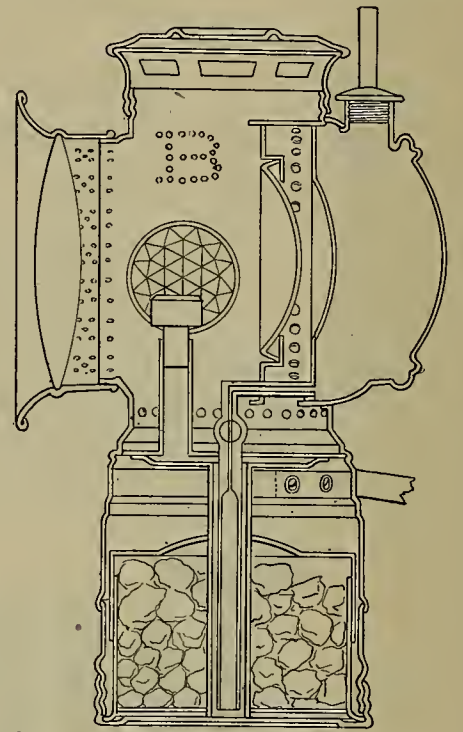
E. P. Hubbell, secretary, treasurer and general manager of the National Cement & Rubber Mfg. Co. of Toledo, O., has tendered his resignation as assistant cashier of the Second National Bank of that city, to take effect January 1, and will thereafter devote

his entire time and attention to the rapidly growing business, of which he now owns the controlling interest. The concern now occupies the entire five floors of one of the largest buildings in the city of Toledo, and has agencies in every prominent city in the United States. It also has well established trade in South Africa, South America, Sandwich Islands, and the principal countries of Europe. A branch house has been established in Paris, which is under the management of Elie Weill & Co., who are regularly authorized agents.

The National Cement & Rubber Manufacturing Company sells only to jobbers. It has several salesmen on the road, and states that trade of late has shown a most remarkable increase. The company is to have 100 feet of floor space at the Paris exposition for an exhibit which will be in charge of Elie Weill & Co., and will also occupy space No. 169 at the New York show, and have space at the Philadelphia and Chicago shows.

#### BRECKENRIDGE GAS LAMP DETAILS.

The E. P. Breckenridge Co., Toledo, has placed on the market and is now ready to supply the trade with its new acetylene gas lamp, the construction and action of which were described in Cycle Age in the issue of September 29, at that time the first practical models of the lamp having just been completed. The lamp, a sectional view of which is here shown, is notable on account of the introduction of several features which aim to make generation of acetylene gas



more applicable to and convenient in cycle or carriage lamps. Loose carbon is placed in the lamp in such form that it can be entirely removed from the lamp body by simply lifting out a small tube to which is attached a disk supporting the carbide. The removal of the residue carbide after the supply has become exhausted is thus the work of a single, simple and cleanly operation. The burner tip is arranged to give a broad fish tail flame the light from which is thrown through the lens at an illumination angle of 60 degrees. The water reservoir is back of the combustion chamber and discharges the water through a bent tube running to the bottom of the carbide receptacle. The flow of the water is regulated by a valve which renders it impossible for the water to reach the carbide faster than drop by drop. The water acting first on the carbide at the bottom of the holder, the generated gas passes through the unused carbide before it escapes through the burner, thus being relieved of what moisture it carries and producing a dry and highly volatile gas. The Breckenridge company also manufactures one model of oil lamp which has features selected from the various successful oil lamps formerly made.

#### HOW EQUIPMENT AFFECTS SALES.

How much the equipment of a bicycle affects its appearance and sale is not even yet generally realized. Many a sale is made or spoiled by the looks of the saddle, handle bars, tires and pedals. If these are light,

**HE'S TELLING HIM ABOUT THE NATIONAL BICYCLE**



**Good Bicycles at Fair Prices.**  
ONE GRADE ONLY.  
Get our Catalog and ask our traveler to call.  
NATIONAL CYCLE MFG. CO.  
BAY CITY, MICH.

26

Mention The Cycle Age

# Plain Talks on Andrae Cycles

THEY NEVER DISAPPOINT

... I ...

Ever since bicycles have been on the market Andraes have been ridden.

There are few for sale second hand.

Those sold five years ago are being ridden to-day—giving perfect satisfaction.

In five years a good bicycle will make many friends.

An agent wants to sell a popular wheel—it's easier.

We are continually looking out for the welfare of our agents—doing this and doing that to help them sell Andraes.

It's to our advantage to do so.

This year we have the finest line of wheels an agent can get.

14 Models—\$30 up—he needn't lose a sale.

We know there are some people in every town who will not ride any wheel but the Andrae.

If they cannot buy it at home they will buy it somewhere else.

Is there an Andrae agent in your town?

Do you want a money-making proposition to take it?

## Julius Andrae & Sons Co.

MILWAUKEE, WIS.

Eastern Export Branch: 95 Reade St., New York City.

Mention The Cycle Age

Initial Tension Expansion Spring

# SEAT POST

The Only True Jar Absorber.

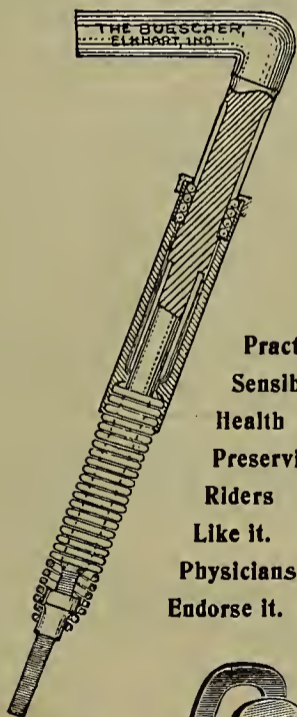
(Patent Pending.)

PRICE, \$2.50 EACH.

SYNONYM FOR THE BEST IS THE NAME OF

**THE BUESCHER MFG. CO.**

ELKHART, IND.



Practical,  
Sensible,  
Health  
Preserving  
Riders  
Like it.  
Physicians  
Endorse it.

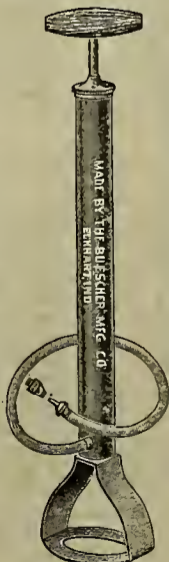
The jobber, the dealer and the user of bicycle sundries know this.

Our products are standard and reliable in style, quality and price.

'99 CATALOGUE mailed at your request. It will pay you to see same before ordering a single sundry.

Complete lines of Pumps, Lamp Baskets, Toe Clips, Coasters, the best Spring Seat Post, etc., are shown in it.

See our Trouser Guard. We make specialties—write for estimates.



No. 7 FOOT-PUMP, barrel 1 1/8 x 12. Solid stirrup. Price 80c Each.



No. 3 COUPLING.

No. 3 TOE-CLIP Patent Sept. 14, '97. Correct practical design, 35c pair.

Latest and Best. Every Pump should be fitted with it. Pat. July 14, 1896.

# The Hollenbeck Rawhide Saddle...

Weights but 12 OUNCES



Dealers and riders can obtain them without extra charge on any high-class bicycle.

**HOLLENBECK SADDLE CO.**

—MAKERS—

SYRACUSE, N. Y.

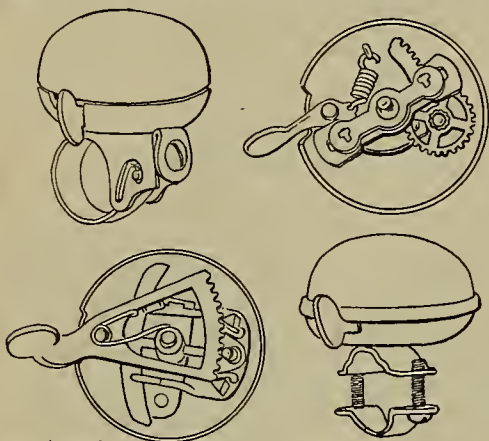
Write for Booklet.

Mention The Cycle Age

graceful, well finished, yet strong, they lend an additional value to the machine that can hardly be overestimated. Unfortunately all fittings placed on otherwise attractive bicycles do not incorporate these features. When a saddle, pedal, or other fitting does possess them, however, its field is much broadened and it has qualities upon which there are possibilities of working up unlimited trade. This is the idea the Hollenbeck Saddle Co., of Syracuse, N. Y., is working on with its new Rawhide saddle, and the truth of the observation is well proved by the quick success that has been met in placing it among makers of high class bicycles. The Hollenbeck company announces that the following well known concerns will fit the 12-ounce Rawhide either regularly on certain models or as an option: E. C. Stearns & Co., Barnes Cycle Co., Buffalo Cycle Mfg. Co., Heinz & Munschauer, R. H. Wolf & Co., Julius Andrae & Sons Co., Eclipse Bicycle Co., Carlisle Mfg. Co., Magnet Cycle Co., Peoria Rubber & Mfg. Co., Bettys & Mabbett, Bean-Chamberlin Co., Snell Cycle Fittings Co., Olive Wheel Co., Davis Sewing Machine Co., George N. Pierce Co., Sterling Cycle Works, Utica Cycle Co., Kirk Mfg. Co., Viking Mfg. Co., Manson Cycle Co., Ben Hur Cycle Co., Rochester Cycle Co., Northway & Kingsbury, Aluminum Bicycle Co., Ariel Cycle Mfg. Co.

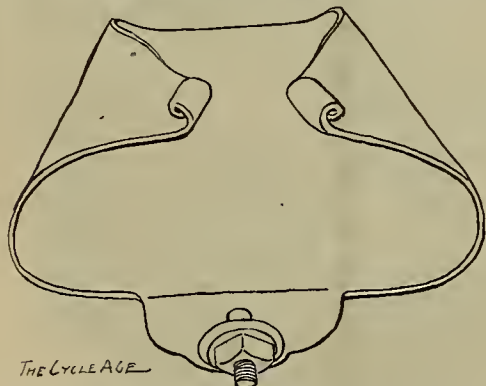
#### COMPLETE LINE OF BEVIN BELLS.

The Bevin Bros. Mfg. Co., of East Hampton, Conn., shows in its cycle trade catalogue a large line of bells, trouser guards,



THE CYCLE AGE

toe clips, spring oil hole covers, foot brakes, nipple grips and lamp brackets. The Bevin Special, made in four patterns, is the highest priced bell listed by the company. It has an electric stroke, rotary movement and is entirely finished in nickel. The mechanism and base are of brass. As illustrated, two forms of clamping devices are used and the gongs are made both with plain and with ribbed joints. Some of the cheaper pattern bells have simple, positive, ratchet movements, instead of the rotary, though the stroke and the sound are similar. The lower illustration shows one of these movements. Tire and spoke operating bells and continuously ringing chimes are also included in the bell line. Of the many patterns of toe clips presented that illustrated here is the most notable. It is made of one piece of steel and has some of the features of the stirrup clip. The sides are yielding and flexible,



THE CYCLE AGE

causing no painful pressure on the foot. It is made in both gentlemen's and ladies' sizes.

#### BOOM IN ROLLER SKATE INDUSTRY.

An evidence of the growing interest now being manifested in roller skating is the fact that the Henley Bicycle & Roller Skate Works of Richmond, Ind., operating the largest factory for the production of these goods in the country, are running night and day to fill orders for the popular Henley skates. The company reports a larger demand during the last 30 days than has been known for many years, arrangements having been made to open a great number of rinks between Thanksgiving and New Year's, to supply which has taxed the great capacity of the Henley works to the utmost. A number of very fine rinks have been opened in

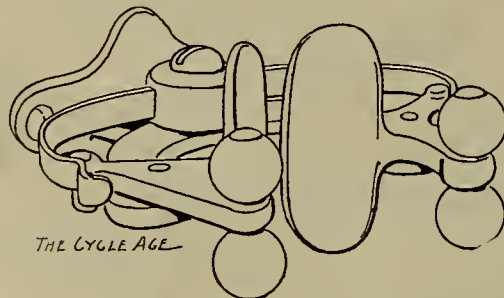
large cities and stocked with Henley skates, and numerous smaller ones have been supplied all over the country. The demand is unprecedented except during the palmy days of roller skate excitement of '79 to '86, and it now seems possible that this reawakened enthusiasm will exceed that in former years referred to and last for a number of years. M. C. Henley is personally interested with others in the operation of the elegant Main street rink in his own city, Richmond, Ind., which was opened recently with success; more than 1,200 paid admissions being received the first evening. This has been running every week day since, both afternoon and evening, and in the morning of two days, with the interest and attendance constantly increasing. Reports show that these conditions have been repeated in other places, rinks having been opened within the past fortnight at Indianapolis, Baltimore, Milwaukee, Evansville, San Francisco, Chicago, Oshkosh, and many smaller places, all of those so far opened having met with success beyond the expectations of the management, the attendance at all fully equaling that of any former year. The hardware trade are handling these goods largely, and many jobbers are putting in large stocks of Henley skates since it has become a settled fact that the business has not only revived, but will be a permanent one for a few years at least.

#### JOBBER'S OF FRAME SETS AND PARTS.

An advance catalogue of complete frame sets for four models of bicycles, and of individual parts and fittings, including the Fauber hanger, independent seat post and handle bar expander, Weston & Co.'s Champion hub, Watson Automatic seat post, Brennan adjustable handle bar, Young's sprocket rim, O. S. and Syracuse pedals, Olmsted saddles, Adams vise, Spot Cash vulcanizer, Invincible brazer, P. D. Q. enameling oven, Schrader valve, transfers, grips, stamped connections, chain adjusters, fork crowns, etc., has just been issued by R. H. Olmsted & Son, 413 South Clinton street, Syracuse, N. Y. This constitutes a handy reference catalogue of all that is needed for the assembling of bicycles. In January this firm will get out a catalogue of bicycle sundries which will be distributed widely, and would be pleased to hear from manufacturers who would like to have their goods listed.

#### BALL BEARING CYCLE HOLDER.

The Bristol Bell Co. of Bristol, Conn., is offering for a second season its ball bearing holder with which bicycles can be held



THE CYCLE AGE

by the rim of a wheel without the slightest danger of the varnish on the rim being scratched. As seen from the illustration the holder, which is constructed to be screwed to a wall or post, has clamping arms fitted with rubber balls. These balls are the only parts of the holder which touch the rim of a cycle being supported. The operation is entirely automatic and the attaching frame is made so that the holder can be adjusted to any desired angle. The holders are finished in full nickel, nickel and enamel or in Tuscan bronze.

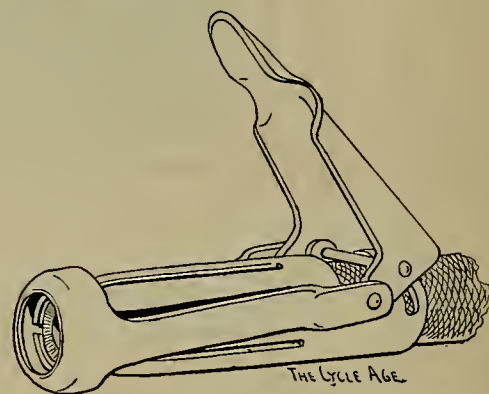
#### NATURAL ELASTICITY IN FRAMES.

Comfort in riding and simplicity in construction are seldom intimately associated in bicycle manufacture. Therefore, when these two indispensable qualities are successfully combined with strength and accuracy, the resulting construction is of the greatest interest, not only to the rider but to the agent as well, for the latter's profits are largely cut into if the machine's handles fail to stand up and are continually requiring adjustment or small repairs. Moreover, increased comfort to the rider insures a well pleased customer. During a period of nearly three seasons a form of construction embodying the good features mentioned has been receiving the only absolute test of a bicycle at the hands of hundreds of riders in every part of this country and in many foreign countries. This is a rigid, resilient bicycle frame in which jar and vibration are eliminated, but not at the expense of simplicity or weight. This result is attained not by the addition of some complicated device, but through qualities inherent in the frame itself, which is claimed to be stronger than an ordinary frame, though it weighs no more, and in which buckling is impossible and a breakdown out of question. That none has ever occurred is, perhaps, the best prom-

ise for the future. The natural elasticity and strength of the hickory used in the construction of the Chilion bicycles are responsible for the comfort and durability of these machines, whose makers, the M. D. Stebbins Mfg. Co. of 48 Hampden street, Springfield, Mass., announce that the '99 machines will rank with the best in quality of materials and workmanship. Mesinger saddles will be regularly fitted. None but Cleveland Machine Screw Co. balls will be used. The other details will correspond in grade. The chains used will be of special accuracy, with sprockets milled to fit. A two-piece crank and shaft of remarkably simple construction and the Chilion unbreakable fork crown are other attractive features. The finishes are handsome as well as novel in appearance. They are a distinctive feature, though conspicuous only for their beauty. Accuracy of bearings and of sprockets and chain give easy running qualities. In every detail these machines will show the careful study that has been devoted to the production of as good a bicycle as can be built.

#### IMPROVED PUMP COUPLING.

The instantaneous and effective coupling device for clamping the end of a pump hose to the valve of a tire here shown is an improvement on the one first brought out a year ago by J. E. Boucher and E. P. Wolf of Chicago and is to be sold the coming season by Robert Malcolm, dealer in bicycle



THE CYCLE AGE

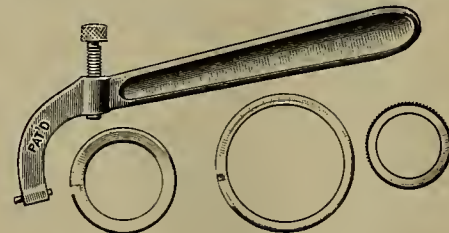
materials and sundries at 115 Lake street, Chicago. The clamp is intended for use with foot, floor and power-pumps. The free end of the hose extends through the clamp to the end of the nozzle. The hand piece acts as a lever to draw backward the ring encircling the nozzle, which, being beveled internally, forces together the six portions of the chuck part formed by the long kerfs. These press upon the inclosed rubber hose end and bind it upon the valve and valve stem in an air tight connection. Raising the lever by means of the thumb ears provided readily releases the clamp. The device is stamped out of white metal and is non-rusting.

#### CHANGE IN INDUSTRIAL CYCLE CO.

The Industrial Cycle Co., Wilbraham road, Springfield, Mass., is preparing for an increased output the coming year under slightly different management from that of the past season, Rev. D. A. Reed having sold his interest in the company to the other two members of the firm, D. T. and A. C. Methven. The company was formed three years ago and has been rapidly enlarging its business ever since. The output for '98 was 6,000 bicycles. Plans are being made for the manufacture of 10,000 machines for the coming season, orders now being on hand for 4,000. Some new machinery and equipments will be added to enable the increased output to be handled.

#### SCHRADER ADJUSTABLE SPANNER.

The utility of the spanner in separating and assembling certain bicycle parts is so widely conceded that the adjustable span-

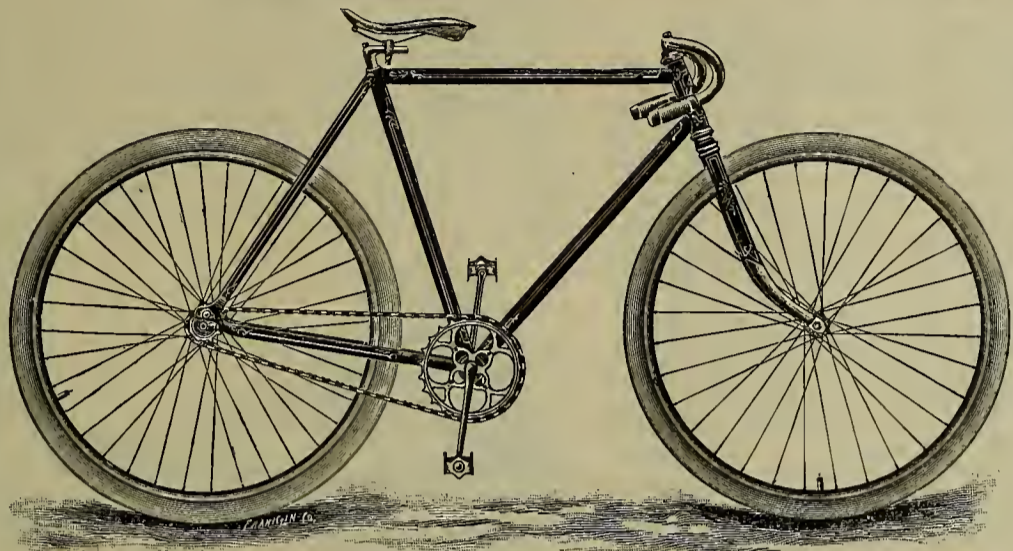


ner wrench manufactured by Frederick Schrader, East Side Station, Bridgeport, Conn., becomes a likely aspirant for popular favor, both among shopmen and riders. The spanner has a curved end which carries a hardened steel pin to enter the spanner notch in the part to be moved. A strong set-screw passing through the body at the point of tangency between the curved and straight portions allows the circularity of the spanner arc to be varied to suit the cup or ring to be turned. The spanner will

# ADLAKE :: BICYCLES

"THE WHEEL OF HIGH DEGREE"

Prices Reduced for '99 but Quality Remains the Same.



### ADLAKE SPECIALS

Model A, 30 and 28-in. wheels, 22-in. frame.....	\$60.00
Model B, 30 and 28-in. wheels, 24-in. frame.....	60.00
Model C, 28-in. wheels, 20-in. frame.....	60.00
Model R, "Racer" 28 in. wheels. 22-in. frame.....	60.00
Model E, Women's, 28-in. wheels, 21-in. frame.....	60.00
Model F, Women's, 28-in. wheels, 23-in. frame.....	60.00
Model G, Tandem, 28-in. wheels, 23-in. frame.....	90.00
Model H, Tandem, 28-in. wheels, 23-in. frame.....	90.00
Model K, Tandem, 28-in. wheels, 21-in. frame.....	90.00

### ADLAKES

Model M, 28-in. wheels, 22-in. frame.....	\$40.00
Model N, 28-in. wheels, 24-in. frame.....	40.00
Model M, 30-in. wheels, 22-in. frame.....	45.00
Model N, 30-in. wheels, 24-in. frame.....	45.00
Model P, Women's, 28-in. wheels, 21-in. frame.....	40.00
Model S, Women's, 28-in. wheels, 23-in. frame.....	40.00


### ALASKAS

Men's, 22-in. frame, 28-in. wheels.....	\$30.00
Men's, 24-in. frame, 28-in. wheels.....	30.00
Women's, 21-in. frame, 28-in. wheels.....	30.00

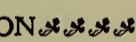
Complete line now ready for delivery. Travelers are now on the road and will call upon all dealers.

**The Adams & Westlake Co., Makers, Chicago, Ill.**

ALSO MAKERS OF ADLAKE AND X RAYS BICYCLE LAMPS AND ADLAKE CAMERAS.



## "Load Up"

ON 

### New Year's Day

WITH A COMPLETE ASSORTMENT OF


# High Pressure Supplies

FROM THE

## National Cement and Rubber Mfg. Co.



TOLEDO, O., U. S. A.

CATALOGUE FREE



- Rubber Cement,
- Brazer Heads,
- Tire Cement,
- Chain Lubricant,
- Enameling Ovens,
- Stick Graphite,
- Jifoid Plugging Solution,
- Hard Cement,
- Cleaning Fluid,
- Repair Kits,
- Hot Air Vulcanizers,
- Tire Tape.

- Brazers,
- Brazer Burners,
- Brazing Compound,
- Vulcanizers,
- Lantern Oil,
- Rubber Paint,
- Almond Oil,
- Baking Enamels,
- Nickel Liquid Polish,
- Rubber Patching,
- Hot Water Vulcanizers,
- Unvulcanized Patches.



MR. DEALER:

Tell the rider that the makers guarantee the Claus forever—we'll back you up.

CLAUS HANDLE BAR MFG. Co.  
Milwaukee, Wis., U. S. A.

Mention The Cycle Age

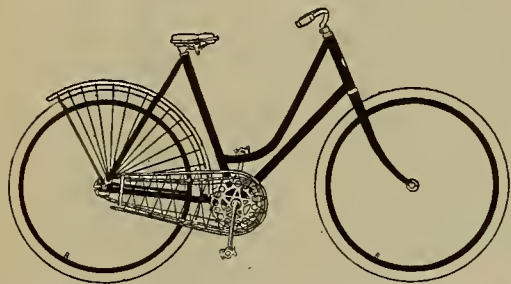
operate on rings from 1 inch to 2¼ inches in diameter. The tool is polished and nicked and is small enough to go into the ordinary tool bag.

#### STEARNS CATALOGUE OUT.

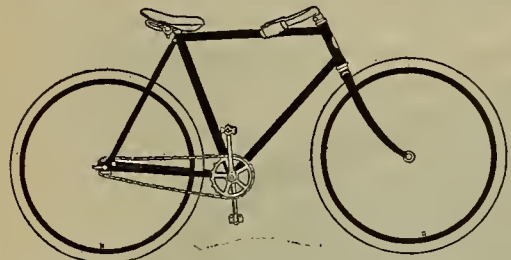
The "Yellow Fellow Year Book," being a treatise upon the construction, equipment and prices of the eleven 1899 models of Stearns bicycles, is just off the press and still redolent of the black and orange inks in which it is printed. It is arranged and set up in the attractive style which characterizes all the trade literature that emanates from this house. The half-tone plates of the machines are printed in two colors from wash drawings by Bartlett & Co. A feature of the booklet is a double page illustration showing the mechanism of the bevel gears of the chainless, the crank nanger of the chain driven machines, the Stearns internally clamping seat post, the detachable grip and the Stearns automatic locking stand used in three different positions.

#### TOLEDO METAL WHEEL CO.'S NEW LINE.

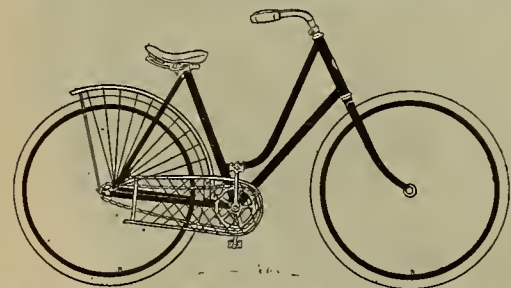
The Toledo Metal Wheel Co., Station B, Toledo, are building machines for adults as well as juvenile bicycles for the season



of '99. The former line comprises men's and ladies' patterns listing at \$50 and \$52.50 respectively. The upper illustration shows the ladies' model which in general construction is similar to its mate. The machines have flush joints, tapered D shaped rear forks and a 2½-inch drop to the hanger. The frames are finished in either black or maroon enamel, the first coat of which is



an anti-rust enamel which prevents the tubing from rusting and causing the enamel to scale off. The hangers are of the Fauber pattern with especially designed sprocket. Expander clamps are used for securing both the seat post and the handle bars. The front forks have the best quality of brazed steel sides with nickel plated arch crown. The other leading specifications and options embrace popular features and fittings. The "Favorite" juvenile machines, a boys' and



girls' model of which are illustrated, are made in three sizes, having respectively 24 and 26-inch wheels. The weights run from 18 to 22 pounds, and the prices are \$20, \$25 and \$30. All of the frames have flush joints at the steering head and seat cluster, and D shaped rear forks are used. The hanger is fitted with means for oiling direct to the bearings, and has a three-piece crank and axle arrangement which is strong and in proportion to the other reduced sizes throughout the models. Plain steel drop bars are fitted to the boys' models and up-turned to the girls' patterns.

#### MANIPULATING DOUBLE TRANSFER PAPER.

All of the "double paper" transfers made by the Meyercord Company of Chicago have printed on the back the words: "Varnish transfer as usual, then remove the tissue paper and transfer by wetting the back." By an examination of all sheets thus marked it will be found that the paper consists of a very thin tissue paper attached to a heavy paper. When transferring, probably

the quickest and best way to handle, will be to varnish the sheet or varnish as much of a sheet as is necessary for immediate use, then cut apart, place the ornament on the frame in its position and press thoroughly to the frame, then soak with water, and peel from the edge, tearing the thick paper from the thin and leaving the thin paper with the ornament on the frame. Then wet the thin paper and the transfer will transfer very easily and perfectly. This is the best way to handle and probably the most satisfactory, but the whole sheet can be varnished and the thin paper stripped from the thick in sheet form and the ornaments cut apart and transferred on just the thin paper.

#### MYERS COMBINATION CYCLE STAND.

ages of a light folding cycle support for exhibition and other similar purposes, with a strong, efficient home trainer, has become very widely known and has been granted the compliment of a wide use. The stand is made of flat spring steel and weighs but 4½ pounds complete. It can be attached to either the front or the rear wheel and when once attached cannot be shaken off. As the stand interferes with no running part of the bicycle it is well adapted for show purposes in a cycle store and also as a cleaning stand for individual riders; and being strong enough to support a 300-pound man, the home trainer attachment possesses a double field of practical usefulness. One of the newest attachments which have been devised to go with the stand is an adjustable truing device by means of which the work of truing up a bicycle wheel without removing it from the frame is very readily accomplished. The stand with its attachments is manufactured by F. E. Myers & Bro. of Ashland, O., who also make and market other forms of cycle stands, among them being an independent cycle holder for holding machines in the home or office during the times they are not in use, a display stand for supporting bicycles at a height of eight, ten or twenty inches from the floor, and a cycle rack for use in front of stores, etc. The display stand is made in two separate parts which allows its use, without adjustment or tinkering, with machines of all lengths, including tandems. The nuts on the axles do not need to be removed to place a bicycle on the stand. All of the stands are given an attractive aluminum finish.

#### HANDY REFERENCE FOR PARTS.

The Toledo Cycle Supply Co., 431 St. Clair street, Toledo, selling agents for Crosby & Mayer Co.'s fittings, is sending out a sheet of fittings and parts, with specifications, to be pasted on the wall of the shop as a ready reference. Four diamond and one drop frame are shown in working drawings with measurements and angles given. These include a 23-inch frame for 30-inch wheels with 4 inches drop of hanger, a 22-inch frame for 30-inch wheels with 3 inches drop, a 22-inch frame for 28-inch wheels with 3 inches drop, a 24-inch frame for 28-inch wheels with hanger dropped 2½ inches, and a drop frame model of 22 inches height, 28-inch wheels and 3 inches drop. The parts shown include one and two piece hangers, one-piece stamped head, drop forged fork crown, four-lug seat post cluster, full set of head fittings, handle bar and seat post expander, fork sides and rear stays and chain adjuster. The company will have its large and complete catalogue of fittings and sundries ready for distribution January 1.

#### SALAMANDER FOR CHAIN ILLS.

E. G. Eager & Co., jobbers of cycle sundries and sporting goods, 334 Superior street, Toledo, O., are general distributing agents for Elfin juvenile bicycles for Ohio, Indiana, Michigan and the entire south, Pacific slope and the northwest, and are also sole selling agents of Salamander chain lubricant. This lubricant, they state, will cure all diseases that the chain is heir to; is not affected by heat or cold, will not collect dust, and will go direct to the seat of the complaint and make a stiff joint limber and full of life. It is not a new, untried article, but has been on the market in and around Toledo for the past two years. A number of large jobbers are cataloguing it for '99 and the company is prepared to furnish electrotypes to others who desire to list it among their supplies.

#### LITTLE INCONVENIENCE WILL RESULT.

In the Cycle Age Trade Index recently issued the address of the Grant Ball Co. is given as Elyria, O. The factory and general offices are located in Cleveland, a fact so well known to the trade that the error will cause less trouble than if the company were a less prominent one whose name was not on the books of so many leading manufacturers. All mail should of course be sent to Cleveland.

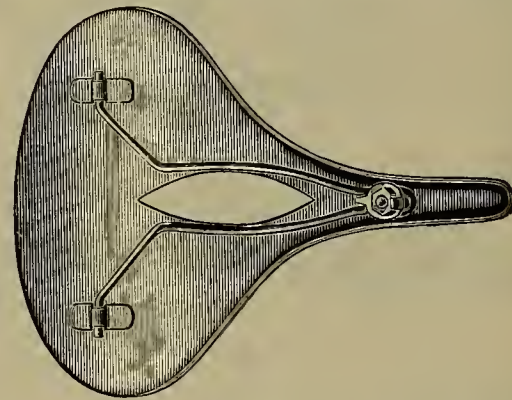
#### IS MADE BY BULLIS BALL GEAR CO.

The ball gear described and illustrated in last week's issue of Cycle Age is being put

on the market by the Bullis Ball Gear Co., of Rochester, instead of by the Miner & Fisk Co. as stated. A. J. Fisk, who has been successor to the Miner & Fisk Co. for the past year, is manager of the Bullis company, which will exhibit this novel gear mechanism at both the New York and Chicago shows.

#### NUTLESS FASTENING FOR SADDLE SPRINGS.

A new method of fastening the spring ends to the base at the cantle of a bicycle saddle is being adopted this season by Cutting, Kaestner & Co., 241 South Jefferson street, Chicago. The scheme is so simple that it is unnecessary to supplement the accompanying drawing with a description. The little metal pockets or eyes having been pressed into place in the square holes in the metal base, they are covered with leather, giving a smooth finish to the under side of the base plate and doing away entirely with the customary nuts. After the base has been padded and covered with leather, the laterally extending ends of the spring are sprung into place in the pockets. The peculiar new washer used at the pommel is positive in action and prevents any movement of the



front part of the spring. The saddle clamp normally keeps the two sides of the spring pressed apart and prevents any possibility of the ends of the springs coming out of their sockets. By the recently noted increase of floor space and addition of machinery the company has increased its capacity to easily 2,000 saddles per day and already has many good orders on its books, having invaded this season for the first time the territory east of Buffalo. Last year the company sold more than 150,000 saddles and anticipates a very greatly increased output the coming year, as it can devote to the manufacture of its bicycle saddles, tool bags, leather belts, etc., a greater proportion of its attention which last season was conferred upon immense government orders for horse saddles, pistol holsters and sword scabbards. The '99 catalogue of Cutting saddles shows nearly thirty models for manufacturers to select from. An exhibit will be made at the Chicago show by the company.

#### REPAIR CHAIN LINK.

The accompanying illustration shows the detachable repair chain link designed by the Indiana Chain Co., of Indianapolis, to take the place of a broken center link in any chain. It can be put in without the use of tools. It will also replace the old style bolt



and nut in any chain by breaking off one link. These links will be mailed direct to the rider at 25 cents apiece.

#### TRADE NOTES.

J. J. Henson, for two years superintendent of the Iroquois Cycle Co., of Chicago, has taken the position of superintendent of the Acme Cycle Co., of Elkhart, Ind.

The Iver Johnson Arms & Cycle Co. has secured the services of Fred I. Blake as superintendent of the Fitchburg factory. Blake was for many years superintendent of the Spiers bicycle works at Worcester.

The Strauss Cycle Supply Co., 334 Genesee street, Buffalo, has contracted with a number of manufacturers to handle their goods exclusively, among them being the Fauber hanger and Strauss tire. A full line of sundries will be carried.



# THE WHITE

THOU HAST SPOKEN RIGHT, 'TIS TRUE,  
THE WHEEL HAS COME!

Shakespeare (King Lear).

The experience of the past season has demonstrated that the era of the high-grade wheel has returned. THE WHITE is the best-made wheel in the world. Ask at any REPAIR SHOP and you will learn less about THE WHITE than about any other wheel.

**THIRTY-INCH**—We have decided to add to our 1899 line Model "G," fitted with 30-inch wheels. To properly bring out the advantages of the large wheel, much care and skill must be exercised, so that the new features of construction will be correctly cared for. The wheel base of Model "G" is such as will correctly balance the increased size of wheel. No sacrifice of strength or speed has been made. It is an all-round bicycle for all kinds of riders. The price is \$60.00.

**CHAINLESS**—In Model "E" we again offer a bevel-gear wheel, which not only embraces the same well-tried principles of the last year WHITE chainless, but which has in addition all of the small improvements which a year's usage would suggest. Outside of the running gear, the chainless for '99 has advanced in merit over that of '98 to the same extent and in the same manner as our chain models have been improved over those of last season. In nothing have we stood still. Price, \$75.00.

Our Ladies' Chainless is a companion wheel to Model "E." It found great favor during '98 among lady riders, because it offered complete protection against muddy riding habits and torn gowns. The woman cyclist is not naturally a mechanic. Our chainless bicycle Model "F," with all the graces and charms of the regular ladies' wheel, comes nearest to being the PERFECT mount for the fair cyclist. Price, \$75.00.

**SPECIAL RACER**—We offer our Racer for '99 as a wheel which is not only built for its intended purpose, but which is built for that purpose with a knowledge gained from three seasons of widespread use on the track. We have endeavored to produce a bicycle which will gain hundreds of new friends among the racing men, because of its absolute worth. The high-grade material, careful, painstaking workmanship, intelligent design and correct equipment of our "Special Racer" are the foundations upon which its prestige on the track rests. We have given special attention to the two most important parts of a racing wheel—the frame and the running gear. Price, \$65.00.

In addition to the above, we build our regular road chain wheels, Model "A" for men, and Model "B" for ladies; price, \$50.00. Our catalogue contains much that will interest dealer and rider.

**WHITE SEWING MACHINE COMPANY,**  
Cleveland, Ohio.

BRANCHES:  
New York, Boston, San Francisco, London, Paris.

# THE PASTIME AND SPORT

## RACING IN FULL SWING

Australian Sport Begins in Melbourne, Sydney and St. Kilda With Big Fleets—The Events.

The racing season was opened in Melbourne November 9 with the meet organized by the Hibernian Society. The principal events were a five-mile scratch race, won by Walne from Barker, with L. M. Jackson third, and a ten-mile scratch race, won by Jackson from Walne, with Jack Parsons third. Parsons looked the winner when they entered the straight, but Jackson came with a terrific rush and won by a length. The two-mile handicap for \$175 was won by L. M. Jackson from 90 yards. Following are the summaries:

Five-mile scratch—Walne, first; Barker, second; L. M. Jackson, third. Time, 13:05.  
Ten-mile scratch—Jackson, first; Walne, second; Jack Parsons, third. Time, 24:45 2-5.  
Two-mile handicap—Jackson, 90 yards, first; A. J. Berry, 150 yards, second; R. W. Lewis, 110 yards, third. Time, 4:42.

A two-days meeting was held at St. Kilda on November 12 and 19 and attracted about 8,000 people each day. The feature of the two days' racing was a paced tournament over three miles, in which eight of Australia's best riders took part. In the first heat Jack Parsons and Larry Corbett met. Corbett, with a low gear against a strong wind down the straight, had the best of the deal, and beat Parsons by a length. In the second heat Walne met Jackson and defeated him by half a length. Lou Barker and Ken Lewis met in the third heat. Barker jumped Lewis, who gave up, letting Barker win as he liked. Beauchamp (holder of all Australian records from 30 to 100 miles) defeated A. A. Middleton in the fourth heat, winning by two lengths. In the semi-finals, Walne beat Corbett by inches and Beauchamp beat Barker comfortably. In the final Walne beat Beauchamp by a length.

The ten-mile scratch was also won by Walne. Parsons fell. The St. Kilda Wheel race was won by the veteran, G. R. Broadbent, from the 140-yard mark. The five-mile scratch was won by Beauchamp from Barker, with Jack Parsons third. Walne, Payne and Porta hung back and were dropped. The first-class handicap of one and one-half miles was won by Walne from scratch. The summaries follow:

Three-mile match heats—First heat: Corbett, first; Parsons, second. Time, 6:47 4-5. Second heat: Walne, first; Jackson, second. Time, 6:31 1-5. Third heat: Lou Barker, first; Ken Lewis, second. Time, 6:31 2-5. Fourth heat: Beauchamp, first; Middleton, second. Time, 6:08 3/4. First semi-final: Walne, first; Corbett, second. Time, 6:46 3-5. Second semi-final: Beauchamp, first; Barker, second. Time, 6:40 3-5. Final: Walne, first; Beauchamp, second. Time, 6:33 4-5.

Ten-mile scratch—Walne, first; Barker, second; Jackson, third. Time, 24:12 3-5.  
St. Kilda Wheel race—Broadbent, 140 yards, first; McKibbin, 250 yards, second; Stewart, 190 yards, third. Time, 4:29 4-5.

Five-mile scratch—Beauchamp, first; Barker, second; Parsons, third. Time, 11:47 3-5.  
One-and-a-half mile handicap—Walne, scratch, first; Barker, 30 yards, second; Walker, 50 yards, third. Time, 3:22.

The racing season in New South Wales was opened on November 12 and 19. Megson rode very poorly the first day but on the second day he rode in something like his old form, winning the five-mile scratch from Hunt, with Forbes third, and beating Forbes comfortably in a mile match in 2:01 4-5. The summaries:

One-mile scratch—A. C. Forbes, first; Miller, second; Elliott, third. Time, 3:30 2-5.  
Two-mile handicap—F. Hunt, 45 yards, first.

Three-mile multicycle handicap—Campbell and Rennie, 230 yards, first. Time, 6:36.

One-and-a-half-mile handicap—J. Crowell, 75 yards, first; G. Campbell, 85 yards, second; J. Cochrane, 65 yards, third. Time, 3:23 1-5.

Five-mile scratch—Megson, first; Hunt, second; Forbes, third. Time, 12:51 3-5.

One-mile match—Megson, first; Forbes, second. Time, 2:01 4-5.

Half-mile flying stakes—Cohen, 55 yards, first; Cuthbertson, 50 yards, second; Gahagan, 55 yards, third. Time, 1:03 4-5.

One-mile November stakes—Forbes, scratch, first; Hunt, scratch, second; Miller, 5 yards, third; Megson, 10 yards, fourth. Time, 2:14 3-5.

Three-mile multicycle handicap—Cliffe, Grear, and Tucker, 160 yards, first. Time, 5:58 1-5.

## Keenan Opposition Not Feared.

Philadelphia, Dec. 19.—Local League lights are in nowise concerned over the numerous reports from Baltimore and New York anent a combination to down Keenan for the next presidency. Conway Sams, of Maryland, would have extreme difficulty in carrying the election in view of his close connection with the present administration. Kireker, of New Jersey, who is also mentioned as a possible candidate for the presidency, is handicapped by the fact that Tattersall, the present treasurer of the League, who is booked for another year, is also from the mosquito state, and is pulling like a dray-horse for Keenan. In the meantime, those who are engineering the Keenan boom are doing some effective missionary work among the representatives of the smaller eastern and some of the western divisions, and by next February it is expected that everything will be cut-and-dried for a stam-pede to the popular Pittsburgher.

## Banker Loses Three-Cornered Match.

The winter circuit of southern Europe made its last appearance in France at Toulouse on December 4. The next meet was to be held in Spain. The principal event of the Toulouse meet was the three-cornered match between Banker, Tommaselli and Grogna for \$200. Banker won the first heat of 1,200 meters in 2:04. The Italian started the sprint but slipped on the damp track and was passed by the American. Tommaselli won the second heat by half a length from Banker, with the Belgian third, and the final heat was won in the same order. Banker took the lead in the last quarter mile, but at the beginning of the last lap Tommaselli made a fine jump, passing Banker and gaining two lengths. Banker went after him and closed the gap and in the home stretch the two were neck and neck, but at thirty meters from the tape the American's front wheel slipped on the track and the Italian won by a length, with the Belgian third. Five teams started in the 2,800 meter tandem race. At the bell Banker and Tomasselli sprinted away from the field and passed the tape with a lead of almost fifty meters in 4:15. Pastaire and Leynaud were second.

## New York Dealers Against Racing.

New York City, Dec. 19.—At its annual meeting at Rochester last Thursday the board of officers of the New York State division practically declared against the retention of racing control by the League. There was a hot fight over the retention of a racing board by the state division and at the end of the discussion the vote showed 33 against the retention of the state racing board to eight in favor of it, and a resolution was passed striking the words "racing board" from the constitution and by-laws of the division.

## NEW C. W. A. CANDIDATES

Montreal and Toronto Select Favorites for Presidency and Vice-Presidency.

Toronto, Dec. 12.—Although the annual elections for office in the Canadian Wheelmen's Association do not take place for some time yet, Montreal has already put forth candidates for president and vice-president. Louis Rubenstein, the present vice-president and A. B. Rattray, chief consul of the Montreal district, have been placed in nomination for the presidency and vice-presidency respectively. The Ontario men whose names have been so far mentioned are E. B. Ryckman of this city and Dr. J. D. Balfour of London. Mr. Ryckman is looked upon as the stronger candidate. For the vice-presidency no person has yet been announced from Ontario, although the friends of H. B. Howson, chief consul of the Toronto district, think he is entitled to the honor. It is likely, however, that Mr. Howson will be prevailed upon to take another term as chief consul in preference to the less useful position of vice-president.

On a recent visit to this city, Major General Hutton, the general in command of the Canadian military forces, and his staff, galloped over the cycle path built at great expense by the Toronto wheelmen, causing considerable damage to its surface. The cyclists felt much aggrieved at what they considered a very bad example to teamsters and others. Upon his attention being called to the matter the major general promptly offered to personally defray all expenses for repairs which had been caused by the negligence of his staff.

## Six-Day Race for San Francisco.

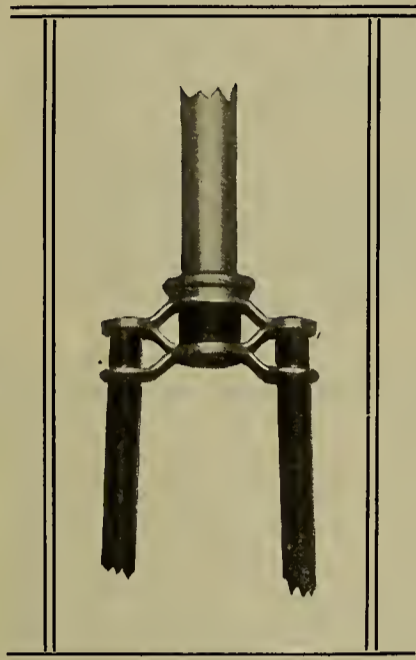
A 24-hour race will be run in New York on January 6 and 7. It has not been decided yet whether this will be a paced or unpaced event, but the first prize has been placed at \$1,000. Following this Brady and Kennedy will go to San Francisco, where Alfred Ellinghaus is promoting a six-day grind to begin February 6, the prizes being \$2,000, \$1,200, \$750, \$500, \$300, \$200 and \$100. Waller, Pierce, Albert, Schinneer, Stephane, Frederick, Gimm, Schock and Nawn have decided to enter this and will accompany Brady and Kennedy west, leaving New York on January 8 or 9. Miller wants to take part in both contests, but his employers will not consent, as they think the strain would be too great even on Miller's constitution.

## Sturmey Warns the Rebels.

Henry Sturmey, secretary of the International Cyclists' Association, writing to a friend in the United States relative to the position of the I. C. A. toward the racing men suspended by the L. A. W. for riding at unsanctioned meets, warns the seceders as follows:

"In view of the revolt of racing men against the League of American Wheelmen, it appears that there is a certain amount of misconception as to the position of things on this side, which it may be well to clear up at once. I notice that Arthur Gardiner of Chicago, one of the League of American Wheelmen's suspended riders, is proposing to visit Europe, and has stated that the racing men abroad are with the dissentient American riders and that all European tracks will be open to them. In case others may be similarly misinformed, I think it well to point out at once that with the sole exception of Spain and Portugal, Russia and the Eastern European countries, where there are no unions, and practically no rac-

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ing, every union in Europe is affiliated with the International Cyclists' Association, and all are unanimous in upholding the suspensions and decisions of any of their bodies, so that if these men are suspended upon reasonable grounds by the League of American Wheelmen—an affiliated body—they can take it from me as a positive fact that that suspension will be upheld and that a journey to Europe would be a useless one; for they certainly would not be permitted to ride by any of the European organizations. I write this to save any unnecessary journey."

### WHEELMEN AS PREACHERS

Striving Earnestly to Convert Their Countrymen to a New Faith—Would Relieve Their Burden.

It can be truthfully said that during the very brief period that there has been concerted action to secure an improvement in the road system of this country, a great deal has been accomplished. The wheelmen of this country have been among the most active workers in this cause. There is no need to preach good roads to the wheelmen. Every wheelman is a preacher, a worker and a fighter for good roads, and has spread the propaganda throughout every city and village in the United States. Since the wheelmen have been agitating the question of good roads they have aroused an active interest in this subject among the farmers of the country, to whom the question of good roads is of the highest importance.

The farmers have great reason for taking up this question and one which many of them never thought of. It is due to them, in absolute justice, that the whole business of road construction should be remodeled. Farmers lose by not being able to get to market when the market is good, by the waste of products that can not be marketed at all on account of bad roads, by not being encouraged to cultivate things that require a speedy market, and in a great many other ways. The actual money loss to the farmers of the United States by the bad roads of the country is not less than one-fourth of the total home value of all their products. The total home value of the annual products of the United States farms is about \$2,500,000,000, and the loss by bad roads is about \$600,000,000, so that the farmers lose, or they would lose if they could stand all that loss themselves, one-fourth the value of all their products by the extra cost of getting them to market. These figures are startling and should awaken the agricultural element of the country to a realization of the value of a good road system. It is indeed time the whole country was waking up to the importance of the question.

### FAVORS WHEELMEN'S DEMANDS

Governor Elect of Kansas's Cyclist—Will Push Good Roads and Bicycle Baggage Bills.

Topeka, Dec. 19.—The wheelmen of Kansas have much confidence in the newly-elected governor of this state, Mr. Stanley, who is a bicyclist, and rides between his home and law office in Wichita daily. His wife and two children also ride bicycles and all are enthusiastic upon the subject.

During the session of the legislature two years ago the bicycle baggage bill, and another providing for the employment of convict labor on the public roads failed to pass, and wheelmen are solicitous of the outlook for the coming year. When asked by a representative of Cycle Age regarding his attitude toward these subjects, the governor elect replied:

"I am heartily in favor of giving the wheelmen anything they want within the bounds of reason. Don't understand now that I mean that they are likely to ask anything unreasonable, for I believe that the wheelmen are a satisfied, aggressive,

first class element of American citizenship, and the things which they have been advocating for years meet with my entire approval. I shall recommend to the legislature in my message, legislation in the interests of the whole people, viz.: for good roads. I have not yet determined what I will suggest, but I am convinced that something should be done in this direction. This is a subject to which I think too much importance cannot be attached. We have convict labor, which under the present system of management in many states amounts almost to nothing, and if some man can devise a plan whereby this idle labor can be employed without coming in competition with free labor, he deserves the greatest honor as a public benefactor." Mr. Stanley will undoubtedly also recommend the adoption of the bill requiring railroads to carry bicycles free.

### French Cyclists and Tax Tags.

Cyclists in France are not only taxed, but are obliged to carry a plate on their machines bearing the owner's name and address. In order to prevent people avoiding payment of the annual cycle tax the government is about to introduce another plate which cyclists will also have to attach to their machines. This plate will be issued annually when the tax is paid and will constitute a receipt for the same, which will free the owner from molestation. But woe betide those cyclists who do not pay their tax, and whose machines do not bear the outward and visible sign of such payment. They will be subjected to many pains and penalties. In accordance with the decision of the Council of State the manufacture of said metal plates or labels is about to be put to contract. The number of "plaques" to be made for the year 1899 will be 634,000.

### Jacquelin the Favorite in Moscow.

A big race meet was held in Moscow on December 3 and 4. An international event at one and a half versts was run in five heats, three semi-finals and a final. Boutilkine won the first semi-final from Singrossi, Jacquelin took the second from Zarn, and Outotchkin won the third from Dei. In the final Boutilkine led throughout until Jacquelin started his sprint and won by half a length, the Russian running a close second. On the second day was run a three-versts race for the prize of Moscow. Jacquelin, Singrossi and Boutilkine qualified in the three semi-finals. Jacquelin won his heat and semi-final in such fine style that he was the favorite, but in the final Singrossi and the Russian ran him to the pole, the former winning with Boutilkine second. The act was greatly hissed by the spectators.

### NEWS IN BRIEF.

Willy Arend has opened a tobacconist's store in Berlin.

Otto Ziegler, Jr., contemplates racing in Paris in 1900 during the international exposition.

Charles Miller is filling a three weeks' engagement to ride the home trainer in a New York theater.

Parlby will race at Moscow in company with Bourillon, Jacquelin and Singrossi on December 24, 25 and 26.

Five days of 24-hour, middle-distance and sprint racing, extending through two weeks, have been arranged for Madison Square Garden by the American Cycle Racing Association.

A novel contest between motorcycles and human pacing is to be held at Madison Square Garden next Saturday night. Jay Eaton and Teddy Goodman are to follow two of Fournier's petroleum tandems, changing pace as often as they desire, and Harry Elkes is to have the best teams of pacing men he can get together on triplets

and tandems. Fournier thinks he can go the full twenty miles under a two-minute gait.

Joyeux sailed for home last Saturday and Edouard Taylore started yesterday for a visit to Paris, to return in the spring.

A. A. Chase has just won a 100-mile road match for \$875 from W. H. Hands, who had a handicap of 7:30 and led for the first thirty miles.

Arrangements are being made for the construction of a quarter-mile board bicycle track in Augusta, Ga., for next season's racing.

Bald is reported to be training in West Baden Springs for a match race with Tom Butler at Madison Square Garden on New Year's eve.

The manager of the Prince track in Paris announces that the next 72-hour race will be held May 19 to 21, the event to be made an annual affair.

Michael, McDuffie, Elkes and Taylore have been selected to compete for the indoor middle distance championship at Madison Square Garden early in January.

Waller, who won second place in the six-day grind, rode a bevel-gear chainless during the second half of the contest, having borrowed the one that McDuffie was riding when he fell in his exhibition ride.

Sentimen in St. Louis seems to be against the proposed 142-hour race which Brady and Kennedy are trying to promote for that city, and the health commissioner and leading physicians will protest to the authorities to prevent it taking place.

At the Ohio Centennial, to be held in Toledo in 1902, one week will be devoted to the cyclists of the land. The local cycle board has persuaded the centennial commissioners that such a week would be appreciated and a grand carnival will be arranged.

The growing lack of interest taken by manufacturers in racing matters is shown by the difficulty the contestants in the six-day race had in securing retainers. Even Miller could not induce any maker to pay him for riding his tires and the victor therefore rode a pair of French tires which he brought back with him from Europe.

Recalling the great Milwaukee boom that was launched at Indianapolis during the last League meet, the beer city seems to be preserving a most remarkable silence just now when Boston and Buffalo are pulling so hard for the meet next summer, which is to be located by mail vote of the executive committee of the League next month.

Pierce, who finished third in the 142-hour race, is a poor Canadian whose wife is so ill that the doctors say she can be kept alive only by a trip to the west, and it was in the hope of winning a sufficient sum from the race that he entered, for he is himself opposed to six-day racing, but manfully said before the start he would be willing to ride to death if he knew by so doing his wife could have her health restored.

Springfield, Mass., Dec. 19.—The wheelmen of western Massachusetts will endeavor to secure, through the assistance of the state division of the L. A. W., the passage of a law providing for the taxing of bicycles in the western counties of the state to secure funds to build cycle paths. It is proposed to have cycle path commissioners in the different counties who will have absolute control of the paths. Doubt has been expressed as to the constitutionality of the proposed law and if it should be rejected on this account an effort will be made to secure funds by some other means. The cycle path advocates will introduce into the legislature this winter an amendment to the present law to provide for punishment for malicious injury to cycle paths.

The National Cyclists Union of England has completed its first twenty years of existence, having been formed in 1873 as the Bicycle Union. In years past there was much friction between the racing cyclists and the ruling body, caused primarily by tactlessness, the needless cause of the present split between the L. A. W. and the racing men in this country. Within the last five years the N. C. U. has undertaken the management of professional cycle racing, and as a consequence there has been a development of this branch of the sport. For two or three seasons past the N. C. U. has agitated for "universal lighting." It has not hitherto been possible to secure a general enactment covering the whole of England; but the reform is being gained piecemeal. Nearly thirty country councils of England and Wales having adopted a by-law as suggested.



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Precisely so in business—old customers must stick if the business ball is to grow. What makes them stick? A good many things, but the foundation is always the same—sound, reliable goods—goods that keep your promises—goods that work and wear.

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UNION REDHEAD .....	List \$50	} UNION "P"ERFECTION. UNION "D"URABILITY. UNION "Q"UALITY.
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"OUR WORST IS BETTER THAN THE OTHER FELLOW'S BEST."

The UNION ROLLER GEAR CHAINLESS will be heard from in 1899. **SPEEDIEST BICYCLE BUILT.**  
 The UNION agency is valuable. If you don't get it you will wish you had. **WRITE NOW.**

**UNION CYCLE MFG. CO., - Highlandville, Mass.**

Most of the newspapers of the country having had their hysterics over the alleged brutality of the last six-day race, it is interesting to read the comment of the New York Sun at the close of the event. Editorially it says: "The contestants were not cripples and maniacs when they left the Garden. On the contrary, they were constitutionally uninjured, and one and all seemed satisfied with the result."

The suggestions of the wheelmen of New York for the building of a special path for cyclists on the Brooklyn bridge has been pronounced unfeasible by the chief engineer of that structure, who says that it would add too much extra weight and that suitable approaches could not be constructed.

The committee in charge of the preparations for the international race meet to be held in Montreal next summer propose to raise a purse of \$2,000 or \$3,000 as a prize in a contest between the Orient, Dunlop and some German pacing team if these can be brought together.

Conway Sams, chief consul of the Maryland division L. A. W., and, it is said, aspirant for League presidential honors, has drawn up plans for the establishment of central headquarters for Baltimore members of the L. A. W., to be used as a club house.

Khyber Pass has become a Sunday resort for the cyclists of Peshawur, India, who start up the mountains Saturday and return Monday. The roads are excellent, but great care has to be observed to avoid collision with camels and their drivers.

Fred Titus is at present singing in the chorus of the "Belle of New York" in Chicago, being content to start at the bottom in a new profession and work toward the top, rather than to emulate "our Eddie."

The cycling editor of the Syracuse Standard takes the following optimistic view of the outlook for racing next season: "Makers are quietly arranging for teams, meet promoters are already arranging the programme for another season, the cycle riders feel certain of success in their efforts to divorce racing from the League, and the track owners generally are falling in line for the formation of a controlling organization. The sport of '99 will be of the best character and will tend more towards the sprinting nature than during the present season in all probability. Pacemaking teams will be supplanted by motor-cycle pacing to remove expense and first class instead of second class foreigners will come to America for sprint racing."

The youngest prince of the royal family of Sweden is a very ardent cyclist. He is often seen taking long trips out into the country, sometimes traveling incognito. He is also fond of riding centuries.

Walter Sanger—"Wooden Shoes" of un-paced fame—has permanently retired from racing and is now interested in the manufacture of handlebars in Milwaukee.

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1 Oil Extractor.  
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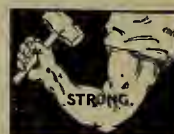
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# THE CYCLE AGE

## AND TRADE REVIEW

VOL. XXII—No 9.

CHICAGO, DECEMBER 29, 1898.

NEW SERIES No. 58.

### ACID CLEANED FRAMES BARRED

#### UNION TO WITHHOLD ITS LABEL

**International Organization of Bicycle Workers May Make Serious Trouble for Chicago Factories.**

The leading man of the International Union of Bicycle Workers has announced his intention of compelling the factories in Chicago to use the union label. If the factories will not come to time in this respect he will drop persuasion and employ force. He says:

"Toledo bicycle manufacturers long ago recognized the value of the union label, and that is the best organized city in the United States. While manufacturers in other cities, and especially in Chicago, are running short-handed and are afraid of the future, in Toledo they are running night and day, and we claim it is because the union label is placed upon all bicycles made there. Many bicycles are now made in penal institutions, and organized labor is agitating for a law forcing all such products to be labeled 'convict made.' This will help the manufacturer who employs free labor, and should be an argument why he will be benefited if he permits his workmen to organize. We will not permit the use of our label on wheels polished with acids, as we do not care to take such responsibility. Several of Chicago's big factories use this system, but when the public discovers the fact bicycles made by them will be boycotted very effectually."

#### No Label for Acid Cleaned Frames.

Presumably the allusion to the use of acid is intended to have special reference to frame cleaning. There is no acid used in polishing. Frames get greasy from handling in the fitting and brazing rooms, and are dipped in a mild solution of sulphuric acid and then plunged into an alkaline solution which neutralizes the acid, saponifies the grease and permits its easy removal. The process is common, but is not injurious.

#### Pamphlet on New Shop Methods.

It is further announced that arrangements are also being made to publish a pamphlet containing a full account of the new methods that have been introduced in bicycle factories in order to cheapen the cost of the products. In the sight of the union it seems to be a crime of the first magnitude to cheapen cost of construction.

#### Holiday Trade Was Brisk.

Philadelphia, Dec. 27.—The retail holiday trade of the present season, from the point of view of the local cycle tradesman, has been decidedly encouraging as compared with that of last season.. Busi-

ness during the week preceding the great Christmas holiday was so brisk on "the row" as to make it necessary for most of the principal establishments and many of the smaller ones to keep open evenings. The fact that the majority of the cycle houses on Arch street carry side-lines of goods which are in most cases suitable for gifts appropriate to the season naturally had much to do with this welcome, if short-lived, boom, the profits whereof will go a long way toward tiding the dealers over the dreaded "between seasons" which is not due to terminate until about March 1.

#### Proposed Taxation of Bicycle Business.

In a revision of the state revenue laws of Georgia a bill has been brought before the legislature wherein a tax of \$200 is imposed on every company selling or dealing in bicycles, by itself or its agents, in that state, and all wholesale and retail dealers in bicycles manufactured by companies that have not paid the tax. The company or dealers are required to furnish the controller general a list of agents authorized to sell bicycles of their manufacture, or under their control, and must pay the controller \$5 for each agent for the fiscal year, or fractional part thereof, for each county in which the agent does business for the company. The result of such a law in that state would, according to an objector to the proposed restrictions, be that two-thirds of the dealers would be forced out of business. Citing Columbus as an example, he says that two of the prominent dealers would move their business to the adjoining Alabama towns, thereby avoiding the tax and still, no doubt, sell bicycles in Columbus.

#### Death Caused Change of Plans.

In confirmation of the rumor that the Elgin Sewing Machine & Bicycle Co., of Elgin, Ill., was preparing to go into the manufacture of motor vehicles, the company states that such was its intention, but owing to the death of Assignee Dewitt Campbell a fortnight ago, the plans have been changed. The Chicago Title & Trust Co. is assignee now and the plant and machinery are to be sold.

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### NO POOL AMONG TIRE MAKERS

#### RUMORED COMBINATION DENIED

**From the East Comes the Statement that a \$30,000,000 Company is Being Formed.**

Tire makers laugh when asked to speak to the theme of the reported combination among the leading houses. The daily newspapers have it that the B. F. Goodrich Company, Morgan & Wright, the Hartford Rubber Works and the New York Belting and Packing Company are to pool issues, form a company with a capital stock of \$30,000,000, half of which is to be 7 per cent. preferred stock and the remainder common stock. It is also alleged to be part of the plan to smother competition in the manufacture of hard rubber goods, and to this end some other concerns are said to have been invited to join the combination.

#### Flint's Little Scheme.

As if this were not enough, the sensation mongers add:

Of perhaps greater importance than the organization of this new trust is the fact, which became known to-day, that it is the intention to make an alliance with the old rubber trust for the purpose of getting control of the crude trade. To effect this they will send representatives to the rubber districts and possibly buy up certain territory. If this can be done they believe it will be possible to dictate the price and market requirements and virtually control the trade. It is said the factories embraced in the two combinations use the greater part of the rubber output of the world, and will be in a position to say much about prices. The principal work in organizing the new trust, which is expected to be placed on its feet in two weeks, is being done by Charles R. Flint, who organized the United States Rubber Company.

#### What the Tire Makers Say.

The reply of Morgan & Wright to these assertions is not flattering to the hopes entertained by Flint or his credulous dupes. This firm says:

It is an old story. It has been brought out so many times that it is becoming tiresome. Our firm will not join any trust or combination. We suspect that this late version of Mr. Flint's project has been given to the press for the purpose of ascertaining how it would be received. There are a few hard rubber goods makers in Trenton who have pooled issues and aspire to get larger firms to join them. So far as our tire business is concerned we shall remain independent to the end.

#### Fake Pure and Simple.

Our name appears in the list of companies forming the proposed combination without any authority from us. It was purely gratuitous, probably upon the part of some enterprising newspaper man who either did not take pains to get the facts or was misinformed. THE B. F. GOODRICH CO.

#### Sieg Strike Settled.

The strike of the employes of the Sieg factory in Kenosha, Wis., was settled last

Saturday through the assistance of the state board of arbitration. On Tuesday more than 100 of the strikers resumed work at their former wages, notwithstanding the statement of the previous management that while it had no desire to cut the men below living wages, it could not afford under existing conditions to pay according to the former scale when there were plenty of men willing to work for what the company could offer. The difficulty between the men and the management arose two weeks ago apparently from a change of superintendents, the new factory manager having without notification cut the wages of some of the men who had previously accepted a slight cut. Screw machine hands demanded \$1.50 per day. The polishers, who were cut to \$2 and \$1.75 per day, asked the regular union scale rate of \$2.50. All but two or three of the men went out on strike.

### IS FORCED TO PAY

**Loop Hole in Bicycle Protective Policy Unavailing—Insurance Methods Annoy Makers.**

Lyman D. Wood, of Columbus, O., secured a verdict of \$52 against the Toledo Bicycle Protective Company on December 16 in a suit brought to recover the value of a bicycle which he had insured with the company and which had been stolen. The company claimed that according to the contract it could not be held responsible for the loss, since the owner had been careless in leaving it in front of a business house for several hours. The jury, however, brought in a verdict in favor of the plaintiff as above, the amount representing the \$34.50, the cost of the bicycle, \$16 for the rental of a substitute machine for eight weeks at \$2 per week, caused by the failure of the protective company to make good the loss, and \$1.50 as interest on the principal.

A feature of the bicycle "insurance" business that has escaped most riders who have taken out contracts or policies and has caused considerable annoyance to the trade, is the fact that instead of insuring the owner for the full cost of his machine, the company agrees only to replace the bicycle with another of the same make or one "of equal value." The managers of these companies approach the manufacturers and demand agents' prices on such machines as are purchased by them to replace those stolen from the persons insured with them, thus inducing price cutting and at the same time getting a much higher premium rate than appears on the face of the contract.

### Keim Suffers for Electric Lamp Co.

A Supreme Court jury returned a verdict recently of \$1,144.17 against John R. Keim of New York city in an action brought by the Union Bank of Buffalo. The suit was instituted to recover the amount of a promissory note made by the Eclipse Electric Lamp company, now defunct, of which Mr. Keim was a director. The bank discounted the note and under the law Mr. Keim was held as one of the board of directors. The suit has been on the different court calendars for some months, Mr. Keim's counsel says, and it is his belief that Mr. Keim was singled out as the only one of the stockholders who had any money. It is generally believed that Mr. Keim's recent purchase of the Spaulding plant was the cause of the suit being brought against him. The Eclipse Electric Lamp company was organized a year or more ago and worked in connection with the Spaulding Machine Screw company, in the manufacture of bicycle lamps.

## DISCUSSING AMERICAN GOODS

### EXCLUDED FROM PARIS SHOW

#### Spirited Comparison of Merits of Our Bicycles With Those of Home Manufacture in France.

A war of words is going on in Paris through the French cycling papers as to the comparative merits of French and English bicycles against the American machines. Those taking part in the interesting discussion are a firm of leading French manufacturers, upholding the French goods, a French agency firm representing four prominent United States manufacturers, advocating the superiority of the American product, a well known American exporting house having branches in Paris and elsewhere advocating the priority of American inventions, and a French firm taking the part of arbitrators.

#### American Agents Wanted More Space.

The long-drawn-out fight grew out of the fact that the Chambre Syndicale des Fabricants de Velocipedes, corresponding to the Board of Trade of Cycle Manufacturers in this country, of which the first mentioned party above is a member, granted only two exhibition spaces in the Salon du Cycle to the second party, who had applied for four stands. The American representatives complained that this was unjust, as they represented four American makes, whereas French makers of but one line were awarded two or three stands—a fact that plainly showed the French makers feared the competition of the Americans.

Replying to this, the first party stated that the great imports of bicycles from the United States were due only to the uninterrupted overproduction here, and that French makers of first-class machines had no reason for alarm, since the mechanism of the American bicycles is so complicated and delicate that no cyclist or tourist yet born can learn to clean, adjust and keep them in order, and that an American machine once broken on French soil cannot be repaired. It was also maintained that the American parts and fittings, for these reasons, cannot contribute to establish any permanent changes in construction. "France is not Cuba," he writes, "and one cannot take it a l'American," as the English learned after flooding France with their machines, which have had to recross the channel, France having produced bicycles equally good and cheap. "So," he says, "it will be with the American machines, and within eighteen months they may pack up and go."

#### Favors Using Automatic Machinery.

The arbitrating party entered the discussion at this point with the following well put statement: "We recognize the superiority of the American machinery for the making of bicycles, and those of our countrymen who have purchased and are using such machines are acting wisely, because buying American machines to make French bicycles is like buying the guns that will throw bullets to stop an invasion, but to buy American bicycles is like getting American bullets from American guns; therefore, let us buy American machinery but not American bicycles, because, having then the same material and facilities, we can ourselves manufacture equally good bicycles." In this statement the concession of the superiority of the finished product of our own makers is obvious.

Following this a French firm, through a large advertisement in the paper, asserted that it had already sold 20,000 bicycles in one week for the coming season, but that American bicycles were selling as five to

every one of English or French manufacture.

Either because piqued by the discussion it had called forth or because the alarm of its members had been increased by the facts the discussion had brought out, the French manufacturers' association at its last meeting decided not to allow the firm of American representatives to have any space at all in the Salon du Cycle instead of the two spaces to which it had taken exception.

The American agents, who had gone to considerable expense in advertising the exhibits they expected to make at the show, promptly instituted suit for damages against the Chambre Syndicale.

### Humber Affairs in America.

An investigation of affairs at the Humber factory in Westboro, Mass., has been made by a representative of the English stockholders. He was armed with a power of attorney which gave him authority for a searching examination of the books and plant. In his work he was assisted by an English machinery expert. Both have returned to England for the purpose of submitting their joint report to the directors of the parent concern. While not anticipating the action which may follow the reading of this report, it is entirely proper to state that the condition of affairs is so far from hopeless that it may almost be stated as a certainty that business will be resumed. In the event that the English stockholders should decline there are Westboro men of means and experience who stand ready, in fact pledged, to make a reasonable offer for the plant and good will of the concern.

### Raleigh and Gazelle Companies Combine.

The troubles of the Raleigh Cycle company of England are now stated to be nearing a settlement. It is believed that the appointment of the receiver might have been avoided but for a desire to effect certain changes which during the life of contracts still existing was impossible. Mr. Bassett has resigned his position and Frank Bowden, whose retirement from office two years ago was due to ill-health caused by overwork, has assumed the management and a scheme of reorganization has been definitely settled upon. The Raleigh and Gazelle interests are to be consolidated and worked by means of capital raised by an assessment of 2s 6d per share.

### Public Interested in an Ice Bicycle.

Considerable interest has been created in eastern Wisconsin by the inventor of an ice bicycle who has been making trials of his runner-shod vehicle on the Milwaukee river and the lakes about Oconomowoc. There is apparently nothing new about the invention, however, which consists in substituting for the usual rear wheel of a bicycle a wheel having twelve ice dogs attached to the steel rim and fastening a runner in a steel frame at each side of this driving wheel. A sharp runner is also clamped to the rim of the front wheel, which must of course be made stationary, and steering is effected with the usual handle bars.

### Dreher Suffers the Penalty.

Toledo, Dec. 26.—Frank Dreher pleaded guilty to using the mails in pursuance of a scheme to defraud, and Judge Hicks fined him \$250. Dreher is the man who offered "high grade bicycles for \$3.90 each."

The seventh annual bicycle and automobile show was opened in Paris on December 15 by the French minister of commerce.



**DECREASING INTEREST RATES  
NOT DUE TO SLUGGISH TRADE**

**Permanence of Low Rate is Doubted by  
Financiers—Encouragement  
to Thrift.**

The opinion has been expressed in high financial circles that the present low rate of interest is not likely to be permanent, with an implication that it is desirable that it should not. The decreasing rate of interest, however, bears so close a relation to normal economic development that there will be some hesitation about regarding the present rates as the result of temporary causes.

**Business Exceptionally Active.**

A low rate of interest might be due to a lack of demand, but in most cases the lack of demand is due to a depressed condition of business which is likely to keep capital out of the money market. It cannot be said at the present time that business is sluggish. The bank clearings, the railroad earnings, the production of iron and steel—these are merely a few of the indications of an exceptionally active state of business. There must be a full normal demand for capital. A much more usual cause of low rates of interest is the amount of capital in the money market. With the growth of wealth in the world there is a decrease in the earning power of money. That interest is lower in London and New York than in remote communities where little capital has yet been accumulated is a sufficiently familiar illustration of this tendency of interest to go down as the volume of capital goes up. Capital has been increasing rapidly in this country, the rate of interest has been going down, and the present movement does not seem to be abnormal nor exceptional.

**Observation Proves the Contrary.**

There have been fears that a low rate of interest would discourage saving, and prove inimical to the accumulation of capital. This is one of those a priori propositions that do not bear very close examination or a comparison with facts. It would be quite as logical to say that a low rate of interest promoted saving, because a man would need twice as much capital at 3 per cent as he would at 6 to provide him with a given income. A comparison of saving habits of former times with those of the present, or those in countries where interest is high with those in countries of low interest, will not sustain the idea that the saving habit declines with the rate of interest. Thrift is most apparent where the rate of interest is low.

**The English Cycle Agent's Condition.**

On an average the English agent handling medium priced machines, listing between \$55 and \$62.50, has only about \$7.50 gross profit on every sale. His maker does not supply a toolbag, nor tools; just a tire inflater that is no better than a syringe, as he mournfully complains. He pays for the crates in which his machines are shipped—50 cents apiece—and for transportation charges about 85 cents. He gives customers a better saddle than is fitted at the factory, exchanges the handle-bar when asked to do so, makes a present of spanner and lamp—and is hounded by traveling men till he attends the shows. The picture is drawn by one of him.

**Charges Fraudulent Transfer of Stock.**

A petition in equity has been filed in the district court in Des Moines, Ia., against E. D. Kenyon et al. by the Sterling Cycle Works, which alleges that on October 5, 1898, a judgment was rendered

in the district court in its favor against these defendants for \$112.83; that the plaintiff has caused the issuance of two writs of execution against the defendants, and that each was returned unsatisfied. It is now claimed that the stock of the Kenyon Bicycle company, consisting of thirty shares at \$100 each, has been transferred to Elvira Kenyon, S. J. Beans, W. C. Beans and A. S. Kenyon, and that such transfers were fraudulent and for the purpose of hindering and with the intent to delay and defraud creditors, particularly this company. The Sterling company asks to have the conveyances decreed fraudulent, and that the title to said stock be decreed and established in the defendants in order that the plaintiff may levy upon the same for the purpose of realizing its claim.

**CHAPMAN CONTROLS COLUMBUS CO.**

**Horace L. Outbids a Stranger Who Offers \$9,600—  
Benjamin Chapman May Return.**

Horace L. Chapman has purchased a controlling interest in the Columbus Bicycle company. In all likelihood, therefore, his son Benjamin, who has been so long and conspicuously identified with this concern, will again re-enter the field from which he recently withdrew.

Mr. Chapman bought the stock owned by John A. Pfeifer, who assigned some time ago, paying for the same \$9,650. The stock was sold to James Ross, the assignee, and was bought in by Mr. Chapman, after some very lively bidding.

The first bid was \$6,000, this being made by Mr. Chapman. After some little time a stranger bid \$6,500. Mr. Chapman bid \$7,000, at which the stranger went him \$500 better. Mr. George Urlin made a bid of \$8,500 after Mr. Chapman had raised his bid to \$8,000. Again a halt was made, but after a few calls Mr. Chapman bid \$9,000. The sum of \$9,200 said the stranger. Then \$9,300 was bid by Mr. Chapman. \$9,400 said the stranger. "I will bid \$9,500," shouted Mr. Chapman. Another wait and then the stranger bid \$9,600. Mr. Chapman only raised this bid \$50, but it was enough, and the stock was sold to him.

The value of the 52 shares of \$100 stock has been placed at various figures. The stock was appraised at \$22,500. The company is capitalized for \$31,200, but the last appraisement amounted to \$111,506.54.

**Building Motor Vehicles in Mexico.**

According to an ex-Chicagoan who has a flourishing business in the City of Mexico but is now on a visit to his native city, motor vehicles are being manufactured on a commercial scale in Mexico, where great interest is being taken in mechanical propulsion of carriages. "One firm," he says, "turns out from fifty to sixty a year, retailing them at \$500 to \$700 each. Gasoline is used as the motive power. The demand for motor vehicles is good and I look for a thriving business in the new machines."

**Pope Company Sued by Bilgram.**

Hugo Bilgram, the well known bevel gear cutter of Philadelphia, has sued the Pope Mfg. Co. for infringement of his patents issued for a machine for cutting bevel gears.

Work is soon to begin at Newport News on the construction of two steamships with carrying capacity of 11,000 tons each, to be put into service between San Francisco and Hong Kong. These will supplement the service of the Pacific Mail Steamship company and will make an average speed of eighteen knots.

**COMPARATIVE EXPORT FIGURES  
ENGLISH AND AMERICAN TABLES**

**One Week's Shipments—British Report  
for Eleven Months Shows a  
Great Decrease.**

Exports of bicycles and bicycle materials from the port of New York for the week ending December 26 are recorded as follows:

	Bicycles.	Materials.
Sweden .....	\$ 39,254	\$ 2,511
Denmark .. ..	26,974	7,617
Germany .....	25,175	15,356
England .....	7,408	3,907
Dutch West Indies.....	5,000	.....
Argentine Republic .....	4,275	811
Brazil .....	2,102	92
France .. ..	1,031	1,045
Holland .....	1,019	706
Switzerland .. ..	75	1,200
British West Indies .....	679	193
Africa .. ..	559	270
Chili .. ..	150	423
Italy .. ..	700	.....
U. S. of Colombia.....	350	.....
Belgium .. ..	35	470
New Zealand .....	283	.....
Scotland .. ..	215	.....
Cuba .. ..	143	50
China .. ..	145	.....
Russia .. ..	100	.....
Other American countries..	253	.....
Totals .....	\$115,930	\$34,651

**English Shipments for a Week.**

The total exports of bicycles and materials from Great Britain for the week ending December 10 are as follows:

Melbourne .. ..	\$21,915
Adelaide .. ..	1,645
Sydney .. ..	785
Perth .. ..	630
Christchurch .. ..	1,600
Wellington .. ..	90
Otago .. ..	1,445
Penang .. ..	50
Mauritius .. ..	560
Yokohama .. ..	190
Singapore .. ..	485
Smyrna .. ..	150
Madras .. ..	3,090
Calcutta .. ..	355
Bombay .. ..	1,525
Malaga .. ..	135
Malta .. ..	185
Auckland .. ..	430
Zanzibar .. ..	60
Cape Town .. ..	1,585
Port Elizabeth .. ..	1,640
Teneriffe .. ..	100
Buenos Ayres .. ..	150
Demerara .. ..	390
Paramaribo .. ..	60
Durban .. ..	2,035
Launceston .. ..	25
Flushing .. ..	1,725
Jersey .. ..	300
East London .. ..	230
Amsterdam .. ..	400
Bordeaux .. ..	1,130
Boulogne .. ..	235
Ostend .. ..	175
Total .....	\$45,505

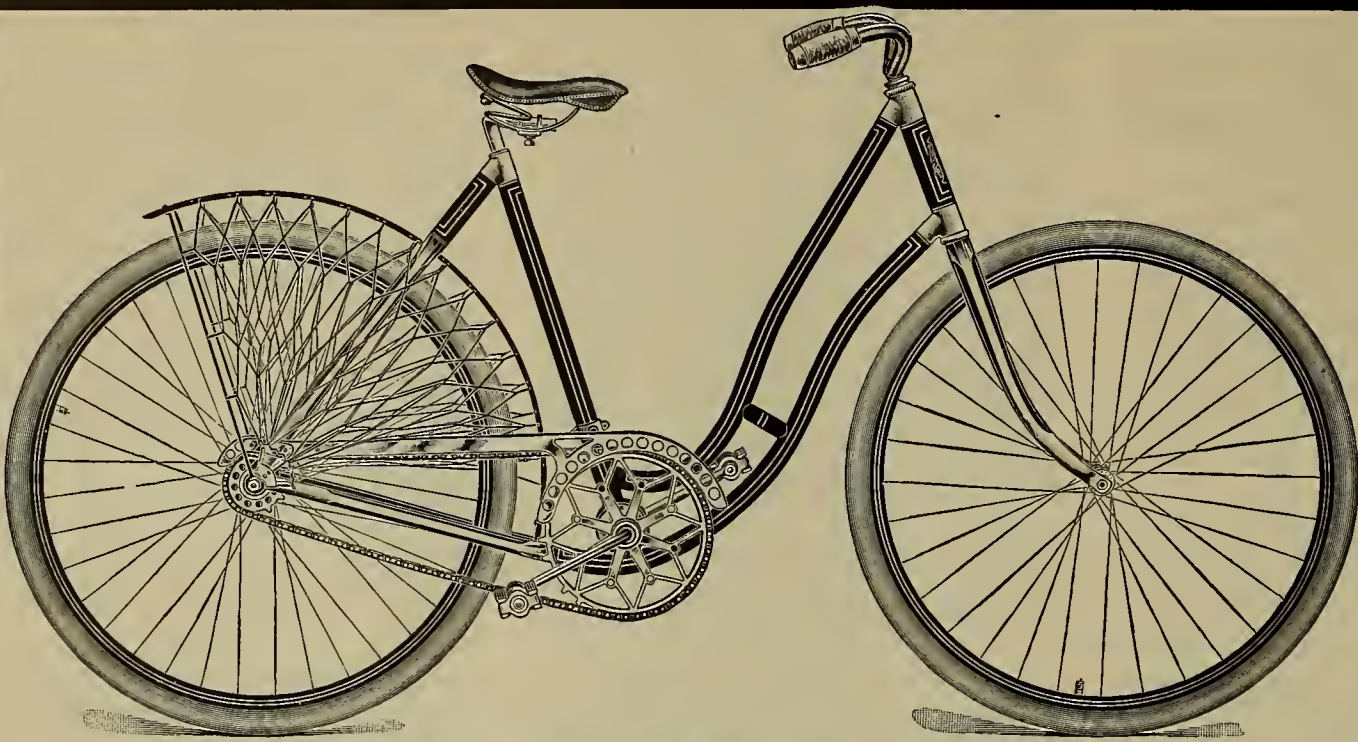
**Eleven Months' British Exports.**

The total exports of bicycles and materials from the United Kingdom for the eleven months ending with November, 1898, are compared with the complete returns for 1897 and 1896, as follows:

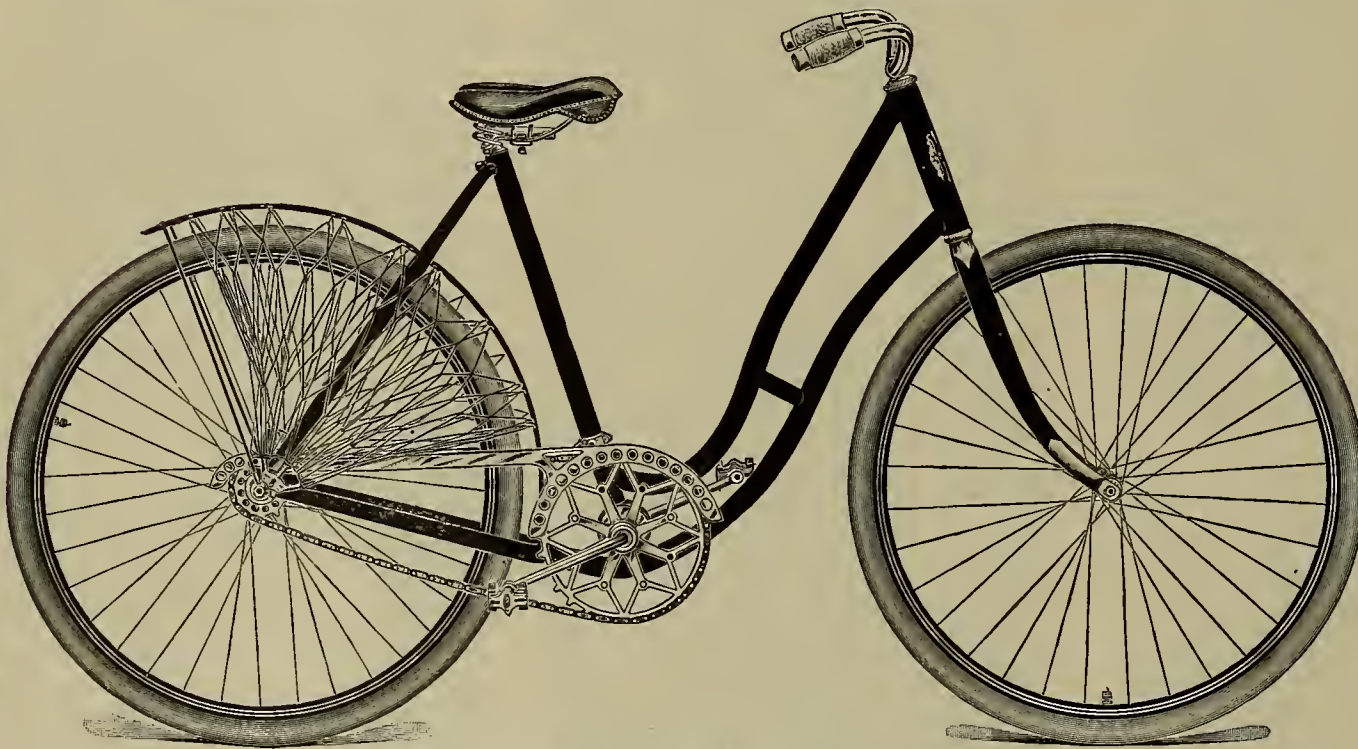
Month—	1896.	1897.	1898.
January .. ..	\$624,435	\$763,820	\$480,465
February .. ..	706,125	688,195	474,225
March .. ..	891,875	855,830	482,245
April .. ..	786,335	698,085	522,340
May .. ..	798,765	697,940	434,700
June .. ..	772,265	553,050	371,280
July .. ..	716,755	566,850	383,475
August .. ..	650,140	483,165	287,535
September .. ..	683,560	430,460	316,870
October .. ..	893,320	497,845	314,565
November .. ..	720,600	446,410	339,480
December .. ..	1,060,555	444,785	.....
Totals .. ..	\$9,278,020	\$7,155,645	\$4,407,330

**Chainless Bicycles in Demand.**

The bicycle dealers of Pittsburg report having sold many more machines for Christmas gifts this season than ever before at this time of the year in the history of the business. A noteworthy feature of the trade is that the demand for chainless machines exceeded the call for the usual type nearly two to one.



The Manson, Model 33, Ladies' Eccentric, List \$50.00.



The Manson, Model 32, Ladies' Eccentric, List \$40.00.



The Manson, Model 31, Ladies', List \$30.00.

# THE MANSON

IF DEFECTIVE PARTS ARE FOUND IN  
**THE MANSON BICYCLE**  
 WE WILL REPLACE FREE AND PAY ALL EXPRESS CHARGES  
 MANSON CYCLE CO. 153-5 W. JACKSON ST. CHICAGO.

# THE CYCLE AGE

## AND TRADE REVIEW

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

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### ALMANACK CYCLE CONSTRUCTION

There are expressions used in trade parlance which are beginning to chafe the industry and diminish the working capacity of salesmen. They sit on the cycle trade like an ill-fitting collar on a true-pulling horse. There is especially one such expression which it is time to replace or remodel. When the load is light it merely worries the faithful animal; but with heavy pulling it makes sores, which are not easily healed.

"Our 1899 models are now ready for inspection!" This has for months been the refrain of business announcements. "Patterns," says the purist, in preference to "models," but "1899" is the unavoidable prefix. "Our models for 1899 trade," "our models for next season," that is, are the variants which indicate impatience at the term, but few indeed are those—mostly matter of fact jobbers—who simply sweep the tradition of compulsory season changes to one side and present their goods to the trade without reference to supposed expectations of phenomenal progress or implied confessions of past mistakes.

Recent catalogues are teeming with apologetic explanations of the reasons why goods offered in the market this fall are essentially similar to those which were offered last fall. It is sometimes made a boast that no change has been found necessary; but through the boast is heard the apology. Evidence is plentiful that the manufacturer thinks the public will expect changes, and that the manufacturer would make them if he could possibly see his way clear to do so. In other words, the manufacturer realizes that a percentage of the public and of the retail trade will still consent to pay something for seasonable novelty, but not so much as to compensate the manufacturer for the trouble of producing it unless something clearly more valuable than novelty alone is involved in the change. What troubles the fidgety manufacturer is the supposed attitude of the public. This attitude may not be exactly as supposed. The supposition is indeed fictitious so far as the better part of patronage is concerned. But whatever there is of the attitude and of the supposition has only one prop—the continued use of the term, "1899 models." It implies an obligation to present a novelty. Behind the back of this term, the impression steals its way into the mind of the purchaser that goods which present no changes of importance are not entitled to the moderate price asked for them.

If the term had been abandoned three years ago the price of bicycles and of accessories and sundries would have been 25 per cent. higher than it is today. The trade would have been 50 per cent. richer. Grant that the term has a small value for retail selling purposes in March, April and May, the shadow of the subsequent year's model—the shadow which coming events cast before them—begins to spread its dark mantle as early as June. In June, July and the rest of the year prices are depressed and sales are retarded by the expectancy of what "1900 models" may be like. During three months the "1899 model" has a lease on fashion with a small minority of the public. During the nine months thereafter, when these models should have a ready sale at maintained prices, the brief illusion is heavily paid for. An irresistible argument against full prices is based upon the tradition of season changes and the term of expression which legitimizes it.

This regularity should be broken. It should be possible to send out "new models" in the fall, or at any other time of the year when conditions require it. This year the prosperity of the rural population which culminated in the late summer and the early fall created a large late demand for bicycles. The profits from it could have been greatly increased if "new models" could have been offered for its satisfaction instead of "1898 models."

Only the absolute abandonment of almanack regularity in bicycle construction and eradication of the public's anticipations in this respect can restore the effectiveness for trade purposes of those changes in construction that the manufacturer sees fit to make, and can relieve him from the need of making changes which are immature or of which he does not clearly perceive the intrinsic advantage. In order to accomplish this end it seems clear that all phraseology should be avoided which perpetuates the undesirable condition.

In their advertising matter manufacturers can do very much to abolish the common season terminology, if they choose. The press can do as much, and the Cycle Age as its share offers the New Year's present to the trade: that it will hereafter—beginning with the next number—completely eradicate from its reading matter all reference to new patterns as being limited to any particular season. There will be no "business policy for 1899," no "prices for 1899," outside of the advertising pages.

So leavened with terms that smack of season talk, season prices and season construction is the trade that considerable vigilance is required to uproot them, but the work can be done, and dealers may co-operate for the good of themselves by editing their local advertisements on the same plan which the Cycle Age will follow in its reading matter. By energetic pursuance of this plan it is believed that they will be rewarded by better prices in the summer and fall and ability to keep a larger stock without much risk of loss by depreciation if it should come about that they are obliged to hold a part of their stock from one season to the next.

### LANCING A PIMPLE

It is time to lance the pimple who edits the Cycling Gazette—the scavenger among trade journals. Being on the fringe of that group in the fourth estate which disdains responsibility for its writings, he naturally sees no special reason for adhering to the truth if a lie adroitly slipped into print will equally serve his purpose.

As a practitioner of malignant mendacity the pimple is facile princeps—which done into a language that will not perplex his intellectuals means that he is "the brightest of them all," or the most complete pimple ever protruded. Here is a specimen of his art:

And now to dispose of subjects concerning the Cycle Age, let us touch upon the anti-show letters which are being run in weekly installments. From reliable sources we have learned that these letters were written away last summer, when the show question was as remote as anything possibly could be, and that they were addressed to the Board of Trade's secretary. Perhaps you will notice that no date lines are connected with the various missives as they appear in print.

None of the manufacturing firms which lately received letters from the Cycle Age asking for opinions on the show question will dare to taint their honor by avowing that the printed replies were "faked."

For the Cycle Age has the originals in its possession.

### PROFITS OF MANUFACTURE

Much of the discontent afflicting the labor ranks of contemporary industry may be traced to blind interpretations of the widely and often injudiciously published figures of manufactures. A common error on the part of those whose knowledge of commercial science is bounded by the results of the application of the four fundamental operations of arithmetic to the statistics happening before them, consists in deducting the cost of materials and the sum of wages, combined, from the gross values of the products, and then in assuming that the remainder constitutes the profit of manufacture. No more erroneous or fallacious deduction could easily be made, for only analysis of any branch of manufacture, expertly made, can show how large a part of the gross proceeds from the sales of goods must be applied to miscellaneous or general charges and

overhead expenses. There is nothing which an expert statistician or census specialist avoids so scrupulously as putting questions which, if answered, would disclose the profits of any business; because he knows that if the questions are so framed he will either receive no replies at all, or else partial or incorrect replies intended to mislead. Therefore any and all deductions of alleged profits from whatever source are apt to be mere hazards of opinion.

The year 1890 was unquestionably a prosperous one, and there may have been an average profit of ten per cent in the manufactures of that year. Since then the customary rule has held good—more capital has been invested; there has intervened a long period of depression; the margin of profit has diminished, but the wages of labor have, as a rule, not suffered. The adjustment of commercial conditions is now again about complete, and there has never been a period in the history of this or any other country equal to the present in the United States in the following particulars:

1. So large a product made and distributed at so low a cost in ratio to the capital invested, either in production or in the mechanism of distribution.

2. So low a rate of profit sufficing to satisfy capital and to induce further investments.

3. So high a general wage rate earned by so small a number of hours of work.

4. So large a purchasing power in each unit or dollar of the wages or earnings, when expended for the necessities or comforts of life.

5. In no other previous period has the workman received so large a proportion of the joint product of labor and capital, or its equivalent either in money or goods.

From investigation experts are thoroughly convinced that ten per cent is the maximum margin of profit on all production in this country.

\* \* \* \*

Impressive expression is given to the value of our cycle export trade by stating that it is about one-fifth as large, both in money and volume, as the home trade. So confident a computation requires a few figures in order to make it stick. Let it be said that the gross valuation of the cycle products for the past year was \$44,000,000 or thereabouts; that is to say, 1,250,000 machines were sold at \$35 apiece—the average price at which the bulk of goods, fully equipped, were retailed. The value of the exports will reach \$7,000,000 for the same period. But their valuation is net. Add the trade discount to the exports, and the conclusion is approximately as stated at the outset. Or if exception is taken to this method of figuring, deduct the average trade discount from the gross sales in this country and divide by the net value of the exports—the result will still remain about the same. No notice is here taken of the value of materials, sundries and parts shipped abroad, but even making the freest allowance for this, it will not be necessary to materially amend the original statement.

\* \* \* \*

Consigning goods to foreign buyers is becoming a common practice with cycle making firms which are more eager than wise in extending their trade connections. It is egregious folly to court risks of this character, for if the goods are not readily accepted they are invariably offered at reduced valuation to parties who time their appearance in such transactions by previous arrangement with the original consignees. Recent disclosures show how easily some of our firms are victimized and how severely they have suffered in consequence of their indiscretions. One house made a heavy shipment of bicycles to Europe, failed to satisfy the buyers, reshipped the goods to three different ports, and finally was compelled to sell them at \$15 apiece, completely equipped, which was half of their invoice valuation. On this subject the following letter has been received:

We have a letter from a prominent bicycle dealer in Europe, not our customer to the effect that the trade is in a bad condition over there in many of the chief markets on account of the fact, as he states, that many consignments are made to parties over there on credit or sight drafts, payable there when the goods arrive. When the goods arrive the consignees raise a technical question with regard to them, forcing the consignors to make a liberal allowance before they take the goods, and many times making the net prices of the goods far below the prices they can be sold at with any profit; consequently the party obtaining them becomes the

worst kind of competition, as he is able to sell below legitimate prices, thereby demoralizing the trade generally.

No manufacturer should make a consignment to Europe to be paid for against sight draft when the goods arrive, without having a deposit in New York of at least 25 per cent of the amount necessary to cover the consignment. Still better, they should have the goods paid for in New York.

Chicago, Dec. 21.

MONARCH CYCLE MFG. CO.

Here is the foreign trader's opinion on the subject:

I have this year imported 12,000 American bicycles, being upwards of one-half of the entire import of bicycles in Scandinavian countries. The competition of England and Germany is nearly crushed, and the home manufacturers do not amount to much.

The worst competition I have to fight against comes from America itself, and arises from the fact that American manufacturers and jobbers ship goods here not paid for in full at New York. The goods are refused by the consignees and sold here at auction. The American bicycle trade suffers through this ruinous system. All orders and goods passing through my hands are invariably paid for in full at New York against bill lading, and the credit placed in New York same time as order. Every respectable firm on this side pays that way.

Why, then, ship goods over here not paid for when it is not necessary in order to do the business? It assists unscrupulous dealers on this side, and it will be sure to end disastrously for the exporters and do great harm to the regular trade generally.

Copenhagen.

JENS NIELSON.

\* \* \* \*

Should success crown the efforts which are being made to recruit the retailers for the purpose of making war upon the express companies, against whose extortionate charges all protest, there will be general rejoicing in trade circles. The movement is meeting with surprising encouragement from the cycle trade, which for a long time, through the instrumentality of the National Cycle Board of Trade, has sought to be rid of the oppression of the carriers. With characteristic blindness the manufacturers' organization arrogated to itself the solution of a problem which chiefly concerned the agents. It fiddled with the whole subject of transportation until it became a jest in the trade. It was not perceived—or if perceived then not emphasized until too late—that the agents paid all the costs of shipment, and for that reason should have been leaders in the reform. As petitioners whose chiefest concern—sentiment rather than real—was in lightening the burden of their customers, and not in sharing it, the board transportation committees never had any influence with the railroads on the rare occasions when they appeared before freight classification authorities. Their efforts to persuade the express companies to reduce their rates were for similar reasons impotent. It is the curious fact that throughout the whole history of the board there was exhibited a cynical disregard of the agent's true welfare and the improvement of the conditions which bind him to the maker and cause both to prosper. However, with decent luck, the agent should soon be in a position to favor the manufacturer with benefits proceeding from a reform the latter vainly attempted to secure, for fast freight as a substitute for express has been tested too often to fear a breakdown in the plan which is maturing, and parcels post will cover up any deficiencies which may appear in it.

\* \* \* \*

The show dates should have been much later. But when a promoter cannot get later dates, and is very certain that he will have a large attendance of the public in January, he is in a position to say to the manufacturing trade: "What are you going to do about it? I am in this business to make money. I find I cannot make it in March; hence I will make it in January. Very sorry, gentlemen—for you."—The Wheel.

Why should the show promoter make his needs superior to those of the trade?



# THE KING IN YELLOW

The time and money expended by the dealer in popularizing the wheel he represents is capital invested.

That capital will return dividends according as the bicycle he handles shall establish its value before the people.

The bicycle is a machine that deals with complex problems of mechanics and motion. Its builders must possess a deep acquaintance with the possibilities and limitations of the art—and, knowing them, must apply them rightly.

The makers of Stearns Bicycles have studied the needs of the business—their every improvement is toward the simplifying and perfecting of the bicycles they build.

The dealer who desires to maintain a successful business will build the structure of that business upon a good and permanent foundation.

The agents for Stearns Bicycles have found in the wheel they handle the full pledge of its value.

The trade on the Pacific Coast supplied from our branch store, E. C. Stearns & Co., 210 McAllister Street, San Francisco.

**E. C. Stearns & Company,**  
Syracuse, N. Y.

The trade in the Dominion of Canada supplied from our Canadian factory, E. C. Stearns & Co., 67 Adelaide St. West, Toronto, Ontario.

NEW TESTIMONIALS EACH WEEK.

# MILWAUKEE TIRES

PUNCTURE PROOF

**Pneumatic  
Single Tube**

**Resilient  
Easy Riding**

**FRED KRONER HARDWARE CO.,**  
Wholesale Hardware.  
LACROSSE, WIS., June 8, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF  
TIRE Co., Milwaukee, Wis.

Gentlemen: In reply to your inquiry regarding our experience with your puncture-proof tires, will say, that our customers, who have used your tires are perfectly satisfied and would not go back to other makes again, as they are now saved a great amount of time and trouble which they formerly had in repairing punctures.

We had a pair of your tires on exhibition in our store, which we road over a board full of tacks some 300 times, and then sold them to a rider who uses them on his wheel and is much pleased with them.

So far as we can see they cannot be punctured by rough usage, say nothing of ordinary riding. We can fully recommend them. Yours truly,

(Signed) FRED KRONER HARDWARE CO.

**MacDONALD & WESSELLS, Wholesale Bicycles and Supplies.**  
DETROIT, MICH., Nov. 19, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
We have thoroughly tested your puncture-proof tires, and found them to be even more than you claim for them. The writer has ridden a pair for the past two months and takes pleasure in recommending them.  
Yours very truly, (Signed) MACDONALD & WESSELLS, per D. MacDonald.



**DAVID AHERN & SON,**  
Sanitary Plumbing,

Steam and Hot Water Heating.

FOND DU LAC, WIS., DEC. 2, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF  
TIRE Co., Milwaukee, Wis.

Gentlemen: Your inquiry of Nov. 30 received. In reply will say that I have been using a pair of your tires since last May every day, and think they are in as good condition as when I got them. Never had one minutes trouble with them, something I cannot say for the two different makes that I used before I used yours. You have a good thing.

Yours respectfully,

(Signed) JOHN F. AHERN.

**HOTEL ST. JAMES, Geo. C. Rembaugh, Prop.**  
WINFIELD, KAN., Dec. 2, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen I have ridden a pair of your puncture-proof tires about 800 miles without an accident, although I have ridden over every broken bottle that presented itself, and have gone out of my way to run through hedge thorn brush. Formerly I averaged a puncture a week. Your tire is alright.  
Yours truly,

(Signed) GEO. C. REMBAUGH.

Representatives Wanted. Write for Prices and Other Information.

**MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.**

## A PROFITABLE SIDELINE

### Electrical Supplies May be Handled With Great Advantage in Small Towns

As a side line for bicycle dealers electrical supplies should command more than ordinary attention. That these goods are not more extensively handled is chiefly due to the false assumption, commonly entertained, that the dealer in them must be a sharp in electrical knowledge. If country retailers will get over this absurd notion they will find the line highly profitable throughout the entire course of the year.

#### Small Opportunities in Large Cities.

In the large cities—those having a population of more than 100,000—the electrical trade reaches a volume sufficient to support dealers handling nothing but electrical supplies, but the many smaller cities and towns with electric light plants cannot support separate dealers in this line. The consequence of this is that the electrical business is largely undeveloped outside of the large cities, for the reason that no one capable of handling the trade is at all interested in the matter. It is the testimony of a manufacturer of electrical machinery who contributes his impressions upon the subject to the *Iron Age* in the hope that hardware men will profit by his advice.

#### Large Opportunities in Small Towns.

The average electrical dealer in smaller places is either a young fellow fresh from school or college, who has picked up a smattering of electrical knowledge, and who, by reason of this, is looked upon by his associates as a budding genius, but who is absolutely destitute of business training or financial responsibility; or he is an electrical workman who has accumulated a little money and is equally without real business experience. It is, of course, impossible for such persons to handle any business with the greatest amount of success to themselves or satisfaction to their customers. Instead of being surprised that so many such people fail, the real wonder is that so many succeed; and the fact that many do succeed proves that the supply business has great possibilities for any man of business experience and sagacity who gives it the proper attention.

In many instances the electrical trade is handled by the electric light stations, but as they are interested only in such supplies as conduce to the extension of their own business, they develop the trade only to a very limited extent. An electric light station is not fitted for carrying on a trading business, and most of them would be only too glad to turn this business over to any dealer capable of taking care of it, and in addition would give this dealer all assistance and information in their power.

#### How to Start in Business.

The selling of electrical supplies does not call for any more knowledge than any other line of merchandise, and is, in reality, not nearly so complicated as many imagine. The way to start a successful business in this line is to employ some young man with a little electrical knowledge, let him attend to the electrical questions, having him under strict supervision to see that the business is handled on conservative lines. A good start can be made with a very small outlay—a few lamps of the style used by your electric light station, some lamp cord, sockets, switches, a few electric bells, batteries,

etc., buying everything in small quantities and expanding the line as the growing business demands. The retail profit on almost all items is large, and in many other ways the electrical line works in well. In the fall and winter months the sale of incandescent lamps is large, and as these are continually being broken or burning out, this fact assures a steady business.

#### All the Year Round Trade.

In the spring and summer months a large business can be worked up in fan motors, this line running rapidly into money with good profits at a time of year when general trade is dull. The man who has a bicycle repair shop is particularly fitted for electric wiring and simple repairing, as most of the troubles in common electrical apparatus are readily located and repaired by anyone with ordinary mechanical ability. Most of these defects show up in the fall when people begin using lights extensively, and the busy season in electrical wiring and repairing is just when the bicycle repair man is enjoying a period of leisure.

#### The Business is Readily Learned.

Most people look upon the electrical business as a matter entirely beyond them, but there is absolutely no reason for such a belief. It would not have been possible five years ago, or even two years ago, for the bicycle dealer to enter on this line, as the manufacture of electrical appliances was largely in the experimental stage. The past two years, however, have practically standardized this line, experience and use have sifted the good from the bad, and there is no more danger of change in this line than in any other line familiar to the dealer.

#### Guide for Buyers.

The National Board of Fire Underwriters issues free to any applicant a book called "National Electrical Code," giving the approved practice in all electrical matters. This, in connection with their "List of Electrical Fittings," will prove a sure guide to the buyer until he can rely upon his own judgment. The difficulty the retail buyer will first experience is to find out where he can buy these various articles to best advantage.

#### Profitable Merchandize.

That the addition of electrical supplies by the retailer would largely increase his sales and provide him with a new line of profitable merchandise is an indisputable fact. The handling of this line will place the electrical supply business in the hands of experienced business men, who are fully capable of taking care of the consumer, and who will at the same time command the confidence of the electrical jobber and manufacturer. This is a condition that is longed for by all electrical jobbers and manufacturers, and would result in a development and expansion of the use of electrical supplies in the smaller cities and towns that is at present but dimly realized.

#### Chain "Fake" of the Century.

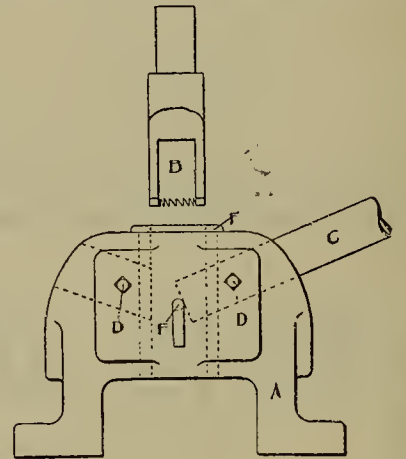
The cycle trade in this country has heard enough of the magical virtues ascribed to the Simpson lever chain to read with interest the humbuggery which, in connection with it, the sly Hooley practiced on people whose confidence he

gained. Hooley was recently examined for the purpose of ascertaining his connection with the \$1,250,000 Simpson Lever Chain and Cycle Co. It was shown that the price of the chain patents was \$1,000,000. One of the directors of the company was asked what made him think the patents were worth so much, and he replied that Martin Rucker told him in the presence of Hooley that no bicycle would be made in future without being fitted with the Simpson chain. Hooley sold him 20,000 shares for \$25,000. Not the least interesting part of this witness' examination was the production of a number of telegrams from Hooley, in which it was said: "Everything going splendidly; just received offer for American and Canadian patents for £5,000,000, with a royalty of one dollar." Before the shares were allotted Hooley had bought the patents for \$75,000.

### SHAPING OF TUBE ENDS

Fitting Tube Ends to Cylindrical Surfaces at an Angle by Means of End Mills.

Many cycle builders whose machines have flush joints use a construction which requires that the tube end be formed to fit against the other tube forming the joint. To obviate both expensive jigs and machinery and the somewhat common practice of forming the ends by hand filing, the end milling cutter may be used to advantage. The end mill can be used in an ordinary drill press and the jig necessary for holding the work can be made so sim-



ple that the expense of rigging up will be slight. The arrangement of the jig and its relative relation to the end mill when both are in place on the drill press is shown in the accompanying illustration. The mill, B, is a regular end mill of an outside diameter equal to that of the tube to which the formed tube joints, which in the case of forming the forward ends of the upper and lower frame tubes will be the steering head. The thickness of the cutting wall should be in the neighborhood of an eighth of an inch. The casting forming the jig is arranged with a vertical hole down through its center in which hole an accurately bored steel bushing, F, is placed to act as a guide for the cutter. From either side of the casting a hole is drilled entering the central hole. One of these holes has the same angle with the vertical hole as has the lower frame tube with the steering head of the bicycle frame for which the tubes are being formed. The other hole has the angle of the upper bar with the head, and for bicycles in which the seat mast and steering head are parallel, this angle is also the proper one for forming the rear end of the upper frame tube. A transverse slot through the jig receives a pin, E, which acts as a stop for the tube, C, when it is first placed in the jig preparatory to the forming process. As soon as the tube has been pushed down to the pin, the screw, D, in the side of the jig is

tightened sufficiently to hold the tube in place. The pin, E, is then withdrawn and by a movement of the operator the mill, B, is lowered and the cutting commenced. The cutting obtained by this process not only leaves the tube end with the proper amount of metal taken out, but with the ends of the tube wall beveled to fit accurately against the tube it is to join. A little practice with the device will enable the operator to turn out the work very rapidly. The vertical hole through the center of the jig should extend clear through the casting so that the stubs cut off from the end of the tubes may fall down out of the way.

**TRADE MOVEMENTS**

**Big Water Cycle Company Formed—Connecticut Concern Sells Out—Small Spaulding Settlement.**

The International Water Cycle company of San Francisco has been incorporated with a capital stock of \$250,000, of which \$130,000 has been subscribed. The directors are Franz O. Winqvist, Henry J. Gerdau, Emil Olssen, Thomas Le Huguet and J. F. Pfetch.

The entire property and assets of the Hopkins & Allen Manufacturing company, of Norwich, Conn., manufacturers of fire arms and bicycles, have been bought by a syndicate and an entirely new company will be organized. The manufacture of bicycles will be discontinued.

Most of the merchandise stock of the Spaulding Machine Screw Co., of Buffalo, having been sold under the receivership before the sale of the plant at mortgage sale to John R. Keim, which wiped out most of the assets, there is only \$7,500 on hand, which, with the book accounts, is all the assets that remain to be divided between the creditors.

A demurrer in an action for \$12,000 damages for trespass entered against Sheriff McCormack, of Laporte county, Ind., for seizing the machinery of the Allen Mfg. Company, which made bicycles in the Michigan City prison, under writ of replevin secured by the receiver, has been overruled. The judge held that under the Indiana law a sheriff can take property only on a writ of replevin from a defendant in a suit and is liable to action for trespass if he oversteps himself.

Oscar S. Lear, a bicycle dealer of Columbus, O., has established a branch in Cincinnati. Just now he is handling nothing but typewriters there, but in the spring will put in a stock of bicycles. During the past summer he operated a store in Springfield, which was closed temporarily some weeks ago for the winter, but in the spring it will be opened again.

The copartnership formerly existing between Kelly & Haworth, in Greentown, Ind., has been dissolved, and the firm is succeeded by the Kelly Mfg. Co. in the manufacture of tire repair tools.

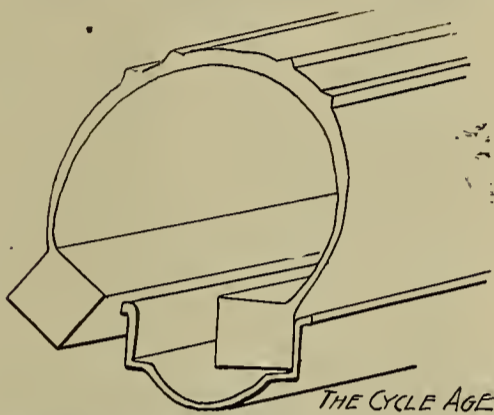
**TUBELESS CLINCHER TIRES**

**English Designs Involving Two Principles—How Air Pressure Seals Meeting Edges Air Tight.**

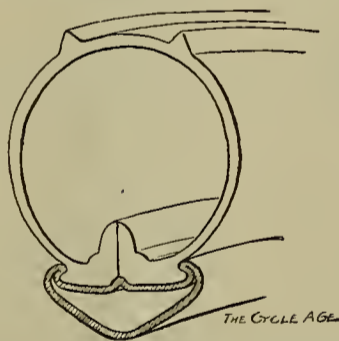
In the illustration is pictured the construction of a new English tubeless tire of the clincher pattern. The edges of the tire are made of flexible canvas formed into square section and covered on all sides with a thin layer of rubber. The rim is made with parallel upturned edges and a depressed center, so that while shoulders are formed on which the square edges of the tire rest, the edges do not touch the rim where they come together. The distance between the two edges of the rim is slightly less than the normal distance across the two squares so that when the

tire is in place on the rim the joining faces of the square edges will be pressed tightly together. The squares being unsupported at their joining corners, the increase of air pressure inside the tire, upon depressing the interior of the tire toward the axis, suppositiously, causes the joint to become still more tight and the tire to be still more securely held on the rim. The natural tightness with which the tire fits the rim allows it to be ridden deflated without danger of coming off and the square edges being higher than the rim prevents injury to the tire when it is ridden deflated.

The unsupported center of the above tire is a new point in the development of tubeless clincher tires. In the lower illustration is shown a section of a popular



English single tube tire, the Trench, in which the large contact surface between the joining edges of the tire is attained by means of triangular projections above bases which have the same approximate form as an ordinary clincher double tube tire. These projections thus give practically the same results as the large square bases of the tire first mentioned, with the exception that the compressive power is not as strong at the top of the joint as at the bottom, where in the case of the square bases the pressure is the same both at top and bottom or with a slightly stronger pressure at the top of the joint. In the lower tire as in all forms of such



tubeless clincher tires with the exception as stated, of the square based one, the bottom of the tire lies flat on the rim from edge to edge.

**Reduction Due to Automatic Machinery.**

Announcement is made that Humber & Co., Ltd., of England, who have heretofore strongly maintained that it was impossible to build good, serviceable bicycles to sell for less than \$100, will make a specialty the coming season at their great Coventry factory of a line of road machines, in models for men and women, to list at \$52.50. The production of these, which, it is said, will be of distinctly Humber quality and bear the Humber trade-mark, to sell at this price, is made possible by the recent introduction of labor-saving machinery.

**Wood Rims in Scotland.**

American firms wishing to push their goods in Scotland should know that wood rims are well regarded; indeed, of late it has been very common to see British

bicycles with their metal rims painted a buff color, and in some cases grained in imitation of wood. Many British manufacturers are fitting wood rims to their new models.

**Profits of English Makers.**

"Kick 'em out," yelled a holder of half a dozen or so shares at a recent English cycle company meeting, referring to his directors. Why? Because, for the first time on record, the dividend had fallen below 10 per cent! This incident in part reveals the temper of stockholders in English concerns. Late company reports are as follows:

	Loss.	Profit.
(a) Smith Stamping Co. ....		\$38,925
(b) Triumph Cycle Co. ....		47,610
(c) Australian Cycle & Motor Co. \$40,000 .....		
(d) Townsend Cycle Co. ....		9,135
(e) Beaton Cycle Co. ....		8,165
(f) Lloyd's Cycle Fitting Co. ...	No dividends.	
(g) Empire Tube Co. ....	20,000	
(h) Coventry Cross Cycle Co. ..		9,190
(i) Progress Cycle Co. ....		16,840
(j) Humber & Co. ....		110,715
Preston-Davies Tire Co. ....		15,935
(k) Singer Cycle Co. ....		135,265
(l) Swift Cycle Co. ....		169,725
(m) Components Tube Co. ....		5,045
Reuben Chambers (fittings)...	9,640	
(n) Rossleigh Cycle Co. ....		33,740

- (a) No dividend was declared.
- (b) A dividend of 5 per cent was declared.
- (c) The fate of this company will be determined in February at a meeting of the stockholders.
- (d) A dividend of 5 per cent on ordinary shares was declared.
- (e) No dividend was declared. The sum of \$6,000 was passed to reserve.
- (f) As a result of orders booked at the shows this concern hopes to pay a dividend next year.
- (g) This concern will be wound up at once.
- (h) A dividend of 5 per cent was declared.
- (i) A dividend of 7 per cent was paid on preferred stock and 10 per cent on common stock.
- (j) A full statement of the affairs of this company recently appeared in this paper.
- (k) A dividend of 4 per cent was declared on common stock and 5½ per cent on preferred stock.
- (l) A dividend of 6½ per cent was declared on preferred stock and 4 per cent on common stock.
- (m) The actual trading profit of this concern was \$300, the directors refunding fees to the amount of \$3,000. The remainder was obtained from dividends on investments of company funds.
- (n) This concern also makes motor vehicles. A dividend of 10 per cent was declared on common stock and 6 per cent on preferred.

**Cancellation of Contract.**

The Cycle Age has been requested to give publicity to the following self-explanatory letter:

To the Editor:—You are hereby notified that the contract and agreement heretofore entered into between the American Electric Vehicle company and the Indiana Bicycle company, whereby the latter company undertook to build the American electric vehicles for this company, was canceled and terminated October 4, 1898, and said Indiana Bicycle company now has no right or authority to build or sell the American electric vehicles or vehicles made in accordance with the patterns or under the patents of the American Electric Vehicle company, and has no authority to deliver said vehicles, although contracted for or commenced during the continuance of said contract. The vehicles of the American Electric Vehicle company are covered by letters patent owned by this company, and any purchasers of such vehicles from unauthorized parties will render themselves liable for infringement.

AMERICAN ELECTRIC VEHICLE CO.  
By C. E. Corrigan, General Manager.

**Pope Bevel Gears in England.**

The Pope company has made arrangements with Brown Bros., a large English supply house, whereby they will carry a complete line of frames and gears for making bevel-gear chainless bicycles. Brown Bros. will supply the English and European trade.

W. J. Bloom, a well known jobber of bicycles and parts in London, is at present in Chicago, and can be addressed from now on in care of Cycle Age.

# COMMERCE IN FOREIGN MARKETS

**OCEAN FREIGHT RATES ON BICYCLES**

Ocean freight rates from the port of New York to some of the principal points of destination and distribution for American bicycles are enumerated in the table here-with presented. The rates are all based on cubic measurement, 40 cubic feet being a ton measurement. One crated bicycle will measure about 10 cubic feet.

- Copenhagen, \$4.85 and 5 per cent per 40 cubic feet.
- Christiania, \$4.85 and 5 per cent per 40 cubic feet.
- Stockholm, \$6.06 and 5 per cent per 40 cubic feet.
- Hull, \$4.85 and 5 per cent per 40 cubic feet.
- Newcastle, \$4.85 and 5 per cent per 40 cubic feet.
- Glasgow, \$4.85 and 5 per cent per 40 cubic feet.
- Liverpool, \$3.03 and 5 per cent per 40 cubic feet.
- Manchester, \$3.64 and 5 per cent per 40 cubic feet.
- London, \$3.64 and 5 per cent per 40 cubic feet (prompt).
- London, \$4.28 and 5 per cent per 40 cubic feet (warehouse delivery).
- London, \$2.43 and 5 per cent per 40 cubic feet (yearly contract).
- London, \$3.64 and 5 per cent per 40 cubic feet (yearly contract warehouse delivery).
- London, via Southampton, \$4.28 and 5 per cent per 40 cubic feet.
- Hamburg, 10 cents per cubic foot, net.
- Rotterdam, 10 cents per cubic foot, net.
- Antwerp, \$3.64 and 5 per cent per 40 cubic feet.
- Havre, 12½ cents per cubic foot and 5 per cent.
- Marseilles, \$6.74 and 5 per cent per 40 cubic feet.
- Trieste, \$6.74 and 5 per cent per 40 cubic feet.
- China and Japan, \$7.88 net per cubic feet.
- Bombay, \$7.88 and 10 per cent per 40 cubic feet.
- Calcutta, \$9.09 and 10 per cent per 40 cubic feet.

**CANADA'S PREFERENTIAL TARIFF**

It is admitted that even with the 25 per cent. tariff advantage it is impossible for British manufacturers to compete with us in Canadian markets. It is further admitted that the disposition to take advantage of the preferential duty favoring Great Britain is offset by a tendency on the part of the Canadian importers to await the outcome of the present reciprocity negotiations at Washington before transferring orders from the United States to British houses. Taking the four months ending with October, during which the preferential duty has been in force, the importations of British goods appear to have slightly increased on the bulk of the list as compared with the corresponding periods of 1896 and 1897.

**LIST PRICES ON ENGLISH CYCLES**

Many of our bicycle makers imagine that the list prices of all English models, with few exceptions, are about the same as are found in this country on machines of equal grade and reputation. In disproof of this belief, the following published quotations of two representative English cycle making firms—net cash to the rider—are submitted:

**Bayless Thomas & Co.'s Models and Prices.**

	Price.
First grade men's machine .....	\$33.50
First grade women's machine .....	36.00
Second grade men's machine .....	60.00
Second grade women's machine .....	62.50
Boys' machine .....	43.00
Girls' machine .....	44.00
Tandem ..	115.00

**Premier Models and Prices.**

	Pounds.	Price.
Men's roadster .....	31	\$105.00
Ladies' roadster .....	29	105.00
Road racer .....	25	95.00
Men's roadster .....	31	87.50

Ladies' roadster .....	30	90.00
Men's roadster .....	31	72.50
Ladies' roadster .....	31	72.50
Road racer .....	26	70.00
Men's roadster .....	32	62.50
Ladies' roadster .....	31	65.00
Men's roadster .....	32	52.50
Ladies' roadster .....	32	57.50

The high prices asked for juveniles, as well as the evident determination to get more for women's models than for men's, are distinguishing features of the foregoing quotations.

**NO BANKING FACILITIES ABROAD**

The defeat of the bill to incorporate the International American Bank leaves American merchants without any banking facilities in the new dependencies, except those which may be provided by private banking houses or by the old methods of buying exchange through London for the benefit of British bankers and British exporters. It is possible that Representative Hill of Connecticut will succeed in his plan for passing the senate bill to incorporate the International Bank after the holidays, but there is some doubt both as to getting time for it and as to getting a majority of votes.

One of the amendments adopted authorized the bank to do business in all foreign countries by means of branches, and another amendment authorized any body of capitalists raising a capital satisfactory to the comptroller of the currency to take advantage of the provisions of the bill. These provisions would have paved the way for American banking in the dependencies. There is nothing to prevent private banks of discount and exchange from establishing branches, but it is doubtful whether they will have sufficient prestige to compete with the great English banks whose immense capital and control of the exchange business have given them the monopoly in nearly all countries of Latin America, Africa and Asia.

The reason for the defeat of the International Bank bill seemed to have been a vague prejudice against granting the power of establishing branches to one bank without granting it to all. It was not exactly apparent whether there was a prejudice against branches as such, or only against granting the power to one bank without granting it to existing national banks. The roll-call in the house showed that seventy-two Republicans were among the 100 members who did not vote. If they had been present and voted for the bill, even with the absent Democrats recorded against it, they would have brought it within one vote of success.

If no legislation is obtained at the present session, it is not unlikely that the entire question of money and banking in the dependencies will be referred by congress to a special commission appointed by the president, or to a joint committee of the two houses.

**EXHIBITION FOR FOREIGN BUYERS**

Congress has authorized the holding of a national exposition of American products and manufactures especially suited for export, at Philadelphia, in the coming year. The main objects of the exposition are: (1) To show to foreign buyers the goods American manufacturers offer for export, and to establish their superiority; (2) to show to American manufacturers the character of the goods they must compete with in the open markets of the world; (3) to show how American goods should be packed, labeled

and put up for export trade; (4) to bring the manufacturers and merchants of the United States in direct personal contact with the principal buyers, merchants and bankers of foreign countries.

The exposition will remain open for five months from May 10.

**AMERICAN DROP FRAME MODELS ABROAD**

American bicycles, particularly ladies' models, are frequently seen on English, Irish and Scotch highways. Many of our high grade models are well represented in the shops of Edinburgh and Leith, as are most of our cheap patterns. One of the best known American firms has only been moderately successful in introducing its models, even at a very reduced price, because the managers have up to the present refused to change them to suit British tastes. Another equally well known firm is able to sell many machines in Leith at a figure slightly in advance of the highest price usually charged in the United States, largely because they have met British tastes and requirements. One particular concession they make is a choice of any tires, British or American, detachable or otherwise.

**OPENING TRADE IN PORTO RICO**

Private advices state that Perry D. Gath, formerly a very successful bicycle dealer here, is now in San Juan, Porto Rico, selling bicycles for a well known Ohio concern. He reports that he is selling more machines there than he did here in 1894, which means a large number to those who know how many he sold here then. A paper published in San Juan, which was received here recently, contained a large display advertisement of Mr. Gath's business. He is selling a good many machines to soldiers and some to natives, who take delight in spinning over the beautiful roads of Porto Rico. Mr. Gath delights in novelty and adventure and is just the man to open up the cycle business in that newcomer of the United States.

**INVENTORS' BANK IN AUSTRIA**

The Austrian government has granted a concession for an inventors' bank. The capital is to consist of \$100,000, in shares of \$80 each. By a resolution of the board of directors this amount can be raised to \$200,000, and to \$400,000 on ratification by the government and stockholders. The aim of the bank is to be the utilization of inventions and patents for the mutual benefit of the inventor and the bank, which may involve the erection of factories for the production of patented articles, the founding and management of trade enterprises for the sale of these articles, and the right of the bank to carry on all other legally licensed businesses which are adapted to encourage the activity of inventors in Austria. The capital for this new enterprise has not yet been procured. The privilege has been granted for six months. If the company is not formed, the concession is withdrawn.

During four months from July 1, last, nearly 1,000 bicycles were stolen in the city of Chicago.

The emperor of Morocco, who only a short time ago purchased a luxurious cycle-wheeled cab from one of the largest manufacturers, has now forbidden the use of the cycle in his domains.





TRADE MARK



# To Manson Agents



For 1899 THE MANSON CYCLE CO. will make the DUNLOP DETACHABLE TIRE the regular equipment on their Models 32 and 33 at no extra wholesale or retail charge.



## The American Dunlop Tire Company

134 Lake Street, Chicago.

Belleville, (North Newark) N. J.

36-38 Lombard St., Toronto.



TRADE MARK



MAKE HAY WHILE THE  
SUN SHINES

... SECURE A ...

**SNELL AGENCY**

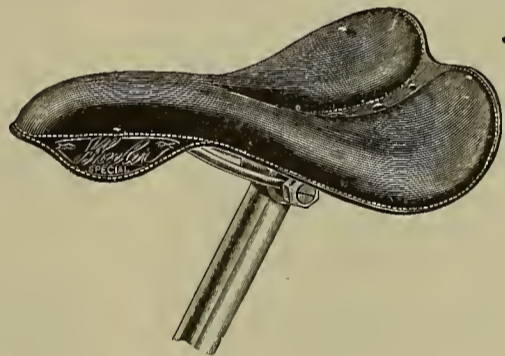
BEFORE THE TERRITORY IS TAKEN.  
THE SWELL LINE of the season.

**STRENGTH,  
BEAUTY,  
DURABILITY**

THREE IMPORTANT ESSENTIALS. They are yours if you buy SNELL BICYCLES. 100 CENTS VALUE in every dollar invested. Catalogue on application. . . . .

**The Snell Cycle Fittings Co.**  
TOLEDO, OHIO, U. S. A.

Mention The Cycle Age



## WHEELER SADDLES

HAVE ALWAYS BEEN MADE WITH THAT  
CURVE IN THE BACK.

OUR LINE FOR '99 COMPRISES BUT FOUR DISTINCT MODELS:

- "EXTRA" Woman's . . . . . Broad, Soft and Easy. ❁❁
- "EXTRA" Men's . . . . . Hygienic and Durable. ❁❁
- "SPECIAL" Roadster . . . . . An ornament to any wheel.
- "CORK-TOP" Racer . . . . . Light and Graceful. ❁❁❁

These saddles are made and finished in the careful and stylish manner that has always characterized Wheeler Saddles.

Send for samples of the most popular saddle on the market.

## THE WHEELER SADDLE CO.

1427-1457 Woodward Ave., DETROIT, MICH.

Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT.  
New York Distributing Agents: HARTLEY & GRAHAM.

## ELECTRIC TEMPERING

### Small Articles Conveniently Hardened by Electrolytic Bath —Correct Heat Produced Instantly When Required

New methods for hardening metals and otherwise changing their molecular structure seem to be coming to the surface lately with great frequency, probably on account of the unusual activity which has marked the iron and steel manufacturing industries and the ceaseless activity in the laboratories of large plants which the progress of metallurgical science and the exigencies of competition have called forth. An interesting process in this line of work is recorded in patent No. 614,928, granted to George D. Burton, of Boston, on November 29. It refers to a method for tempering, and also annealing metals by immersion in an electrolytic bath. The object of the process is not only to facilitate the operation, but also to avoid scales on the surface of the metal. Briefly described, the process consists in subjecting the metal to the action of an electric arc formed between it and an electrolytic bath until the proper heat is obtained, then cutting off the current and permitting the article to be cooled in the bath, the heating and cooling operations being performed without removing the article from the bath.

#### Tempering Part of an Article.

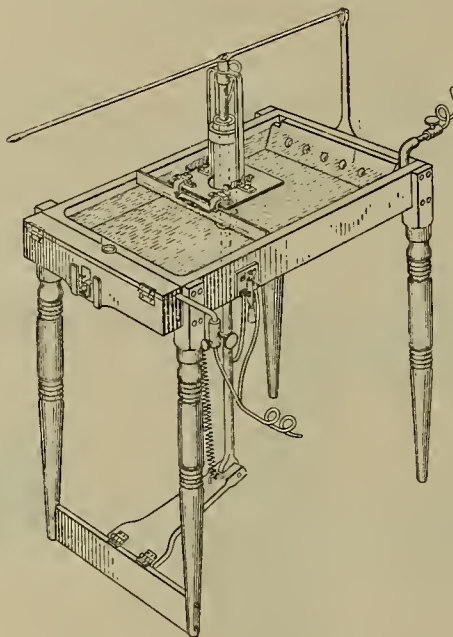
An important application of the method has reference to the hardening of a portion of a metal tool or other article by immersing only the portion to be hardened while the remaining portion is kept out of the bath, practically unheated and unchanged.

The accompanying illustration shows an apparatus for carrying out the process. It comprises a tank to contain the electrolytic solution, lined with material which is a non-conductor of electricity. An anode plate is placed in the tank at any convenient point and has a contact surface much greater than the area of the article to be heated. It is composed of lead, carbon or other suitable conductive material and is provided with a fixed rod extending above the top of the tank. The plate is protected by a non-conducting screen, and is connected with the positive pole of an electric source. An upright cylinder is supported in a socket in the bottom of the tank and is composed of an outer tube of wood and an inner tube of asbestos, wood or rubber. A wood plunger with a longitudinal groove and a metallic conductive cap is arranged to play up and down in the cylinder, and a depending bracket is hung upon the cap. This bracket has two arms with out-turned flanges at their lower ends, to which a work-holder is attached. The work-holder is made in various forms according to the work to be done, being usually provided with clamping jaws and springs for holding the work against a non-conducting plate while the springs also serve as conductors for the electric current. The plunger—and consequently the work holder—is lowered by a foot-lever and raised by a spring so as to facilitate the immersion or withdrawal of the work from the solution. A conductor is connected at its inner end to the metallic cap on the plunger and lies in the groove thereof. A switch is preferably disposed on one side of the tank and provided with two contacts and a switch-lever. The outer end of the conductor is connected with one of the contacts, and the other contact is

connected with a branch of the main conductor, leading to the negative pole of the electric source. When the switch-lever is in operative position the current passes from the anode-plate through the solution to the work and an arc is formed between the work and the solution, the current passing to the negative pole through the clamping-jaws, studs on the bracket arms, springs, bracket, cap, and conductor in plunger, switch, and main conductor.

#### Suitable for Intermittent Work.

The work remains in this position with the current on until the portion thereof to be tempered is sufficiently heated by the arc, and then the switch is operated to break the circuit. The arc then disappears and the solution immediately comes in contact with that part of the work which has been heated by the arc. The work is held in this position and is cooled by the action of the liquid in the



same liquid in which it was heated. When sufficiently cooled, the lever is released by the operation of the spring, causing the work-holder to lift the work out of contact with the solution. The work is then taken from the work-holder and another article placed therein and the operation repeated.

A special arrangement for annealing by resting the metal articles in contact with a conductor in the bath is provided at one end of the tank. It seems to be of less direct application to the bicycle and allied industries than the tempering process and is therefore not described here.

#### Chemical Composition of Bath.

In regard to the chemical ingredients used in the solution the inventor states that the electrolyte should be of a specific gravity greater than that of water, and it may consist of an acid or an alkaline watery solution, preferably the latter.

The chemical ingredients added to the water produce the necessary density in the bath to cause the heating action to take place, increasing the conductivity thereof and facilitating or enabling an arc to be formed between the metal and

the liquid. A density of at least 1.025 to 1.105 should be used. When it is desired to harden the metal to a considerable degree, the bath should be of a greater density, and consequently of a higher conductivity, say 1.200 to 1.250.

For hardening steel or iron a bath of chlorid of sodium and sulfuric acid may be employed. He has used for this purpose a bath composed of seventy-two gallons of water, three gallons of sulfuric acid, and fifty pounds of chlorid of sodium or rock-salt.

For annealing or softening iron or steel he has used a solution composed of a barrel of water, five pounds of borax, and five pounds of sal-ammoniac. This bath will answer also for the softer metals, such as brass or copper and compositions of these metals.

So far the process seems to have been used chiefly in the manufacture of saw blades for the purpose of tempering the cutting edge without making the rest of the blade brittle, but its availability for other purposes where thin steel articles must be tempered on the surface or in part seems obvious.

### QUICK GEAR COMPUTATION

#### Simple Manner of Instantly Finding the Gear of Chainless and Gear-Cased Bicycles.

It frequently happens that riders and others wish to compute the gear of some bicycle without going through the labor of counting the teeth of both sprockets and of figuring up from the data thus obtained. A method which is approximately accurate and which entails no counting and but little mathematics is as follows: The cranks are first brought to some definite position, say either horizontal or vertical, and while they are in this position a mark is made on the rear wheel rim where it crosses the line of the rear stay tube or any other permanent point which may be used as a guide. The cranks are then turned through one complete revolution and the new position of the mark on the rear rim noticed. If the diameter of the rear wheel be now multiplied by the number of revolutions it has made while the cranks have made but one revolution the gear of the machine is obtained.

For example, suppose that a 28-inch rear wheel has made two and three-quarters revolutions to the cranks' one, the product of this number and twenty-eight is seventy-seven, the gear of the bicycle. As machines are usually geared to more than twice the diameter of the rear wheel it is only necessary to observe through what part of a revolution the mark has advanced over its original position, and this can generally be done with sufficient accuracy by passing judgment with the eye, although if desired the spokes in the wheel can be used as a guide. If the machine has the appearance of having a very high gear the rear wheel must be watched to see if the revolutions made are not three and a fraction instead of two and a fraction. This method of gear computation is obviously very useful in determining the gear of a bicycle in which the driving gear is encased.

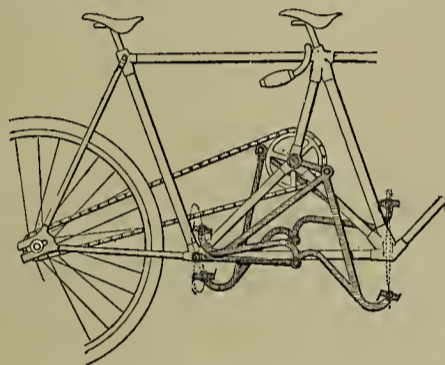
### Important Engineering Work.

Good roads decrease taxation, decrease living expenses, increase property values, promote prosperity, and advance civilization. Macadam roads, properly constructed, are the most satisfactory and cheapest roads yet invented. All road work should be done with a view to its permanency. Trained labor and competent engineering supervision are as important in building public wagon roads as they are in the building of railroads.

## RECENT PATENTS

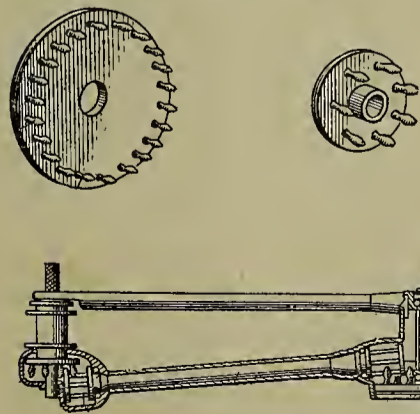
### Up and Down Driving Movement for Tandem—Flush Joint Hanger—Auxiliary Handle Bar Grips

**Tandem Driving Gear.**—The object of this gear is twofold; it dispenses with the second chain and its sprockets and substitutes for the usual rotary pedal motion an approximately vertical pedal path. The frame is substantially like that of an ordinary tandem and to each end of the rear hanger shaft is pivoted a straight bar or link, which has a general horizontal position. To the front ends of these two links are pivoted triangular levers, the upper angles of which are connected to the ends of short cranks attached to the driving sprocket axle ends. The sprocket instead of being at the bottom of the frame is supported by a bracket hung about midway up the frame



and braced by three tubes running respectively to the front seat cluster, the rear hanger and the frame lug which takes the place of the usual front hanger. The pedals are attached to the lower corners of the triangular levers and have an up and down movement, the exact path of which is shown by the dotted lines in the illustration. It will be noticed that the path of the rear pedals is much shorter than that of the front. Without considering the question of the desirability of the vertical pedal movement or of the propriety in a tandem of a movement in which the rear rider's left foot is down when the front rider's left foot is up, it seems that the designer of this machine should have carried out his lever arrangement in such a way that both the front and rear strokes would be of the same length. The inventor is Edgar Courtwright, Tacoma, Wash.

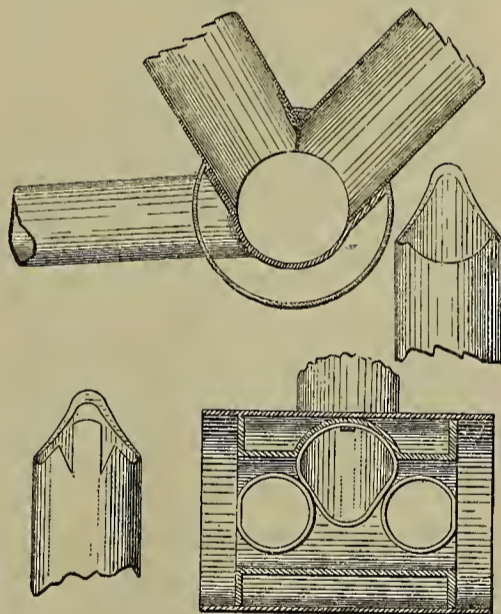
**White's Pin Gearing.**—The front driving gear has a series of pins arranged around its inner face, the pins engaging rollers extending longitudinally but arranged in an annular set around the



front end of the driving shaft. The gear set at the rear end of the driving shaft is similar, the pinned wheel being on the hub of the rear wheel. The pins used are inclined slightly to correspond to the inclination of the driving shaft from a

right angle in its relation to the crank axle. The main features of the gear lie in the prolate spheroidal ends of the pins on the gears and the freely rotating rollers which they engage. The design of the parts is such that before a pin leaves its engaging roller the next pin has picked up the next roller. The inventor claims that as there are always two pins in engagement, the outward lateral pressure of one pin against the roller is counteracted by the inward lateral pressure of the adjoining pin against the adjoining roller. There will be then no tendency to rattling. The inventor is E. E. White, Oshkosh, Wis.

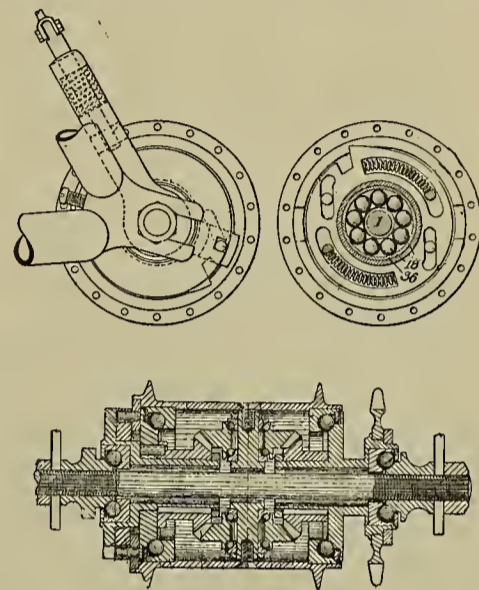
**Brennan's Flush Joint.**—The invention comprises a crank hanger flush joint, in which ample brazing surface is obtained. The barrel is merely a plain shell with holes for the passage of the frame tubes at their proper locations and angles. Inside of the shell is another barrel shorter and smaller than the exterior one and separated from it by out-turned flanges. The interior barrel has frame tube lugs similar to those on an ordinary outside joint hanger bracket. The tubes are inserted through the holes in the outside shell into the sockets or lugs on the inside barrel, their ends having been previously scarfed to conform to the curvature of the barrel. On one of the main



frame tubes a tongue is left to be bent and hooked around the lower corner of the adjoining tube after the two are in place before the brazing. The brazing may be done by running the spelter down around the tubes from the outside, thus obviating heating the metal hot enough to melt spelter loaded inside of the joints, as is required in brazing some forms of flush joints. The inventor is Patrick Brennan, Syracuse, N. Y.

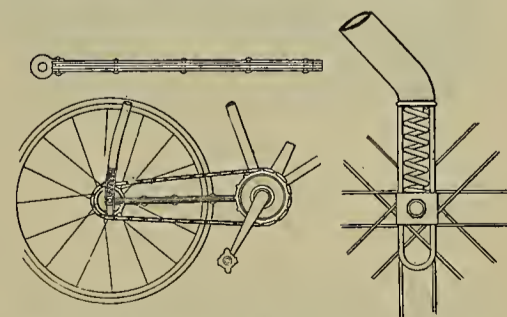
**Changeable Driving Gear.**—In the rear hub and upon the stationary axle are placed two rotary sleeves, each of which extends nearly to the middle of the axle. At the adjacent ends of the sleeves are attached bevel gear wheels meshing with either one or a pair of duplicate bevel pinions mounted in a transverse frame spanning the axle and secured to the hub barrel by means of small screws. The sleeves are on ball bearings, both on the axle and within the hub barrel, and the left one has a spring cam locking

device operated by a small rod or wire running to some hand latch in convenient reach of the rider. The main feature of this locking device is a pair of blocks which by the movement of the cam may be put either in or out of engagement with the hub barrel, allowing the left sleeve to be locked in its relation to the hub, thus locking, through the medium of the intervening parts, the rear chain sprocket with the hub itself and causing the rear wheel to rotate with the same velocity as the rear sprocket. When the cam is held so that the locking blocks cannot engage the notches in the hub barrel, the left sleeve, with its bevel gear,



is caught by means of the operating latch so that it cannot revolve in any direction, and the right sleeve in revolving gives through the medium of its gear both a rotary and an orbital movement to the transverse gears. This orbital motion around the axle has just one-half the velocity of the right sleeve and gear, so that since it is transmitted to the hub barrel the rear wheel will now have but half the velocity of the rear sprocket. The principal advantages claimed for the gearing is that while the use of a differential gear of this sort is not new, this particular construction allows ready adjustment of the parts through the medium of the simple ball bearings and easy removal of parts from either end for cleaning, etc. The inventor is F. P. Snow, Lynn, Mass., assignor to the Stanton Mfg. Co., Boston.

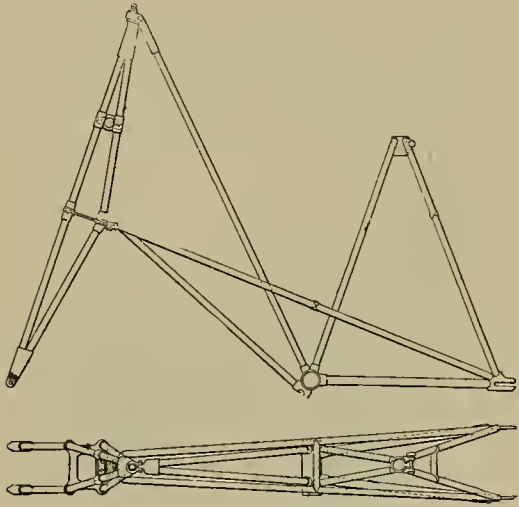
**Cushion Forks.**—To furnish a frame cushioned against vertical jars yet rigid with long narrow vertical loops on which slide blocks to receive the wheel axle against lateral strains the lower ends of the front forks and rear stays are fitted ends. Between the block and the stop at the upper end of each loop is placed a spiral spring. The rear forks are not of tubing, but are each made of several bars of light spring steel, either flat or elliptical in section, and bolted together at several points. The forward end of each of



these laminated fork bars is brazed tight to the hanger, while the rear end is furnished with a lug bored to receive the axle end. The rear axle thus has a vertical cushioned movement in relation to the rear stays and carries the forks up or down with it, the latter not only bending

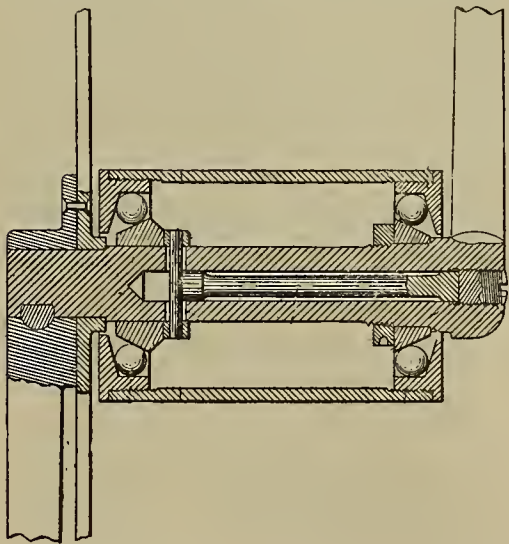
but bending in a springy manner which aids the action of the springs in the stays. The inventor is I. F. Randolph, Chicago.

**Lady's "Cantilever" Frame.**—The invention is an adaptation of the Pederson "cantilever" frame to the requirements of a lady's machine. The rear stays and the double seat mast clustering



at their upper ends form a sort of pyramid for the support of the saddle. The front forks, which are very similar to those on the regular Pederson frame, are in the form of a truss, the tubes of which are separated at the middle by a crown or bridge. At this point the lower steering connection is made. Double tubes running from the crank hanger to the top of the front fork truss hinge at the latter point, forming the upper steering connection. To brace the frame against shocks, long double tubes run from the lower steering connection lug to the rear end of the lugs of the frame. These tubes, except at their ends, are independent of any of the other frame tubes, thus enabling shocks and vibrations to be distributed along their entire length without being localized at any point. The handle bars are fastened to the fork truss frame. The inventor is N. F. Willatt, London.

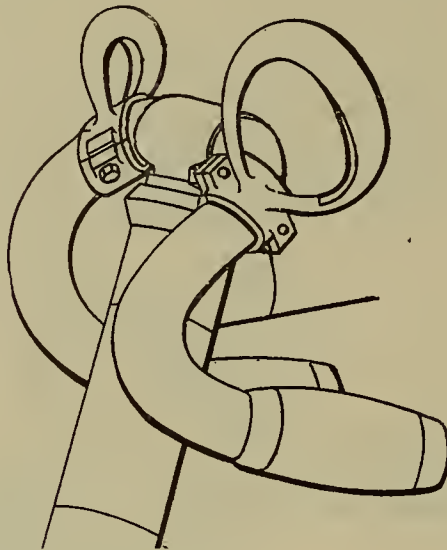
**Bearing Adjustment.** — The bearing, whether it be in a hub or in a hanger, uses inverted cups. One cone is stationary on the axle, and the other, instead of being threaded, is bored with a central hole, accurately sized to fit the smooth turned surface of that end of the axle, forming a snug sliding fit. Extending inwardly from the opposite end of the shaft



from the sliding cone is an axle hole. Running transversely of this hole at a point just inside of the normal position of the adjusting cone is another hole in the form of an elongated oval or slot. A transverse pin fitting this slot has its ends secured in an annular ring sliding on the shaft and resting against the inner side of the adjusting cone. A rod

turned to fit the inside of the longitudinal hole in the axle presses at one end against the transverse pin and at the other against a threaded plug screwed into the outer end of the hole. When it is desired to take up wear or play in the bearing, this plug is screwed further in, pushing with it the long rod, which in turn presses the cross pin before it. The cross pin moves the annular ring and this pushes the cone along the axle toward its mating cup, thus tightening the bearing. When it is desired to loosen the bearing the plug is screwed outwardly and the pressure of the balls on the cones causes the reverse operation of the parts to take place. As there is nothing but the balls to confine the movement of the cone in one direction, it seems probable that were this bearing loosely adjusted it would run tight one instant and loose the next, thus causing a very uneven movement of the bearing. The inventor is G. W. Shamp, Buffalo, N. Y.

**Extra Hand Grip for Bars.**—With view to filling a want among riders using low handle bars for some means of obtaining a restful upright position occasionally this invention provides a pair of ring-shaped handles to each of which is secured a half round part of a clamp. The clamp part is provided with ears bored and tapped for the reception of binding screws. The other half of the clamp is



also fitted with corresponding ears. The circular grips are applied to the handle bar one on each side of the center, the clamping pieces binding it to the bar tube. The exact position of the grips may be shifted to suit the fancy of the rider. The inventor is G. T. Bowman, Philadelphia.

With almost unbroken regularity the metallic spring appears as a remedy for puncture evils and deflated tires. Two Canadian inventors, K. D. Sutherland and T. W. Mitchel, of Montreal, are the inventors of an inner tube for double tube tires, in which a metallic spiral spring coil covered inside and out with canvas is used to supplant the ordinary air tube. The spring tube may be used as a part of a new tire or may be substituted for the inner tube of a leaky double tube tire. In all such combinations of metal and rubber in the tread portion of tires it has been found that the metal wears through the rubber and canvas in a very short time.

A toe clip hinged to a plate screwed to the front side of the pedal and fitted with a projecting tongue at its lower corner so that the rider may place his foot well forward upon the pedal and by drawing it backward pull up the clip and catch his toe underneath it, is the recent invention of H. J. Condell, New York. The piece which secures the clip to the pedal is like an inverted L with the lower back end of the clip swung from its outer extrem-

ity. The operating catch is semi-circular in shape and projects through the open center of the L.

C. H. Thomas, of Cleveland, is the patentee of a roller pin driving gear in which the driving gear wheel has short transverse rollers arranged around its periphery in the same manner as the teeth on a spur gear. Ordinary rigid pins around the pinion engage these rollers. The back gear is made in the same manner with the exception that the pins are on the driving pinion and the rollers on the rear wheel pinion.

#### Remedy for Hard Puncture Compound.

Repairmen and riders have frequently been troubled by the hardening of puncture closing compounds inside of tires which have been "doctored." Occasionally the compound gathers in a hardened lump and not only ceases to perform its duty in the matter of closing punctures, but causes a decided bump every time that part of the tire strikes the ground. The remedy for such an ill is very simple, it having been found by experiment that almost, if not quite, every puncture compound on the market is soluble in water. If a small quantity of water is put through the valve into a tire in which the compound has collected in a lump and hardened, and the tire is then worked with the hands till the water has thoroughly mixed with the compound and dissolved it, the original freely flowing and puncture healing properties of the compound may be reobtained. From four to six tablespoonfuls of water is all that is necessary in the average case of this kind.

#### Exceeding the Discount Limit.

"Three per cent 10 days," means just what it says, and the purchaser ratifies the contract of sale of which this is an important part whenever he accepts the goods. He should, therefore, be as scrupulous to observe that part of the agreement as any other. The clause above quoted does not mean: "Send the money when you get ready and take off your discount." The amount of the discount or the delay beyond the date may be trifling, but the times through which we have been passing have been of the kind to demonstrate that it is trifles which make or mar business. As a fact, the aggregate of such trifles is a considerable amount. The practice of exceeding the discount limit on invoices is an indication of a desire to get the best of the house in little things that often proves a forerunner of worse to come.

#### Bicycle Quotations Desired.

Mr. Frank Grimley, of 264 Clarence street, Sydney, N. S. W., Australia, is desirous of communicating with American manufacturers of bicycles, materials, accessories and cycle making machines and tools, with a view to acting as the exclusive agent for firms making such goods, which will then be pushed throughout Australia and New Zealand. Quotations and samples of novelties are wanted. Goods will be handled for the manufacturer on his own account or will be purchased outright. Mr. Grimley's business is an old established one, having been founded in 1864, and he having dealt with American manufacturers in other lines of goods is able to offer first-class references in this country.

Rev. Matt Evans of Oshkosh, Wis., has resigned the pastorate of the Second Methodist church in order to develop his invention of an "automatic pantaloons guard for bicyclers."

## SUBJECTS OF GENERAL INTEREST

CUTTING LOOSE  
FROM THE  
JOBBER

In approving the policy of a well-known bicycle house which recently elected to cut loose from jobbers a contributor to the Iron Age says that one of the words that is made to do much duty in these latter days is "jobber." Once it meant something; today it is applied to all who do a wholesale business, and to many others who are more important in the business world as retailers than as wholesalers. The jobber, in the right meaning of the word, does not exist in this country today in the hardware branch of business, and is growing very scarce in any and all other branches.

The wholesale dealer who is exclusively wholesale, is becoming almost as scarce as the jobber, and one of the reasons for his existence is that he may assist the manufacturer to distribute goods. So long as he handles an article its control is not in the manufacturer's hands. So long as a retailer can buy of the wholesaler he does not concern himself as to the wishes of the manufacturer regarding the selling price; he will do as he pleases.

The makers of patent medicines have given a fair trial to a system by which they permitted their goods to be handled by jobbers who would agree not to sell the goods to any one who cut prices, but the department stores have been as well stocked as before, and demoralization in prices has continued, showing that just as long as there is a "middleman" between the maker and the retailer, just so long will prices be out of the maker's control.

Any retailer who will give even casual study to the policy of the bicycle firm in question must see that it is one which appeals to him, for it was thought out for his interest. He knows under this system that he is buying his goods at the bottom price; no competitor is getting one cent the advantage of him; he knows that the selling price is the same everywhere, and he will have confidence in his own prices. As men are human, there will be cases where some few retailers may cut, but those will be so few that no dealer need worry over them; they will work out their own cure.

COMPOSITION  
OF  
BABBITT METAL

About forty-five years ago an English mechanic of an experimental disposition found that the system of bearings then in common use in Europe—brasses—was frequently the cause of a great deal of trouble, as the brass, soon becoming smooth from wear and having no affinity for the lubricant, would shed it. A great inconvenience was also experienced on account of sending machinery to all parts of the world and having the bearings give out, thus compelling a cessation of all use of the machine until new brasses could be sent for and received by slow-going ships. To partially obviate this, the system began of furnishing duplicate bearings for the highest grade of the machines exported. This, however, was both troublesome and expensive. One English mechanic, Charles Babbitt, discovered that by leaving a recess in the bearings made of brass, and filling it with a mixture of four parts of copper, eight parts of antimony and twenty-four parts of tin, a composition that could be readily melted in a ladle, he secured a better wearing surface, and one which, in case of its becoming worn or melted out by reason of the lubricant becoming exhausted, could be easily replaced by anyone having

very slight knowledge. This metallic composition soon became known as "Babbitt metal."

It was impossible for the inventor of this metal to convince his contemporaries in Great Britain of the practicability of his plan, on account of their conservative ideas and reluctance to try experiments. Their fathers and grandfathers used brasses, and so would they. This was their argument. Finally, despairing of success in England, Babbitt came to the United States, where at that time brass bearings were also commonly used, and began selling shop rights for from \$50 to \$200 each for the use of his formula.

After his death, his secret became an open one, and a great many people began making "genuine Babbitt metal" for sale. This was in accordance with his formula, but the requirements of different carrying capacities, different speeds, etc., and the competition of the manufacturers of it, soon brought about adulterations of the metal by the use of lead and other cheap alloys. A series of letters or numbers was at one time adopted to designate the different qualities, but it was all still called "Babbitt metal," a misnomer, as there was never but one Babbitt metal, and that was the mixture the ingredients of which have been stated above.

UNPRECEDENTED  
TRADE  
ACTIVITY

The commercial activity of the United States at the present time is amazing not only the foreign countries which are the principal competitors of this country in the export trade, but is difficult of appreciation by even our own citizens, so rapid has been the change from the half indifference to the export trade, as exhibited up to ten years ago, to the present aggressive efforts to invade the uttermost markets of the world with the products and manufactures of the United States. From every source indicative of the volume of trade in the United States are derived statistics that tell the same gratifying story of unprecedented activity and expansion.

More business is being done now by the merchants and manufacturers of the United States than at any previous time in the history of the country. When the accounts for December are made up it will be found that the total volume of business for the month was bigger than that for any month of any other year, a fact clearly foreshadowed by the weekly review published by R. G. Dun & Co. last Saturday after only twenty-three days of the month had passed. The enthusiastic and cheerful tone of this report from such a prosaic source carries a subtle conviction with it which figures themselves can hardly increase. The report says:

It is a year beyond parallel and goes to its close with the biggest volume of business ever seen. Enormous transactions at the stock exchange make a difference, and heavy railroad earnings, but when all the transporting and speculative interests are eliminated there is still a much larger business than in any other month of any year. Last month the exports were in volume greater than in any previous month in the history of the country, but this month the three weeks' report shows an increase of 25 per cent against 9 per cent in imports, which would indicate much more than \$70,000,000 excess of exports for December. The payments through clearing houses have been for the week 26.5 per cent greater than last year and 12.4 per cent greater than in 1892, and for the month 17.8 per cent larger than in 1892. Until now no greater volume of business has ever been done in the history of this country than in the closing month of this year.

The exports of the country are vastly greater than they ever were before.

Though imports have increased remarkably, exports have increased so much faster that the balance of trade is running about \$75,000,000 a month in favor of the United States, a condition the results of which have already been seen in the efforts of foreign nations to borrow in the American money market.

The export trade of the United States is far greater than that of Great Britain.

The tonnage of vessels entering and leaving New York harbor is much beyond that in London harbor.

For the first time in the history of the world New York is able to dictate money rates to the London, Berlin and Paris bourses.

LIQUEFIED AIR  
AS A  
MOTOR FORCE

Prof. Charles E. Tripler of Brooklyn, who has been experimenting for some time with liquefied air with remarkable results, believes he now has perfected a means of handling it to make it of practical use. He says:

"I am happy to announce that, after years of experiment, my process for manufacturing liquefied air, cheaply and in large quantities, is not only successful but I have solved the problem of harnessing this great power to machinery. My engine for this purpose works, and it requires only the perfection of a few mechanical details to realize its enormous utility as a motor for all kinds of machinery—for railroad trains, steamships, factories; in short, wheresoever great force is required, from propelling navies to firing their guns and blowing up cities and forts.

"Liquid air is from twenty to one hundred times more powerful than steam, according to the amount of heat applied. Even with the heat of the surrounding atmosphere its expansive force is twenty times greater than steam."

The details of the motor he keeps secret.

TRADE CONDITIONS  
IN THE  
NORTHWEST

The business conditions in the northwest are steadily improving and the outlook for several years of good trade there is excellent. Wisconsin, Minnesota and the Dakotas are more prosperous than they have been for many years. Crops have been large and of good quality, the railroads have plenty of freight to haul both to and from the east, a large mortgage indebtedness has been paid, adjustments to meet existing conditions have been made and the outlook is decidedly encouraging. A large farm mortgage concern in Chicago, which controls loans amounting to more than \$9,000,000 in the corn belt, reports that out of \$609,985 interest payable on these loans in the last twelve months ending October 25, only \$5,802 is overdue more than ninety days or being collected by foreclosure. This is less than 1 per cent of the total interest and only 6-100th of 1 per cent of the principal outstanding.

A partnership has the same power over firm property that an individual has over his own property.

Calcium carbide is still unobtainable in Calcutta, according to the Indian Cyclist. A bill has been introduced in the viceroy's council amending the present petroleum act to make it applicable to explosive solids such as calcium carbide. There is said to be a great feature for calcium carbide in India.

## AUTOMOBILE REQUIREMENTS

### Judges of Recent Boston Contest Greatly Favor Motors Against Horse Traction.

In the report published by the Massachusetts Charitable Mechanics' Association of Boston relative to the recent contest between motor carriages at Charles River park, no recognition is given the Stanley steam wagon or any other vehicle which did not remain on exhibition after the contest. This was in accordance with the rules made known to the exhibitors in advance and therefore presents no grounds for complaint; but should nevertheless be kept in mind by those who are interested in motor vehicles and receive the report of the judges.

The judges of the contest were Isaac H. Davis, a member of the association under whose auspices the contest was held; Prof. Gaetano Lanza, of the Massachusetts Institute of Technology, and Charles H. Metz, president of the Waltham Mfg. Co.

The results of the contest have been fully reported in previous issues of *The Cycle Age*, but the judges of the event set forth the general considerations by which they were actuated in the awarding of prizes, and these are of interest by showing the requirements of motor vehicles with which it is considered most important that makers of such vehicles should comply. These considerations are as follows:

#### Speed and Range of Speed.

In the case of carriages intended for road use, and not for racing, a speed greater than about fifteen miles per hour is not needed; for in the case of country roads, the conditions of the roads would usually prevent a greater speed without injury to the vehicle and the rider; and in the case of city roads, faster riding would be against the law, on account of the danger to foot passengers. Great speed, therefore, would be needed only by carriages intended for racing. Nevertheless, the ability to increase the power exerted at times very much above the normal is a great desideratum, for it may be necessary to climb steep hills, and to maintain upon them a reasonable speed, and one considerably greater than can be maintained by the average horse and carriage. Indeed, the motor carriages should always be able to go faster than the horse-driven carriages, not only because they should expedite travel, but also because they can be better guided.

Range of speed and good control are very important matters. These are especially important when one finds a portion of the road so clear of other travel as to render possible and desirable a high speed, and another part so crowded as to render it necessary to creep along at a very slow and very variable speed, which may even at times become a negative quantity.

In steam carriages it is easy to accomplish this result by throttling the steam more or less as may be needed. In the electric carriages the method of accomplishing this result is usually as follows: The carriages have usually three or four forward and two or three backward speeds produced by setting the controlling mechanism at certain definite positions; then when a speed is needed intermediate between any two of these, the result is obtained by setting the controlling mechanism in the position corresponding to one of them, and then, after moving with this speed a part of the distance, changing to the other. When we take note of the fact that it requires a little (though short) time to develop any one speed, it will be evident that this method gives the driver a very perfect control of his vehicle. Of course the brake may be used in both as an additional auxiliary when necessary. It should be added that those that cannot reverse are at some disadvantage when in a very great crowd of heavy and slow-going teams, or in a blockade; nevertheless in cases where they can turn in their own width this difficulty is less than where they cannot.

These remarks apply also to gasoline carriages, as they are usually built with ranges of speed that give them a good control.

By this is meant that the carriage should be easily turned, quickly started and quickly stopped, and easily guided where the room

is small, as in a crowd of vehicles or in a very narrow street; also in cases where it is necessary to turn quickly, to turn in a small space, or to reverse or go ahead at any speed, these things can be readily done. All this is very necessary in order that obstacles, whether at rest or in motion, may be easily and quickly avoided. It should be observed, however, that all the motor carriages exhibited are decidedly more manageable than a horse and carriage, besides occupying less room, and that the operator guiding the motor carriage knows just what it will do, with far greater certainty than the driver of a horse and carriage knows what his horse will do.

#### Simplicity and Durability.

The special importance of simplicity is that the machinery may not easily be gotten out of order on account of a multiplicity of the parts, or from a need of too delicate adjustment, that the services of a skilled mechanic may not be needed to drive it, and that ordinary repairs may be made as easily as possible, and by the use of such tools only as can be easily carried on the vehicle.

In order to secure durability none of the parts should be so proportioned as to wear out quickly. But in order to be sure of the durability, it is necessary to observe the wear of the carriage during a long period of service, and while it would be easy to condemn features that evidently showed weakness by an inspection of the new carriage, it would need a long trial to pronounce positively that any carriage is very durable.

#### Appearance and Design.

When motor carriages become common, there will be use for those which, though well adapted to their purpose, are not especially handsome. Thus it would not be suitable to have in a delivery wagon the richness and beauty desirable in a pleasure carriage; nevertheless, in all cases neatness and elegance of design are important.

#### Comfort and Cost of Operation.

The motor carriage should be fully as comfortable as those now in use, and not jar the rider excessively.

The cost of operation is, in the case of all the carriages exhibited, so very small an item that it would hardly have any influence upon the user of a motor carriage in deciding which to purchase; it is not in any way to be compared to the cost of keeping a horse. The cost is, in practically all the cases, less than two cents per mile on ordinary roads.

#### Climbing of Grades.

The carriages should be able to overcome as steep, or even somewhat steeper, hills than horses can climb, and to maintain a greater speed than a horse. A severe test of a motor carriage is to have it start from rest on a steep grade, in which case the capability of a motor to bear a very considerable excess of load temporarily is a great help.

#### Description of De Dion Vehicles.

The quadricycle is provided with two seats, the rear seat being a saddle occupied by the driver of the machine, and the forward one being a seat occupied by another rider. These machines have to be started by means of the pedals, which cease to act as soon as the motor begins to operate. The gasoline is contained in the bottom of a combined tank and carburetter; a current of air, whose quantity is regulated, is caused to flow over the surface of the gasoline, and thus becomes charged with gasoline vapor. The mixture of air and gasoline then passes through the mixing valve at the top of the tank, where it unites with a quantity of air sufficient to make the proper explosive mixture. From here it passes through a pipe into the cylinder, where it is exploded by an electric spark.

The engine is single acting, and the cylinder is provided, on the outside, with a series of projecting rings, the object of these being to present a large surface to the air for the purpose of cooling the cylinder, as this arrangement renders it unnecessary to carry cooling water. The engine is vertical, and the crank pin is set in two discs which perform, to some extent, the functions of a fly wheel. The discs are enclosed in a flat cylindrical box made of aluminum. The lower part of this box contains oil, into which the crank pin dips at each revolution. This engine drives the rear axle by a train of gears, this axle being made in two parts connected by a differential train of spur gears, which allow the two rear wheels to

turn at different rates of speed in going around curves.

The steering is done by means of the handlebars in the ordinary way. In the case of the quadricycle the forward axle is fixed relatively to the carriage, and the axle of the front wheels is mounted at the ends of the fixed axle by means of vertical pivots, and the steering gear is so designed as to cause the two front wheels to turn through different angles to the carriage when going around curves. Ball bearings are used throughout the running gear. The weight of the tricycle is said to be about 175 pounds, and that of the quadricycle about 275 pounds.

The report of the judges comprises a description in general terms of each of the exhibited vehicles. Of these, only the Eaton electric Stanhope, which is still in an experimental stage, and the De Dion & Bouton vehicles have not been previously described in this paper. De Dion, Bouton & Co., of Paris, exhibited one gasoline tricycle and one gasoline quadricycle, which are described as follows:

The charge of air and gas in the cylinder is exploded by an electric spark, which can be caused to occur at any portion of the stroke desired. Thus if a high speed is desired this spark would be made to occur near the beginning of the stroke, and if a slow speed is desired, near the end of the stroke. The batteries for the spark apparatus are contained in a metal box hung from the upper bar of the machine, an induction coil is hung on the rear axle, and to the valve-operating gear is attached a circuit-breaker of special design. By suitably adjusting the position of this circuit-breaker by means of a handle, the spark is caused to occur at any portion of the stroke desired. It will be evident, therefore, that any speed above a certain minimum, which they state to be about four miles per hour, can be obtained. For lower speeds, the machine has to be driven by the pedals, and, in starting, the pedals are used until the motor commences to work properly. The switch of the igniter is in the handle of one of the handlebars. In going in a crowded city street, if the speed required is too low for the motor to work, the pedals are used.

These machines, on account of their lightness, would naturally be preferred to the heavier carriages by any one who desired a substitute for the bicycle, rather than the comfort and roominess which can be obtained only with greater weight. They can, if anything gets out of order, be driven by means of the pedals. The tricycle can be easily guided, having only one wheel in front; and also, on account of the small wheel base, it can be turned around in a very small space, and this partly offsets the disadvantage of not being able to reverse and back.

The machine is capable of a very considerable speed, and the whole idea is very ingenious and well calculated for use when a light and small vehicle is desired.

#### Compressed Air Stage Service.

A Chicago syndicate composed of George M. Milligan, George Atkins and J. M. Thompson is preparing to organize a parent company in Chicago and local companies in New York, Brooklyn, Philadelphia, Boston, Baltimore, and Washington, for the purpose of establishing in these cities lines of compressed air motor cars or omnibuses shod with pneumatic tires. The ultimate intention is to put such service into all cities of more than 70,000 which have suitable streets for the use of pneumatic tires, the object being to cater to the short haul traffic of three to five miles at a fare of 5 cents. It is expected that the lines in a few of these cities will be in operation by July 1 next year. The parent company is to be capitalized for \$3,000,000 to \$4,000,000, and it is estimated that the local companies will involve a total capitalization of \$50,000,000 or \$60,000,000.

#### More Capital for London Cab Service.

At an ordinary general meeting of the London Electrical Cab company, Ltd., held early this month, a loss of \$13,039 was announced. It was stated that \$60,000 in 5 per cent. debentures would shortly be asked for, which, with the last call, would be sufficient to pay all liabilities and provide additional working capital. It was announced that all of the cabs would be working by the middle of next month.

# The Record of the Past Makes Crescents the Bicycle of the Future

THE MANUFACTURERS OF

# CRESCENT BICYCLES

make it possible for you to buy a '99 model high grade wheel at the price usually asked for second grades and unknown makes.

'99 MODELS NOW READY.

BEVEL GEAR CHAINLESS, \$60. CHAIN MODELS, \$35.

JUVENILES, \$25.

Don't overlook this point: 1899 CRESCENTS ARE NOT 1898 MODELS.

CHICAGO — WESTERN WHEEL WORKS, Makers — NEW YORK

*Good Company is desirable.*  
 Doubt you think the "Morrow-  
 Coaster & Brake will "be in the  
 swim". It will be fitted to  
 Barnes, Dayton, Stearns, Pierce,  
 Spaulding, Ivers Johnson, Acme,  
 White, Orient, Reading-Standard,  
 Thomas, Wolff American, Columbus,  
 Eclipse and other makes of  
 wheels for 99. If you want a  
 money saver order your wheel fitted  
 with the Morrow Coaster & Brake

## MOTOR VEHICLES VS. HORSES

### Defense of the Gas Engine Vehicle in Its Present Form— An Answer to Dolnar

To the Editor.—The article by Hugh Dolnar on the condition of the motor cycle problem in your last issue calls for a protest. The writer has given the motor vehicle problem as much time and attention as any one in this country, and is thoroughly acquainted with their defects as well as their good qualities. The writer of the article in question tells the truth regarding gasoline motor vehicles, but he does not set that truth in the proper relation to the present state of civilization. It is a well known fact that no mechanical vehicle is perfect, and no reasonable being expects perfection this side of eternity in anything.

The question before the American public is not whether these vehicles are perfect, but whether they are sufficiently near perfection to be reasonably practical, or, to be more explicit, whether they are able to give a better service at less cost than does a horse. There is no denying that so far as it goes electricity is an ideal driving method, but its limitations are such that it is not as good as the ordinary horse for ordinary purposes. This being true, it is not likely that the American public will adopt same to any great extent, for they require better servants each year rather than worse ones. For short pleasure drives on fine streets it is possible that the electric vehicle will have a field, but the constant uncertainty of being able to get back without the assistance of a team will destroy much of the pleasure of using, even though clean, silent, and otherwise satisfactory.

#### The Commonly Used Motor.

Before deciding to take up the gasoline motor for vehicle propulsion, the writer gave the electric motor much attention, but did not then, and does not yet, see sufficient future to the electric motor to warrant its adoption. It is not the purpose of this article to criticize the electric motor. Within its very limited range, too limited for an extended private use, it is everything claimed by your correspondent. On the gasoline vehicle, however, is where he makes his error. He says first, "that the American public will never accept explosion engine wagons so long as they are dirty and deliver vile odors in abundance." This statement indicates that he is not acquainted with the best examples of explosion engine vehicles, or else that he does not realize how dirty and filthy is the present commonly used motor, the horse. The public of today drive behind horses without complaint, and it is certain that any motor, although not perfect, which offers advantages over the horse, will be adopted. This is the true gist of the matter.

#### Public Expects Too Much.

The explosion engine vehicle can do more miles per hour, more hours per day, at less cost and with less care than can the horse; while its objectionable features are not to be compared with the objectionable features of the horse. This is the situation of the problem to-day and I fully agree with your correspondent that the proper thing to do is to recognize it both in factory and in print. On the other side of the water where feeding and horse flesh cost more the motor vehicle is taking with a rush, indicating

that the people will accept its faults because of its advantages. Here, where horses are plenty and easily maintained, they may not be willing to accept quite so imperfect a machine as on the other side, but, like over there, they certainly will accept any machine which meets their needs at less cost and with less objections than the horse. It should be the part, however, of the press to properly state this matter before the public that no false ideas may be entertained. Few inventions have ever been criticised with the same degree of fastidiousness as is the motor vehicle. People expect a horse carriage, without the horse, to be propelled by a small motor concealed in the limited amount of space under the ordinary carriage seat, and operated by a push button. They regard the much advertised electricity as the proper and only solution of the problem, and waste their time and money hoping for and buying something they cannot get or do not want in that line. When they fully understand the facts they will be willing to accept the conditions as they are, and this result will be beneficial both to the manufacturers and the users.

#### Demand for Gasoline Vehicles.

We have sold explosion vehicles to owners of electric ones, and we have on our books to-day unfilled orders months ahead of our capacity. Your correspondent asked for evidence of the acceptance of gasoline vehicles. If he had charge of our correspondence for a few weeks, we are confident he would cry "enough." All Duryea wagons so far built, with the exception of the samples in use, which are not for sale, have been sold. While it is true that they are not in evidence in every village in the country, this fact has been caused by the preference to further develop, rather than sell what was already produced. This policy, however, was the direct result of the mistaken notion of the public that perfect vehicles could be had. The final solution of the problem will be that some one or more makers will turn out such vehicles as they have, will sell them as fast as turned out, as is quite evidently possible from our own experience, and will educate the public to the fact that, although better and less objectionable than the horse, they are not "airy, fairy nor ideal."

#### Noiseless on the Street.

Your correspondent makes the statement that "there is no such thing on the market as a clean, silent and inexpensive motor vehicle of unlimited range." The writer has used both our own and foreign makes of vehicles, has "paced" cyclers for miles, and has been assured by them that no disagreeable trail of odor was left behind. It is a matter of absolute certainty that no odor reaches the occupant of the carriage in ordinary driving, for the motion forward brings fresh air only to the drivers. Such testimony as this should forever settle the "offensive" argument. We are often in receipt of testimony to the effect that, although standing on the sidewalk, the observer was not able to hear the vehicle as it passed down the street, and we have very often proved, by comparative tests, that our motor vehicle cannot be heard as far up the street as the horse vehicle. It

would seem that this should settle the "noise" objection.

In the matter of cleanliness, we consider that there is no comparison between caring for the horse and operating same, and caring for a motor vehicle. The fault here is that horse drivers find the horse so offensive that they have same taken care of at livery stables or by some one hired for the purpose, while motor vehicle users, imagining that all they need to do is, as before stated, "push a button," undertake to do same themselves, and find more or less inconvenience attending. Our men have been accustomed to horses from infancy up, and can therefore perfectly compare the trouble and nuisance of both systems and, while we give the motor vehicle the necessary attention required generally without removing cuffs, we do know that to properly care for the horse requires a change of clothes. This argument also cannot be denied, and should be a sufficient answer to the question of cleanliness.

#### Cheap Vehicles of the Future.

Your correspondent further called attention to the fact that foreign vehicles have not sold readily on the American market. This is undoubtedly true, and its reason is not far to seek. They are built in a much inferior manner, and have not the elegance of design nor the simplicity of construction shown on this side of the water. It is common to suppose that the foreigners lead us in the matter of motor vehicles, but this is far from the truth. American inventors have maintained their reputation on this side, and the best vehicles, as demonstrated, when tried in competition, have been produced in the United States. There has been, however, a decided lack of interest in this matter shown by the press, the capitalists and the general public. This is a matter for which the press is largely to blame, and which, as your correspondent suggests, cannot be remedied better than by placing the situation accurately before the public.

#### Present Vehicles Practical.

The motor vehicle is no 10-cent affair, and cannot be built in a hall bedroom. It is to all intents and purposes a locomotive and, while it has been greatly simplified, it is still an article requiring a large investment of capital to properly produce. The cheap motor vehicle which shall carry passengers with comfort is a thing of the quite distant future. The writer well remembers when in the early '80s people refused to buy \$100 bicycles because "next year they could buy them for \$25," but they waited more than fifteen years to see the fulfillment of their prophecy, and the same will be largely true of the motor vehicle. When such companies as the Pope company, with more than three years' expenditure of time, and thousands of dollars in money, are not able to turn out vehicles in large quantities at low prices, it certainly should be evident to the public that the cheap, silent, inoffensive, push-button affair, which they so confidently expect, cannot be had. If they will then turn their attention to what they are now using and be willing to accept something lighter, cleaner, safer, faster, less noisy, not filthy or unsanitary, higher in price, but cheaper to maintain, they will find that such an article can be had.

CHAS. E. DURYEY.

Electric motor cabs from Paris are to be put in operation on Fifth avenue, New York, to supplant the old stage coaches now running. The coach line has been purchased by three stockholders of the Third avenue street car line and the change will soon be made.



# Barnes Bicycles

The Barnes  
Cycle  
Company

Syracuse, N. Y.

**I**T is the substantial, well made bicycle that wins in the long run.

The quality of the BARNES Bicycle has never been questioned, and for graceful outline, fine workmanship and stylish appearance, it has no equal.

It will be noticed that prosperous agents usually have the sale of Barnes Wheels. Get the sale of our 1899 line, the best we have ever made, and insure your success.

Mention The Cycle Age

# THE STERLING

“BUILT LIKE A WATCH”

ALWAYS CONSERVATIVE BUT ALWAYS PROGRESSIVE

No FADS adopted until their merits are exhaustively tested.

Our 1899 Models embrace a number of Radical Improvements.

Our Illustrated Catalog will explain them in detail. . . . .

The Well-known Sterling QUALITY is Absolutely Maintained.

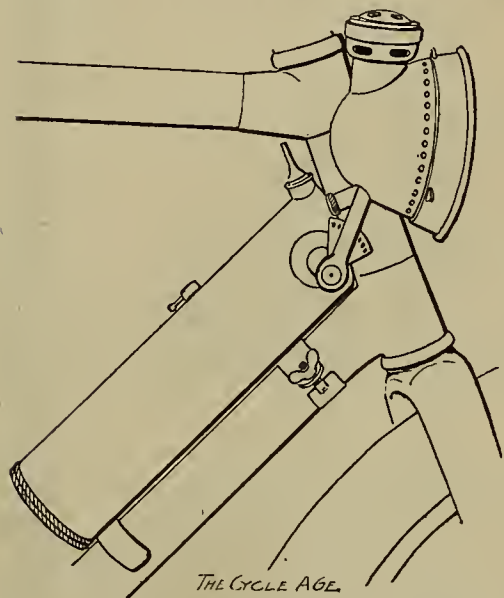
Always Glad to Hear From Energetic Agents.

**STERLING CYCLE WORKS,  
KENOSHA, WIS.**

# INFORMATION FOR BUYERS

## THE NEW DEPARTURE ACETYLENE LAMP.

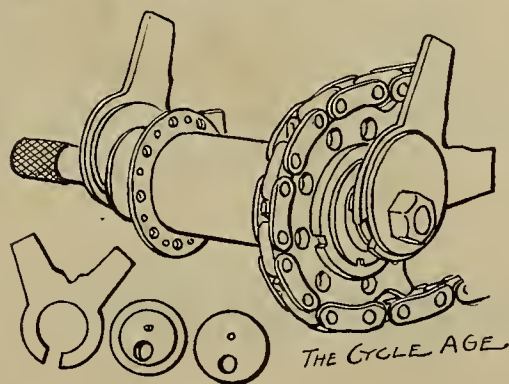
A bicycle lamp that is radically different from any other at present on the market in America is the New Departure here shown. It is being introduced by the Joseph Lucas & Son company, Bristol, Conn., for whom John H. Graham & Co., 113 Chambers street, New York, are selling agents. The lamp is virtually in two parts. The water and car-



bide chambers are contained in a cylindrical tube 7½ inches long by 2 inches diameter, tinned on the inside and divided by a metal diaphragm in the middle. The milled cap at the lower end is removable and the carbide cylinder can be removed and refilled when the charge is exhausted. A perforated metallic cap covers the carbide and a coil spring keeps it pressed down and prevents the carbide from rattling while allowing it to expand under the action of the water. The upper half of the main cylinder contains the water which is admitted to the carbide through a tube containing the worsted wick, the flow being regulated by the small lever shown below the filling cap at the top. The combustion chamber or hood is supported at the top of the gas tube adjustably connected at the side of the reservoir so that the light can be thrown at any desired angle. The hood contains a parabolic reflector and a 2¾-inch lens. The burner is made of lava and produces a fish-tail flame giving a strong light. The tubular generator is enameled in any color to match the machine or is finished in nickel plating, and attaches to the lower frame tube by means of spring clamps, one of which has a thumbpiece for binding it firmly in place. The hood of the lamp is fully nicked and presents a neat and attractive appearance. The weight of the entire lamp is sixteen ounces.

## RATHBUN ECCENTRIC CHAIN ADJUSTER.

The Rathbun Mfg. Co., 130 Second street, Milwaukee, is making a three-piece rear fork end and chain adjuster which furnishes a neat positive adjustment for the chain and a clean-cut finish for the rear end of the frame. The rear fork and stay connection plate is made with the round hole in the



rear end, a slot leading to the hole permitting the entrance of the rear axle. A circular plate with an exterior flange fits in the round hole in the frame fitting and receives the axle in an eccentrically located hole. A plain round plate or washer lies against the inside of the fitting and is made to move in unison with the outside adjusting plate by means of a small hole and pin. The flange on the outside plate is knurled so that the

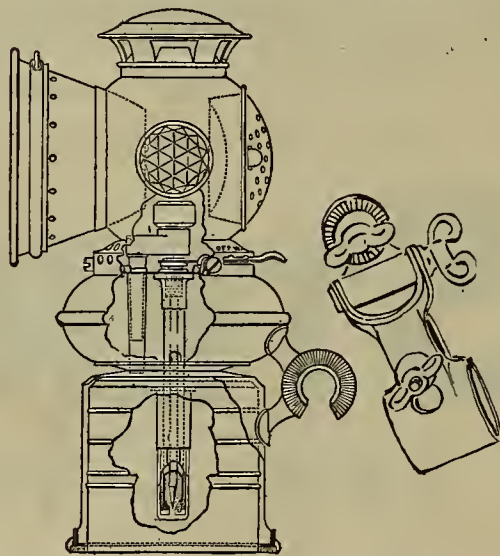
eccentric adjuster can be turned with the fingers. The swing of the eccentric is sufficient to take up an entire link of chain slack. The eccentric washers are made to take ⅜-inch axles and the frame connection piece is supplied with either round or D ferrules for ¼ or ⅝-inch fork tubes.

## PFLUEGER'S CHAIN LUBRICANTS.

Two kinds of chain lubricant, one "snow white" and the other "ebony black," are made by the Enterprise Mfg. Co., of Akron, O. Pflueger's Snow-flake lubricant is composed entirely of white lubricating materials and will not soil hands or clothing. It is also perfumed with an agreeable odor which is lasting and lends an item of charm to the commonplace task of greasing a cycle chain. The Ebony Black lubricant is suitable to all climates and is not affected by changes of weather. It has good lasting qualities and will not gum the chain nor collect dirt. The lubricants are put up in three sizes of packages, and will be sent either wrapped in heavy silver foil and mounted one dozen on a counter display card, or will be wrapped in foil and each stick inclosed in a wood telescopic box. On orders of generous size the lubricant will be put up under special label at no extra expense to the purchaser.

## MILLER & CO.'S "MAJESTIC" GAS LAMP.

Edward Miller & Co., of Meriden, Conn., have added to their line of bicycle lamps for this season the acetylene gas lamp here shown in cross section. The water reservoir is a flattened spheroid interposed between the gas chamber and the combustion chamber and is filled through a circular opening at the side closed with a screw cap after the manner of many kerosene lamps. The water feed tube passes through the center of the water reservoir and depends into the gas chamber almost to the bottom thereof, and is provided at the lower end with a needle valve operated by a finger lever at

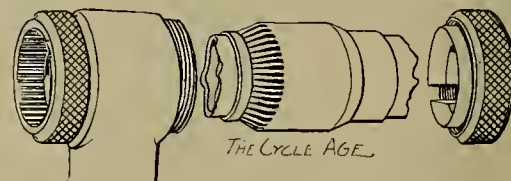


the back of the water reservoir. There is no wick or fibrous material of any kind for feeding the water to the carbide, but the water drops into a central metallic split tube in the carbide box which acts as a distributor. A fish tail burner is used. Special features of the Majestic are the front reflector, which is a section of a perfect parabola; the back reflector, which is hinged to the body of the lamp and gives free access to the inside of the combustion chamber for lighting as well as for cleaning; and the carbide cylinder, which is made of two telescoping parts closed at top and bottom and designed for the use of regular commercial calcium carbide. The lower part of this cylinder is permanently attached to the removable bottom that closes the gas chamber air tight by means of a rubber gasket, and the top part, which must be lowered to be filled, is marked with four divisions showing the amount of carbide necessary for from one to four hours' use of the lamp. An adjustable hanger or bracket to fit either the head or forkside of the bicycle is provided, but the makers strongly recommend that the lamp be attached to the head as in that position the road is better illuminated and the lamp is where it can be easily reached by the rider and its flow of water to the carbide better controlled.

## NEW WEBB HANDLE BAR.

The Sanford & Pollow Co., 235 Lake street, Chicago, who manufacture the Webb handlebar and seat post expander, have lately

placed in the market an adjustable bar also made under Webb patents. The new Webb bar is adjustable without the use of any tools or wrenches and the position of the grips can be altered while riding. As will be noticed in the illustration, a sleeve with taper ends is fastened to the central part of the bar tube. One taper end of the sleeve is radially serrated to match the serrations on the interior taper at one end of the hollow stem head or tee piece. The opposite end of this tee piece is externally threaded and takes a knurled hand nut internally threaded to match and also containing a split bushing internally tapered to correspond to the smooth tapered end of the central sleeve on the bar. The manner of assembling the parts is obvious. When the nut has been screwed tight on to the tee the split bushing is wedged securely against



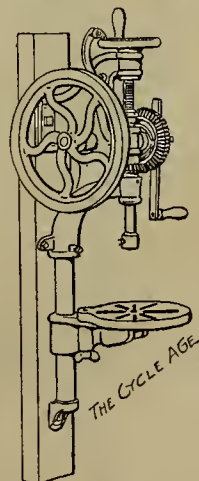
the taper seat on the bar and the parts are securely locked together. The bars are made in popular shapes and as the adjustment parts are small and compact the appearance is neat and attractive.

## HIGH PRESSURE BRAZING FORGE NO. 2.

In the No. 2 High Pressure brazing forge made by the National Cement & Rubber Mfg. Co. of Toledo, O., the trade will notice many valuable improvements over the High Pressure forge manufactured by this company during 1898, which was remarkably successful. The No. 2 was designed to fill the increasing demand for a brazer that would do all classes of work, such as light and heavy brazing, tempering, welding, melting of metals, etc. It is fitted with the company's improved hydrocarbon adjustable burners and with a heavy cast iron tray supported by a substantial standard. The tank is galvanized iron, tested to 150 pounds pressure, the pipe is extra heavy, and all the joints are tee joints, so located that by removing the plug from the tee any portion of the pipe can be readily cleaned by inserting a wire. The lower burner is so constructed this season that it can be swung entirely clear from beneath the pan, yet when in operation is midway between the two burners but not directly under the melting spelter, and thus prevents the danger of filling up from this cause. Filling the cast iron tray with coke and applying the center burner makes it possible to produce a complete blacksmith's forge, and by the use of the other two burners at the same time, the heat is intense enough to melt brass in crucibles. The company is furnishing with each brazing forge this season a 100 pounds pressure gauge, floor pump, and full directions how to operate.

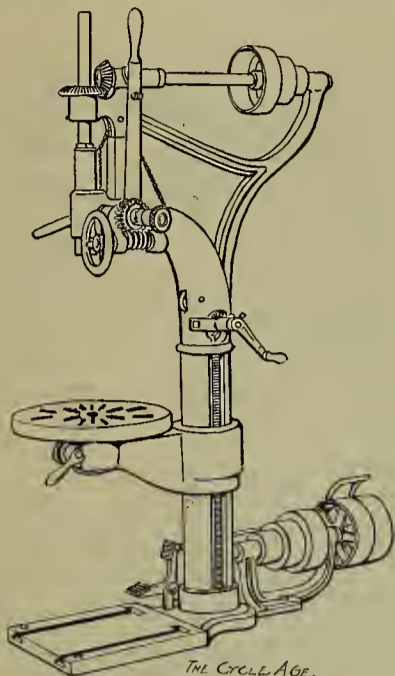
## DRILLS FOR FACTORY AND REPAIR SHOP.

The Silver Mfg. Co., of Salem, O., has a line of drills running from small hand power post drills to 20-inch swing power drill presses, both the requirements of the small



repair and machine shop of the factory being met in the line of machines. The Advance drill No. 12, which is made for both hand and belt power, is well adapted to the purposes of a cycle repair shop. It is simple and durable but still permits of accurate drilling and reaming. This hand power ma-

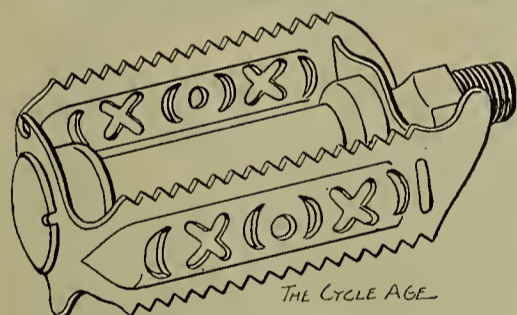
chine, here illustrated, has two speeds and self feed. The spindle is one inch and has a vertical movement or run of 3 inches. The greatest distance of the table from the spindle is 14½ inches and drilling to the center of work as large as 15 inches in diameter is possible. The machine will carry



drills up to 1¼ inches and as regularly fitted takes drills with half-inch round shanks. It weighs 125 pounds. Other grades, sizes and patterns of post and bench drills for hand or belt power are also catalogued by the company, all being designed for light accurate drilling for which more expensive machines are generally purchased. For more extensive drilling operations, as those in a large machine shop or factory, two patterns of 20-inch swing drill presses are listed, one of which is shown. It has a square base and a combination lever and screw feed so constructed that either can be used without interfering with the other. The spindle is bored to No. 2 Morse taper and has a vertical travel of 7½ inches. The weight of the machine is 525 pounds.

**U. S. MFG. CO.'S PEDAL FOR LADIES.**

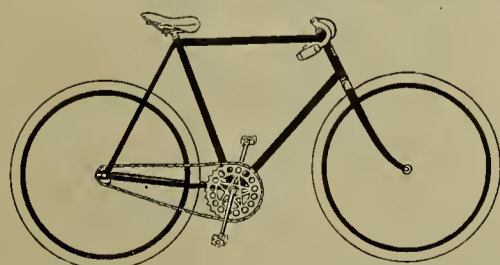
The accompanying illustration shows the design and distinctive features of the Crescent No. 3 pedal now being manufactured for next year's trade by the U. S. Mfg. Co. of Fond du Lac, Wis. This pedal is a combination of the No. 1 and No. 3 Crescent pedals for men, and is for use on ladies' and



juvenile machines. It weighs only twelve ounces per pair in rat trap or fifteen ounces with rubber treads or Straus universal rubbers. These pedals, like the U. S. cyclometers, lamp brackets, etc., are made of the best material and workmanship and are fully guaranteed. The finish is polished nickel on copper.

**THE "FAVORITE" MEN'S MODEL.**

In branching out from the manufacture of juvenile bicycles and placing on the market adult machines, the Toledo Metal Wheel Co., of Toledo, avoids following fads but



aims at the production of up-to-date, high grade bicycles to be sold at moderate prices. The adult drop-frame Favorite, Model 15, has all of the exterior requirements of a stylish machine and is honestly and con-

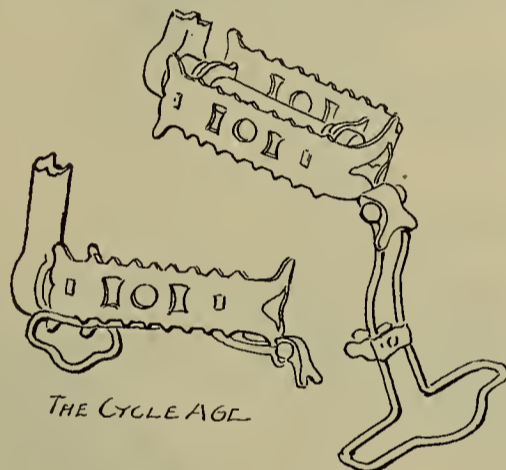
servatively made, it being offered as a bicycle to stand the test of hard usage and to meet the commercial requirements of '99. The frame is built either with 22 or 24-inch seat mast, has flush joints, arch crown, D-shape rear forks, expander bar and seat post fittings, Fauber pattern one-piece crank hanger and other popular fittings. The finish is black or maroon, decorated, with the further option if desired of light blue. Kelly adjustable or plain drop handlebars are offered and several options in tires are granted. The machine weighs 24 pounds and lists at \$50.

**CLARK NOVELTY CO.'S SPECIALTIES.**

The Clark Novelty Co., of Rochester, N. Y., instead of being incorporated for \$11,000 capital stock, as previously stated, is beginning the production of bicycle specialties and undertaking the manufacture of brass and metal goods of special nature with a capitalization of \$50,000, \$40,000 of which has been subscribed for and paid in full. Two of the bicycle specialties that the company is now marketing are the Clark automatic valve and the Clark rotary bicycle alarm. The valve consists of only three parts, has no springs and no pins and is easy to pump. It is made in both plain and metal base styles, with cap and inside part interchangeable. It has been in the market for the past four years. The rotary bell attaches to the front forkside and has the double clapper fastened to the end of a shaft rotated by a small rubber pulley at the other end which is raised by a silk cord into contact with the under side of the wheel rim, causing it to sound continuously until the tension of the cord is released.

**THE "HANDY" BICYCLE SUPPORT.**

The illustration shows a light, simple cycle support which is made by the inventor and patentee, William H. Hart, Jr., 242 Chestnut



street, Philadelphia. The support is made from a light piece of spring wire with a small attaching piece by means of which the support may be screwed to the outer end of the pedal. When not in use it folds up against the under side of the pedal and is held against accidental loosening by the spring clip which catches the barrel of the pedal. With a little practice a rider can pull the support down into supporting position or pick it up out of the way with the foot. The only alteration required on the bicycle to which it is to be fitted is the drilling of a small hole in one of the outer ears of the pedal. When folded up it is practically invisible and as it weighs but 2½ ounces is not to be included among cumbersome accessories.

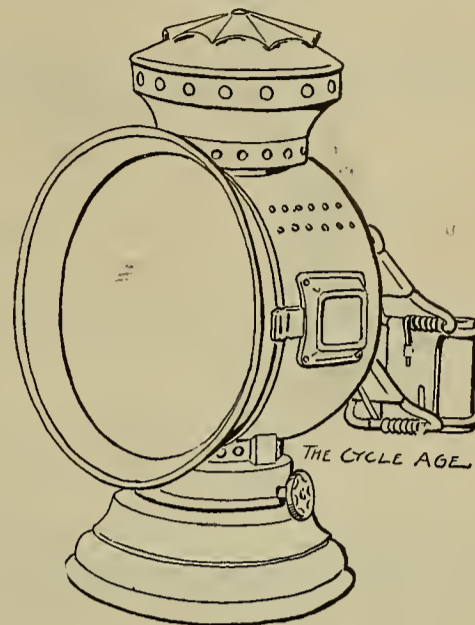
**EARLY SHIPMENTS IN CARLOAD LOTS.**

A feature of this season's trade that offers sufficient ground for the prediction that 1899 will be the best year ever experienced in the bicycle industry is the actual shipments being made at this early date of carload lots of machines to agents. The Shelby Cycle Mfg. Co., of Shelby, O., furnishes two examples of this in its recent shipments of a lot of 670 Ideal bicycles in two cars to two Pacific coast agencies and a single lot of five carloads of Ideals, sold on actual orders from agents, for immediate delivery.

**THE DIETZ OIL LAMP.**

The Dietz lamp, though made on the same general outlines as in the past, has been improved in several particulars for the coming season and is offered by its makers, R. E. Dietz Co., 60 Laight street, New York, as the representative summing up of the knowledge gained in fifty years of lamp building. It is made entirely of brass and weighs but twelve ounces. No solder is used except on the bottom of the oil fount. Careful attention has been paid to the arrangement of the drafts in order to secure good combustion and to obtain an intense white flame. The reflector, which is of the parabolic type, throws all of the light ahead and is readily removable for cleaning. The oil

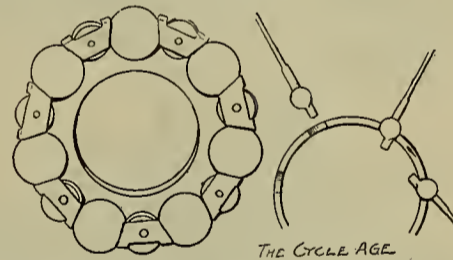
fount is packed to prevent the oil from working out. While green and red side lights are provided as usual, there are no slides on the sides, the reflector instead being hinged so that the lamp may be easily lighted from the front. Experience has taught the makers that a large part of



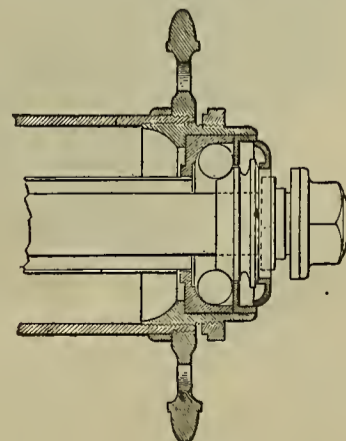
the tarnishing of reflectors is due to the combustion of the match when lamps are lighted from the side. The lamp burns ten hours without refilling.

**CLEVELANDS HAVE A NEW BEARING.**

The latest result of the enterprise of Superintendent Burwell, of H. A. Lozier & Co., of Cleveland, in bringing out new mechanical features for Cleveland bicycles is a combination roller and ball bearing. As shown in the drawing, the balls carry the strain between the cup and cone as usual, while the rollers act as separators for the balls, keeping them from rubbing against one another, but allowing them to impart their rolling motion to the intervening rollers, such sliding friction as is commonly caused between adjoining balls being obviated by the reverse rolling movement of the rollers. As a practical test of the efficacy of the bearing, it has been fitted to a cup and cone grinding machine carrying a grinding wheel which formerly rotated at a speed of 13,000 revolutions per minute and

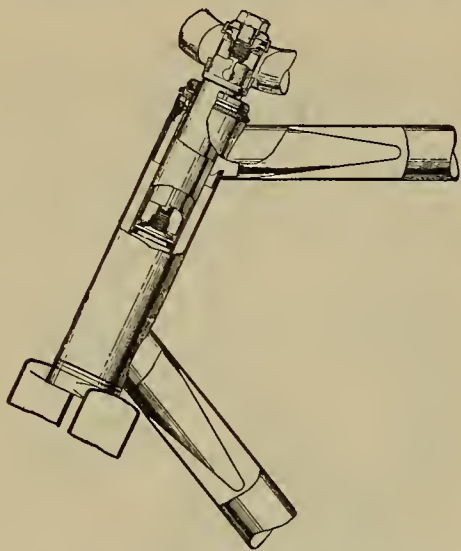


which since the fitting of the new bearing has been revolved at a speed of 33,000 to 35,000 revolutions per minute and has been kept running at that speed for several weeks without any perceptible wear on the bearing. The grinder traveling at the rate of speed mentioned, would, in a working day of ten hours, travel a distance equal to 1,041 miles if rolling on a plane surface. Other improvements have been made throughout the '99 machines. The steering head has been increased in diameter, allow-

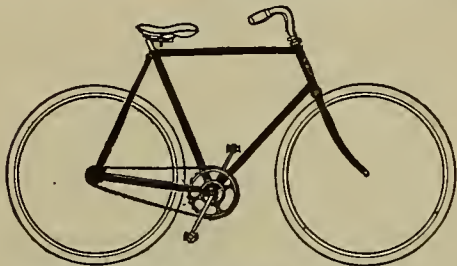


ing the ball cases to be entirely incased by the tube, the head being straight and flush from end to end. The new handlebar expander obviates the necessity of hammering on the bars to loosen the fastening, a

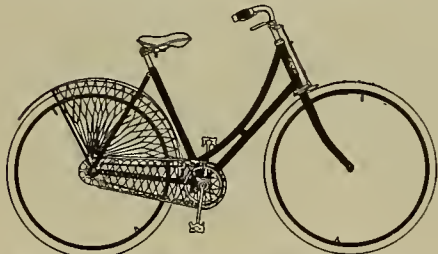
turn of the expander nut releasing the expander and leaving the bar free for re-adjustment or removal. The same device is fitted to the seatpost. The new spoke terminates at the hub end in a ball about a quarter of an inch in diameter and which



has a shorter extension not in line with the spoke itself. As long as the spoke is tangent to the hub barrel it cannot pull out, but when it is turned so that it is at right



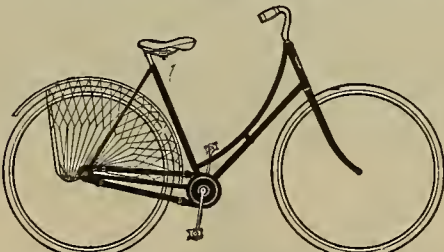
Model 61—Men's roadster. Price, \$50.



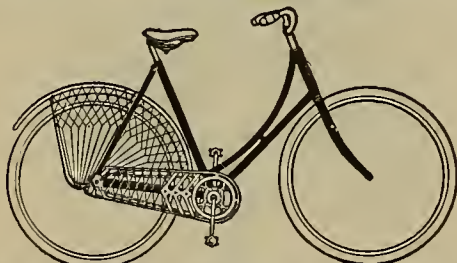
Model 62—Women's roadster. Price, \$50.



Model 64—Men's special light roadster. Price, \$75.



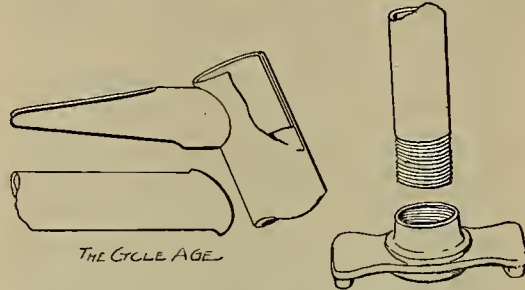
Model 65—Women's special light roadster. Price, \$75.



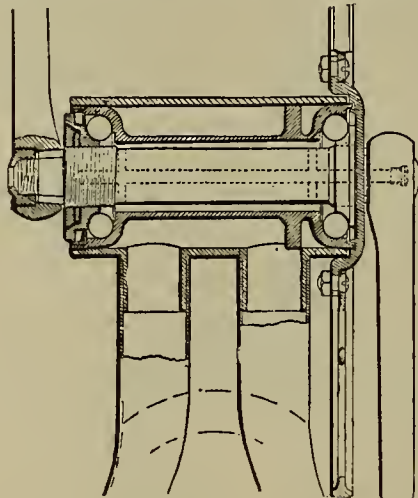
Model 67—Women's regular roadster. Price, \$75.

angles to the hub it can be easily slipped in or out of place. The balls on the ends of the spokes are pressed under heavy pressure on to threads on the spokes and cannot become loosened. The Cleveland bicycles for '99 will be regularly fitted with the Burwell detachable tire. Being mechanically se-

cured it does not depend upon the inflation for its fastening. The crank hanger is similar to that used in 1898 with several slight constructive changes for the better. The regular line of Cleveland models, the leading machines of which are illustrated, includes men's and women's road models, 61 and 62, listing at \$50; men's and women's 66 and 67, at \$75; racer, Model 68, at \$75; men's and women's regular road models,



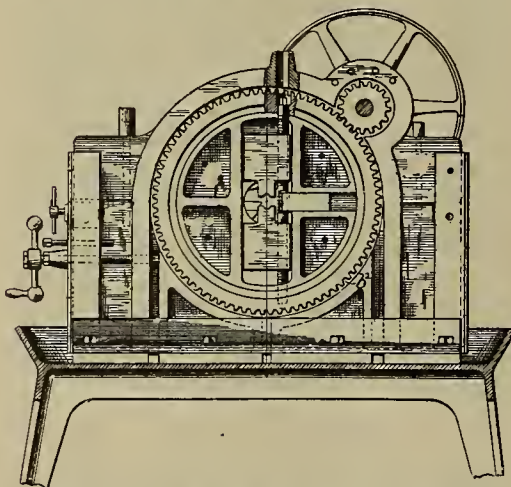
66 and 67, at \$75; racer, model, 68, at \$75; men's 30-inch wheeled roadster, Model 69, at \$85; racing tandem, Model 70, at \$100, and the combination tandem, Model 72, at \$100. The racer weighs only 19 pounds, but its frame has been increased one pound in weight over the racer frame of '98 and stiff-



fened and strengthened in proportion. The weight reduction has been obtained in the fittings and equipment. A notable feature of the Model 66 is the fork stem, which is threaded at its lower end and then screwed into the crown forging and brazed fast.

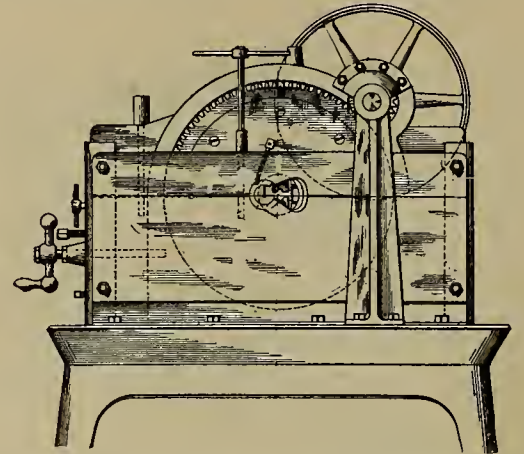
ONE-PIECE AXLE LATHE.

The turning or finishing up of the forgings for one-piece crank and axle parts or other axles which cannot be hung between end centers but must be chucked in the middle is work which has caused W. H. Fauber, maker of the Fauber hanger, to produce the machine tool here illustrated. The machine is a simple lathe specially made for the work mentioned, though it may be adapted to any form of axle turning where any but middle chucking is impossible. Secured in the frame of the lathe is an inverted U shaped plate or frame with an annular ridge run-

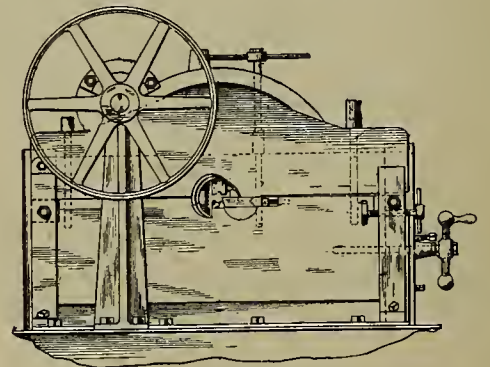


ning around its inside face. This ridge is matched by a similar ridge formed in a segmental plate fastened to the bed of the machine in such a manner that the two plates and their inner annular ridges form a circular way for a large toothed disk in the center of whose periphery is a depression co-operating with the ridges mentioned. The disk has cross ribs as shown in the illustration, between the main two of which a pair of blocks are arranged to slide, their movement being governed by a double threaded screw passing down through

threaded holes in the blocks. The blocks have on their adjacent ends semicircular jaws which form the chucking pieces for the crank axle to be turned. The disk then corresponds to the live center or chuck of an ordinary lathe and is rotated by means of its



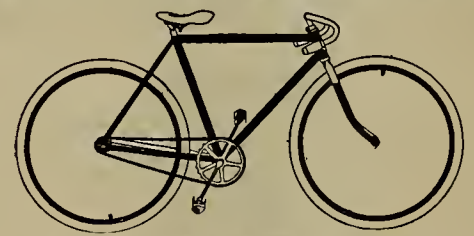
toothed circumference which engages a spur gear on the shaft of the driving pulley of the lathe. The minor pair of ribs across the rotating disk carry a block which may be made to engage by means of grooves cut in its inner end, the annular grooves around the central portion of the jaw adjusting screw, thus locking the jaws in place after they have gripped the axle to be turned. The adjusting screw is operated by a key inserted through a hole in the top of the frame work. The right end cutting tool is in segmental form and as shown in the middle illustration is held in a segmental ring fitting in a hole in the tool carriage plate. The angle of the tool is adjusted by a small set screw and after adjustment it is locked by a screw which tends to bind together the upper and lower parts of the horizontally split tool carriage plate. The left end cutter is shown in the lowest illustration. It is a straight horizontal cutting tool and moves in a slot between the two parts of the left



tool holding plate. It is tightened in a manner similar to the right end cutter and its angle is open to adjustment by means of the semicircular disk on which it rests. This tool carrying plate is adjusted in its relation to the right tool carriage by a set of screws on the front of the lathe. The entire tool carriage is fed inward or outward by a hand screw, also on the front of the machine, and to avoid feeding in too far and to insure uniformity of work, a set screw is mounted in the front block of the frame so that it will come in contact with the inverted U shaped frame and prevent any further movement of the tool carriage in relation to the work holding parts after the desired limit has been reached.

LIBERTY MODELS TO SUIT ALL.

The Liberty Cycle Co., of Bridgeport, Conn., has placed the '99 price for all its road models at \$50 and has designed patterns to suit the varying demands of scorchers, pleasure riders and racing men. Models 61 and 73, respectively the leading diamond and drop frame machines of the line, are built in three heights of frame with



Model 61—Men's roadster. Price, \$50.

flush joints throughout, tapered D-shaped rear forks, arch or square fork crown as desired and are finished in black, dark blue or dark green with rims in natural wood finish or enameled to match the frame. On Model 61, as well as on the "Bogie man" track racer, which lists at \$60, the top frame

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Dealers and riders can obtain them without extra charge on any high-class bicycle.

HOLLENBECK SADDLE CO.

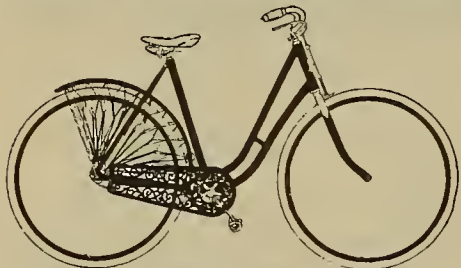
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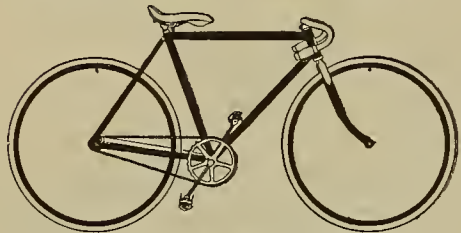
SYRACUSE, N. Y.

Mention The Cycle Age

tube is made 22½ inches long, thus allowing the scorcher to assume a stooping position without having to cramp his body, as is necessary on a shorter frame. Model 70 is a conservative model for gentlemen and has only 1½ inches drop to the hanger instead of the 3-inch drop on the other patterns and the top bar of the frame is two inches shorter in order to permit a graceful upright position for those riders who do not favor the hump. The medium length top bar is also a feature of Model 67, which, however,

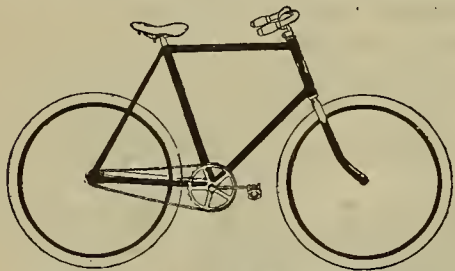


Model 73—Women's roadster. Price, \$50.



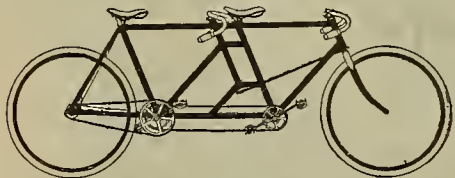
Model 64—Track racer. Price, \$60.

has a 3-inch drop to the hanger in order to meet the requirements of riders who wish to have a low rakish machine but who do not care to assume the scorching position. In thus making road models in three types of frames the Liberty company is able to suit the exact desires of all classes of riders and does not compel the scorcher to ride a machine which with the exception of the depth of the handlebars is suitable for the elderly cyclist, and vice versa. A double diamond tandem with double steering, which may be readily converted into

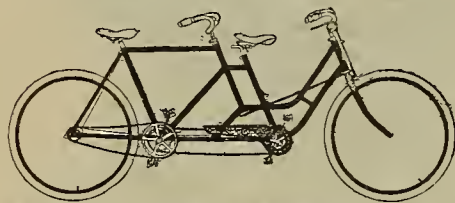


Model 70—Men's roadster. Price, \$50.

single steering, and a combination tandem, each selling at \$75, comprise the tandem line. The double diamond machine is made in two heights of frame. Model 75, having a 22-inch frame, is illustrated. All machines are fitted with the Liberty one-piece detachable sprocket, which may be removed by simply taking out the locking bolt, without disturbing the chain adjustment or separating the chain, and which has the teeth cut on the same plan as that inaugurated during the season of '98 by the Liberty company. There are only five engaging teeth which do



Model 75—Double diamond tandem. Price, \$75.



Model 77—Combination tandem. Price, \$75.

any work, the other small teeth acting merely as guides for the chain. It is stated that the trial given this form of sprocket has demonstrated its smooth, easy running qualities beyond a doubt. The Liberty direct spoke hub flange, which was first introduced by this company in '92, is retained, it having proven itself so satisfactory in the past that no change is made. It differs from some forms of similar spoke flanges in that the projections for securing the spoke heads are made integral with the hub barrel, there being no brazing or other means of attaching separate parts employed. The

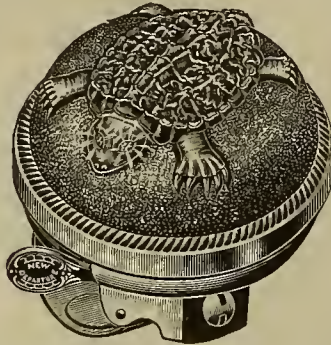
options in gears, bars, tires, saddles, handlebars, etc., are broad enough to satisfy the most exacting.

ORNATE BICYCLE BELLS.

A distinctly new departure has this year been made in the ornamentation of bicycle bells by the New Departure Bell Co. of Bristol, Conn., which has supplemented its well



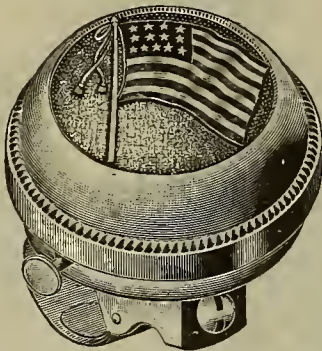
known lines of New Departure and Bristol bells with the ornate designs here illustrated. The dragon, turtle and rattlesnake bells have the figures standing out in high relief from a mat or velvet surface and the eyes



of the dragon are set with rubies and those of the snake and turtle with emeralds. Another design not shown is that of a lion's head with long flowing mane and ruby eyes. These designs are handsomely modeled, hand



chased and finished in a rich antique statuary bronze with base and clamp to match. In this line of bells the New Departure lock clamp only is used, and the gongs are all of the square beaded pattern, which is this year



enriched by a rope fillet at the junction of the gong and bead.—Another novelty which the New Departure company is placing upon the market is the push button flag bell. On a rich mat background appears the Ameri-

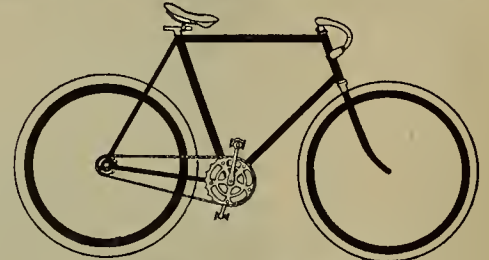


can flag surrounded by a highly polished and finished gong. The stars are silver on a blue field and the stripes are alternate red and silver, the colors being of the correct shade

and in hard enamel which will not crack or peel off under exposure to weather or wear. The alarm is operated by a push button, and turning the gong to the right with the hand rewinds the bell, which is necessary only at long intervals. The L. A. W. bell which has so long been one of the leading designs of this company, has been improved for this season and is more artistic than ever, the center being set with a large, finely cut brilliant amethyst. The League bell is furnished with lock clamp or plain clamp, with dark oxidized background below the emblem or natural velvet nickel-finished as desired.

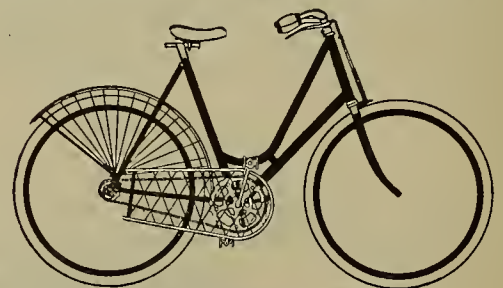
REMINGTON MODELS READY.

The Remington Arms Co., of Ilion, N. Y., has completed samples of its '99 line and offers the trade six patterns of adult machines, four of which are here illustrated. Models 47 and 48 are men's and women's bi-

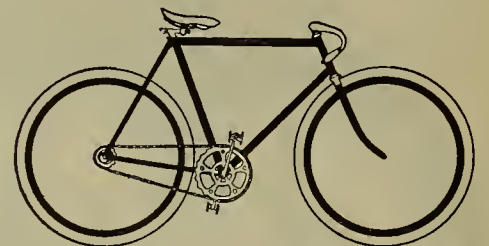


Model 47—Price, \$35.

cycles to sell at \$35. They are similar in design to models previously made by the company and while they list at a popular price are constructed with sprockets, handlebars, pedals, seat posts, hubs, cranks, and other important metal parts made of first-class material by competent workmen in the Remington factory. The hanger is dropped 2¼ inches, 1½-inch tubing is used, Dunlop or Kangaroo tires and Sager saddles are sup-

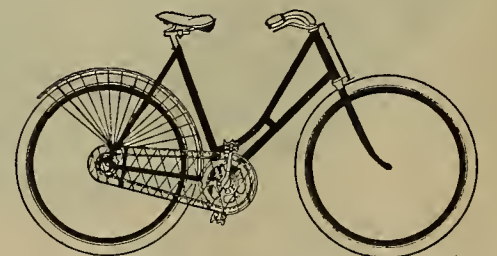


Model 48—Price, \$35.



Model 56—Price, \$50.

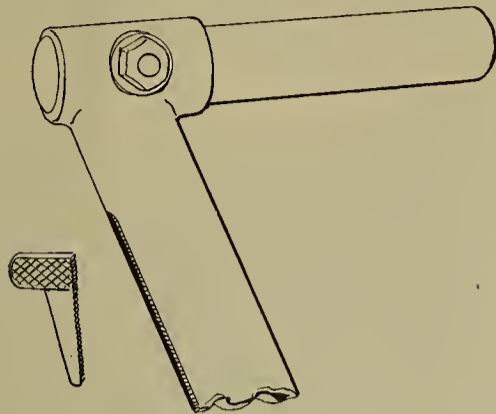
plied as regular equipment, and 3-16-inch B block chains are fitted. The company's \$50 machines, Models 56 and 51, are fitted with crank shafts and cranks forged in one piece, though the reliable Remington three-piece hanger equipment is retained on Models 47 and 48. The joints on the \$50 patterns are flush throughout and the rear forks and stays are made of oval tubing which is not cranked as ordinarily but runs straight from end to end. The hanger is dropped 2¼ inches. The main frame tubes are 1½ inches in diameter with the exception of the top



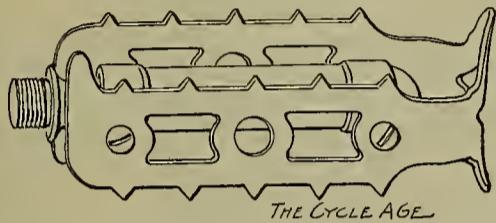
Model 51—Price, \$50.

curved tube in the lady's model, which is one-inch. The Remington patent chain, in which the blocks as usually constructed are dispensed with and which has been well tested during the season past, is fitted to these models. The claim made for this chain is that while it may wear, as the best of chains will, it is absolutely guaranteed against stretching. The seat post is of special construction and has an adjustable sliding cross bar of solid bar steel. The post is held without any of the common clamping devices, it being secured in the frame by a simple wedge piece, the strong point of

which is that the more weight that is placed on the saddle the tighter the post is wedged. The rims and guards are enameled in maroon, while the frames are finished in black, maroon and dark green. Pedals of



home manufacture, the appearance of which is shown in the illustration, will be fitted and a choice of bars to meet all requirements is offered. In addition to the above

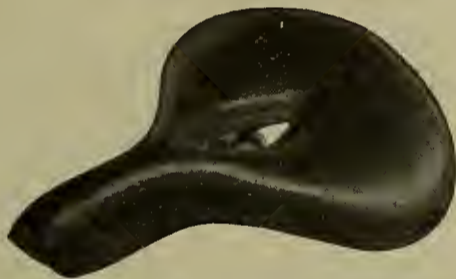


THE CYCLE AGE

illustrated patterns, the Remington company will continue to market its models known as 26 and 27, which will list at \$25.

**CUTTING SADDLES, MODELS E AND T.**

Two favorite patterns from the large line of saddles manufactured by Cutting, Kaestner & Co., 241 South Jefferson street, Chicago, are illustrated below. Model E, of which a top view is presented, is a man's



saddle with a long pommel and a wide seating surface. It is built over a steel base padded with felt and covered with leather. Plain truss wire springs are used. The weight is 16 ounces. A lady's padded saddle built over a steel base 7 3/4 inches wide by 9 inches long is offered at a popular price in model T, of which a bottom view is shown. The saddle is fitted with the company's original one-piece coil spring, which will be a feature of several of the '99 Cutting patterns. The strictly cash system of sales which was carried out during the past season by this company has proven so satisfactory that it will be continued for the coming year, thus



allowing prices to be reduced to a point which makes it unprofitable for the purchaser to buy on the long time payment plan.

**WORKING DOUBLE SHIFTS ON WOOD RIMS.**

The Fairbanks-Boston Rim Co.'s factories are running day and night and shipments have been made this month to Hamburg, Berlin, Paris, Cape Town, Johannesburg, and other foreign cities. This, considering that Fairbanks-Boston rims usually command the highest prices prevailing in every

market of the world, seems sufficient evidence not only of the superior quality of the rims but of the very up-to-date and energetic management behind the business. Excellent recommendations of the enduring qualities of these rims are the facts that the late six-day race in New York was won on them and that the McIlraths, who recently returned to Chicago, made their tour around the world on bicycles fitted with the Fairbanks-Boston linen covered rims. The convenient location of the Brantford factory with relation to the supply of raw material and the superb system by which this is rapidly converted into the finished product, are tersely expressed in the words of a traveling man who has just returned from a visit to the Canadian factory, as follows: "All they have to do is to step out in the back yard, saw down a big maple tree, shoot it into the end of the factory and it comes out rims at the other end."

**WHY STEARNS FEATURES ARE DISTINCTIVE.**

By making in their own factories all of the parts and fittings that go into the manufacture and equipment of Stearns bicycles except the raw steel, tubing and balls, and the saddles, tires and tool bags, E. C. Stearns & Co. of Syracuse produce a line of bicycles which embody so many features peculiar to themselves that there is no possibility of mistaking them for the product of an assembling shop. While Stearns machines and fittings are distinctive and not found on other bicycles—a feature wherein lies part of their value to agents—there is nothing "freakish" about them in design of frame or in the mechanics of the bearings. Especial attention of the trade is called to the new section the company is using in its rims for next year. It is of V shape and comparative tests by the company show that it combines great strength with light weight. E. C. Stearns & Co. have a completely equipped wood working plant in which they make all of their own rims from selected rock maple. Each of these rims is carefully inspected and tested, after which it is given the handsome orange finish which is its distinguishing mark. This finish is of the same quality as that used on the finest grade of carriages and effectually protects the rim from the action of the elements, thereby preserving the natural life and strength of the wood.

**CHAIN LINK SOLD SEPARATELY.**

The illustration below shows more plainly the construction of the repair chain link made by the Indiana Chain Co., of Indianapolis, than cuts previously shown. The



main advantage of the link is that it can be put into a chain by any rider without the use of a tool of any kind. The link with its accompanying pins is sold separately for use on chain of any make.

**VINDEX MAKERS READY TO FILL ORDERS.**

The line of Vindex bicycles, as announced for next year by the Reading Cycle Mfg. Co. of Reading, Pa., will consist of three models, known under the trade names of Vindex Light Roadster, listing at \$50; Vindex, at \$40, and Simplex at \$35. All of these models have been considerably improved over last season's models and have been well received, the majority of the company's former agents, as well as a number of new ones, having already signed contracts for the coming season. The Reading company reports that from present indications its business the coming season will far exceed that of all previous years. It has been operating its factory since October 1 on new goods and is now prepared to fill orders promptly.

**ORDERS COMING IN FAST.**

Arthur K. Peck, general manager for the Barnes Cycle company of Syracuse, N. Y., states that the outlook is unusually bright for a good volume of business during 1899. More orders have been booked than ever before at this time and the contracts are of a liberal nature. Orders are coming in from Japan, South Africa, Australia, Germany, and France. The effect of lower prices is to make the manufacturers more conservative, he thinks, and get the business down to a hardpan basis. At present 300 men are employed at the factory and during the height of the season, which will begin soon, the plant will be run full capacity with 650 men. The company has plenty of orders for immediate delivery. There is an increase in the number of orders for chainless machines and Mr. Peck says as many high priced as cheap bicycles are being sold.

**OFFERS A HANDSOME CALENDER.**

The United States Rubber Co., 15 Murray street, New York, have gotten out a very pretty screen calendar, 9x15 inches, in four

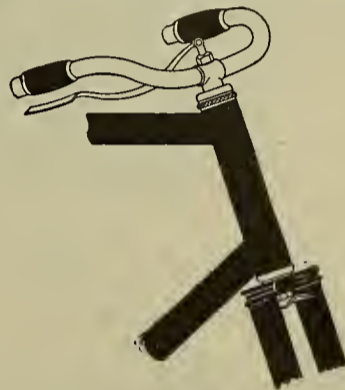
panels, showing the four seasons. The original paintings are the work of the best artists in New York, the lithographing in ten colors by leading American lithographers. The rubber company offers to mail one of these calendars to anyone who sends a two-cent stamp, mentioning this paper.

**STEARNS' NEW HANDLE BARS.**

The illustrations below show in a very graphic manner the exact appearance of the handlebars of the Stearns Yellow Fellow, manufactured by E. C. Stearns & Co.,



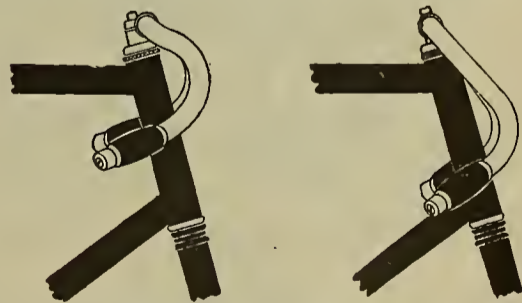
Syracuse, N. Y. The picturing of handlebars in place on the new machine, which plan is followed out in the '99 Yellow Fellow year book, gives a much better opportunity to judge of their exact relation to the front



end of the frame, the steering head, etc., than when the bars are illustrated as entirely detached. All of the Stearns bars with the exception of No. 21 are 17 1/2 inches wide. No. 10 is an adjustable bar curved slightly



forward and with a 2 1/2-inch downward or upward curve according to which way it is turned. No. 12 is similar in shape but is non-adjustable, being brazed in an upturned position and used only when a front wheel

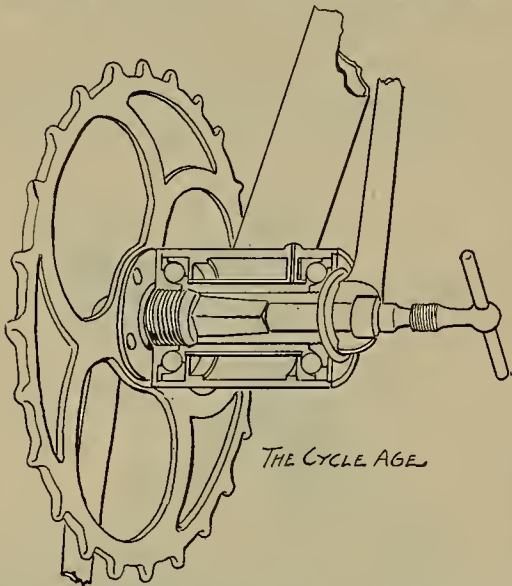


spoon brake is required. An adjustable bar with 2 1/2 inches drop and a curve similar to that of No. 10 bar but 20 or 22 inches wide is offered in No. 21, while No. 13 gives an adjustable racing bar with a 2 3/4-inch forward curve and a 5-inch drop. No. 20 is a non-adjustable low racing bar with a 7-inch drop.

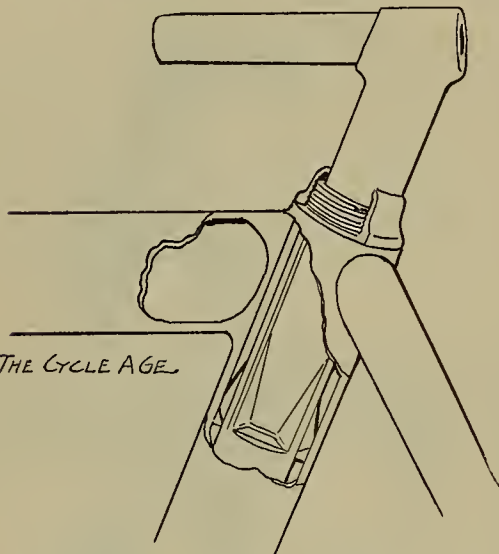
**EIGHT FEATHERSTONE MODELS.**

The line of A. Featherstone & Co., Chicago, comprises eight patterns numbered from A to H and listing from \$50 down to \$20. Model A, the 30-inch wheel pattern, has 3 1/2-inch hanger drop, and Model B, the

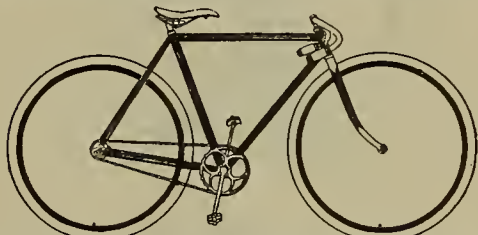
other \$50 pattern, has 28-inch wheels and is equipped as a light road machine or track racer. The \$30 and \$40 machines are built in both men's and women's models. The \$40 patterns have the same crank hanger, seat post connection and fastening and gen-



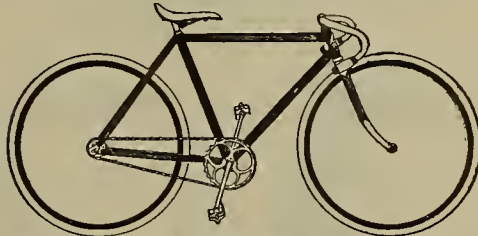
eral equipment as Models A and B. The hanger used on these models is new and, as indicated in the illustration, is of the two-piece variety but differing in construction from the two-piece hangers used on Models



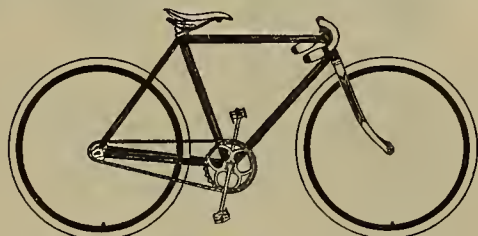
E and F. Each half of the divided axle is made in one piece with its adjacent crank. The left side piece has a long, square, tapered, longitudinal hole in its inner end



Model A—30-inch wheel roadster. Weight, 26½ pounds. Price, \$50.



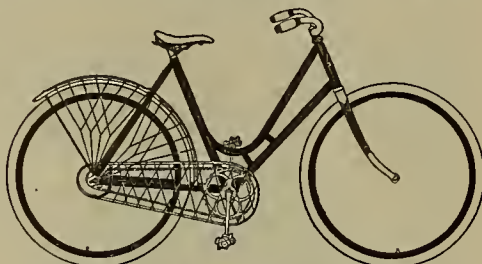
Model B—Special light roadster. Weight, 22 pounds. Price, \$50.



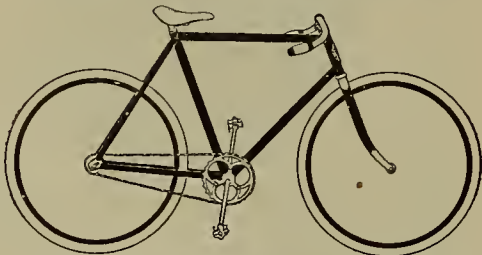
Model C—Weight, 25 pounds. Price, \$40.

which receives the correspondingly shaped taper shank on the other section of the axle. The two are locked together by a long sleeve nut which is turned with a key,

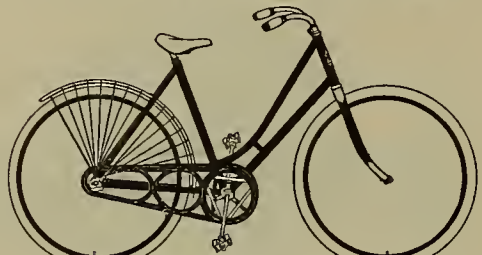
there being no projection beyond the outline of the crank hub. As the cones which screw onto the axle sections are independent in their fastenings, the adjustment and alignment of the bearings is not disturbed by the removal and replacement of the axle and cranks, and it is not necessary to remove the pedals, sprockets, etc., to take the hanger apart. The balls are held in place by retainer rings and a sleeve which surrounds the axle. All adult models are fitted with a special seat post binder consisting of a split taper sleeve surrounding the seat post and drawn up against a corresponding taper machined in the outside of the seat cluster connection by a spanner-operated nut on top of the cluster. When it is desired to loosen or pull out the post the nut is unscrewed, a few light taps given the saddle, and the nut pushed down against the top of the cluster. The post may then be withdrawn. An original expander device is used to clamp the handlebars. Pedals of Featherstone make are fitted to the machines and the Featherstone tire made under the G. & J. patents constitutes part of



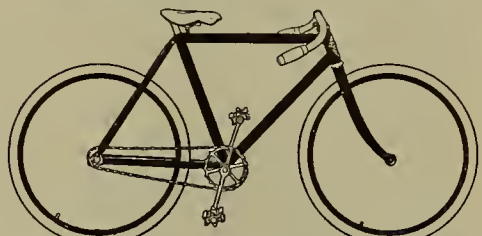
Model D—Weight, 26 pounds. Price, \$40.



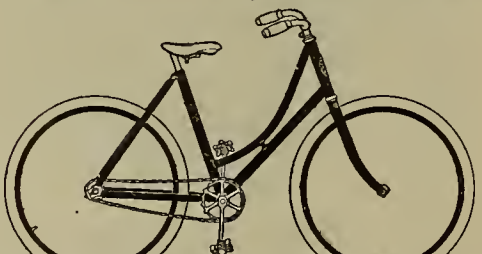
Model E—Weight, 26 pounds. Price, \$30.



Model F—Weight, 27 pounds. Price, \$30.



Model G—Juvenile, 24-inch wheels. Price, \$20.



Model H—Juvenile, 24-inch wheels. Price, \$20.

the regular equipment. Models E and F Special, which in other respects are similar to the regular \$30 patterns E and F, are fitted with a special single-tube tire, the Dart, and sell at \$25.

#### BUNDY ACETYLENE LAMPS.

A booklet just issued by the Frank E. Bundy Lamp Co., of Elmira, N. Y., describes the construction and the action of the generating apparatus of the Bundy acetylene gas lamp. While lamps for bicycles, carriages, fire departments, headlights and for house and physician's use are made by this company, the generating parts are the same in all. The booklet describes the manner in which the Bundy generator aims at the even generation of pure dry gas, non-leakage and absolute water feed control. The manner of feeding the water to the gas so that the sup-

ply shall be the same at all times regardless of shocks or jars which would ordinarily tend to shake down an oversupply is one of the most notable points in the construction of the Bundy lamp. Much interesting and profitable information concerning acetylene lamps is contained in the booklet, which is now being mailed to the trade and to all interested parties who request copies.

#### COASTER BRAKES AND BI-GEARS POPULAR.

The ordinances of Buffalo, N. Y., prohibit coasting in certain prescribed districts of the city in the sense that the feet must not be taken from the pedals. As there are many long hills in the smoothly paved street within the proscribed territory, the announcement that the Automatic coaster and brake, made by the Eclipse Bicycle Co. of Elmira, is to be attached to many of the standard bicycles next season is hailed with delight by the army of Buffalo riders. This device and the Bi-Gear, made by Brown-Lipe Gear Co. of Syracuse, were introduced to the Buffalo public on a rather limited scale last year, but attracted widespread attention and many sales of the machines to which these devices were attached followed, and it is a safe prediction that both devices will be in common demand next season.

#### TRADE NOTES.

The John Lonn Sons' bicycle factory at Laporte, Ind., has just received 12,000 bicycle rims.

The Schumacher Acetylite Lamp Co., 84 LaSalle street, Chicago, will be represented in booth 60 at the Chicago Cycle exhibition, beginning January 7, and at the New York show beginning January 21.

The Coe Mfg. Co., 50 Warren street, New York, has been appointed sole selling agents for the complete line of the Whaley-Dwyer Co.'s stirrup toe clips and other specialties for the eastern and middle states, Maryland, Virginia, and Canada.

The American Machine Co., of Columbus, O., has removed its general offices for that territory to the retail house on South High street, where the company now has two very large rooms and an immense basement to accommodate the business.

The sundry and repair departments of the Julius Andrae & Sons Co., which were formerly located in the downtown salesrooms in Milwaukee, have been transferred to the new Andrae factory, making it more convenient for both the company and its agents, by saving time. Mr. Anderson, who has been in charge of this department for years, has moved to the factory also.

Charles F. Lott, for the past three years connected with the Anderson, Ind., Cycle company in the capacity of buyer and traveling salesman, will be at liberty after January 1 owing to the reorganization and incorporation of the company as the Erie Cycle & Motor Carriage Co., and will upon that date be open to engagement. He is well acquainted with the trade throughout Pennsylvania, Ohio, Indiana, Illinois and Michigan.

The Oriten, the only ten-seated multiplet ever built, is now in England, where it attracted much attention at one of the recent cycle shows. The length of the machine, as given by the Waltham Mfg. Co., is 24 feet and the weight 180 pounds. When this giant was landed at Liverpool no railway truck was found capable of taking such a long article and a timber truck of huge proportions had to be requisitioned from the newest line into the metropolis, the Great Central railway.

With the beginning of the new year the Olive Wheel Co., of Syracuse, N. Y., will increase its force of workmen to 150, the prospects for a big season's business being better now than ever before at this time of the year. Already 2,000 machines of '99 pattern have been completed and on December 22 the company closed a contract for 1,000 bicycles to be shipped immediately to Copenhagen. During the first week in January the company will ship a carload of bicycles to San Francisco.

#### American Cycle Machinery Wanted.

The Cycle Age is in receipt of a communication from a machinery house intimately connected with the English cycle trade, and with headquarters at Birmingham, which desires to secure the representation for Great Britain of some first-class American machinery concern. Further information may be obtained at the office of this paper.



# ADLAKE SPECIAL



MODEL A, 30-INCH, \$60.00.

The most stylish model yet produced and positively the easiest running. Worth every live agent's serious consideration if he desires up-to-date goods. Brim full of Adlake features and practical talking points.

ADLAKE SPECIALS . . . . \$60.00 List  
 ADLAKES . . . . . 40.00 List  
 ALASKAS . . . . . 30.00 List  
 Agents should see the line before closing contracts.

**The Adams & Westlake Co.** Chicago

Makers of "The Wheel of High Degree."

## THE "ADMIRAL"

List \$30

M. & W. tires; 1 1/4-in. flush joints; 2 piece hanger; 3-16 in. chain; oval crown; D rear forks; large sprockets.

We want a few more good jobbers to handle this fast seller.

**MARCH-DAVIS CYCLE MFG. CO.**

FACTORY: IFRS.  
 44th and North Aves. 47 Warren Street,  
 CHICAGO NEW YORK



# UNION CYCLES FOR 1899

"BUILT ON A GOLD BASIS."

UNION REDHEAD . . . . .	List \$50	} UNION "P"ERFECTION. UNION "D"URABILITY. UNION "Q"UALITY.
UNION WHITEHEAD . . . . .	" 65	
UNION ROLLER GEAR CHAINLESS, . . . . .	" 75	

"OUR WORST IS BETTER THAN THE OTHER FELLOW'S BEST."

The UNION ROLLER GEAR CHAINLESS will be heard from in 1899. SPEEDIEST BICYCLE BUILT. The UNION agency is valuable. If you don't get it you will wish you had. WRITE NOW.

**UNION CYCLE MFG. CO., - Highlandville, Mass.**

# THE PASTIME AND SPORT

## WINS AGAINST MOTOR PACING

**Fournier's Petroleum Multicycle Proves too Slow for Elkes' Human Pacemakers.**

New York City, Dec. 27.—Motor pacing in open competition and against man pacing had its first trial in this country at the indoor races at Madison Square Garden last night, when Harry Elkes, paced by seven tandems, rode a twenty-mile match against Henri Fournier's petroleum motor, to be followed the first ten miles by Jay Eaton and the last ten by Teddy Goodman.

The battle was actually to have been between the pacemakers and Fournier. The former realized that their means of livelihood hung in the balance, while the Frenchman equally realized that if successful he would probably have lucrative employment for his machines so long as middle-distance racing remains popular.

When Fournier mounted on his funny machine, which puffed around the track like a little toy steam engine, the crowd stared for awhile, and then howled with glee, so incongruous, so out of place on a cycle track, did it seem; but Fournier, gradually turning on a little more power, flew around the track on a trial spin at a speed that opened the spectators' eyes. Eaton and Elkes started from opposite sides of the track, falling in behind their pacing machines as the latter came around to them. Elkes gained from the start, and on the third lap was on even terms with his rival. Fournier seemed unable to attain a high rate of speed as quickly as he had intended and for the first mile steadily fell behind. The pace was fast, 2:00 4-5, for the first mile and 1:57 1-5 for the second. At this point Elkes was a lap in the lead. Early in the third mile Fournier began to draw up on Elkes, when an accident put him out of the contest, to the satisfaction of scores of pacemakers and their friends present. The driving belt connecting the motor and the driving wheel of the Frenchman's bicycle parted and Eaton narrowly averted running into him.

Extra tandem pacemakers were sent on to the track to carry Eaton and Goodman the remainder of the distance, but the task was a hopeless one for them. When Goodman relieved Eaton at ten miles Elkes was leading by nearly three-fourths of a mile. His time at that point was 20:42 1-5.

At twenty miles, Elkes, who had ridden in splendid form, was one mile in advance of his rivals. His time for the distance was 41:41 2-3.

In the sprint races, Frank Kramer, the amateur champion, made his debut as an outlaw, winning the half-mile, with Ertz, last year's champion, second.

Harry Gibson, of Cincinnati, yept Michael No. 2, rode an exhibition half in :59 1-5, indoor record time.

Summaries of the professional events are as follows:

Half-mile, scratch—Oscar Hedstrom, first; Harry Caldwell, second; George Kraemer, third; Nat Butler, fourth. Time, 1:05 2-5.  
One-mile handicap—George Kraemer, 50 yards, first; Oscar Hedstrom, 40 yards, second; Robert Miller, 50 yards, third; Oscar Babcock, 80 yards, fourth. Time, 2:19.

### American Wins in Spain.

George Banker continues to be the drawing card on the European winter circuit, although he must have had some misgivings as to his reception at Murcie, Spain, on December 11, where he suc-

ceeded in winning the 1,000-meter handicap from scratch in 1:17 4-5, broke the track record, and won the tandem race with Tommaselli as team mate. Tommaselli defeated him in the Prix de Murcie 5,000-meter race, in which each rider took his turn at pacing until Tommaselli made his jump as usual and maintained his lead in spite of Banker's efforts, crossing the tape half a wheel to the good. Only one Spaniard took part in the races, and he suffered defeat throughout.

## TO GIVE UP HORSES

**Michael Decides to Stick to Bicycle Racing Under Weinig's Management—Enter His Successors.**

Now comes the announcement that Michael—the mysterious, the vacillating, who is married but has no wife, who though a bachelor sought a divorce in Crown Point, whose bitterest rival is his dear friend Tom Linton, who has repeatedly renounced racing on a bicycle to become the claimant against his newest chum, Tod Sloane, for jockey championship honors—this small but uncertain quantity has thrown over his new trainer, George McLeish, whom he took to Europe with him on his last trip, and under the management of Al Weinig will again enter competition races on the bicycle.

To what this sudden change of purpose is attributable is not made clear, but to any who has ever attempted to learn anything definite regarding the midget this is not surprising. The announcement states that Michael is to appear in middle distance races in San Francisco and elsewhere, starting in February under the management of Messrs. Kennedy, Brady and Tim Hurst. Weinig and Michael left New York last Friday night for Nashville, there to do three weeks' hard training before joining the six-day men at St. Louis on their way to the coast.

While Michael is leaving New York two other riders of miniature stature are arriving to take his place. These are Harry Gibson, of Cincinnati, known as Michael No. 2, and Joe Downey, of Boston, known as Michael, Jr. Gibson has beaten Martin at the middle distance paced game. Downey is an amateur of 5 feet 3 inches, 97 pounds in weight, and uses a 116 gear. He is a wonder in stature and is but 15 years of age. Downey is considered the athletic marvel of the age, for his ability already shown in a mile paced record of 1:46, a five-mile ride in second place back of pace in 9:27, and ten miles unpaced in 25:30. In the anthropometric chart he stands 409.2 in a test of strength where the average full grown athlete stands at but 500. Gibson will be matched with the professionals, Downey against Charlie Earl, the amateur hour record holder.

## Evolution of Cycling Dress.

The evolution in cycling dress for women has been rapid during the past three years. From the long walking skirts first used when cycling was not yet a recognized pastime, the nightmare season of bloomers was entered and passed, and now the sensible and becoming short skirt, divided or not, over bloomers is the vogue. In the same way the knee high boots, with leather or cloth tops, first especially designed for use on the bicycle have been superseded by a boot no higher than a golf shoe which does not wrinkle nor bind the muscles of the leg and which is not uncomfortably hot in midsummer and does not take so long as the others to lace or button.

## ENDORSE WHEELMEN'S EFFORTS

**Farmer's Adopt Resolutions at Their National Congress Favoring State Aid for Road Building.**

The Farmers' National Congress, which has just closed its annual session at Fort Worth, Tex., has passed resolutions strongly endorsing the system of state aid to road building, and commending the efforts of the League of American Wheelmen for its general introduction.

The passage of these resolutions marks a signal success for the highway improvement committee of the L. A. W. It means that the farmers, who have so long looked with doubts and misgivings upon the good roads work of the L. A. W., are beginning to understand that this work is in their own interest, and that by working in harmony with the L. A. W. they can bring about the construction of durable highways without being obliged to bear all the expense, as they have so long supposed they would have to do.

The Farmers' National Congress consists of about 450 delegates, representing nearly every state. It is the strongest agricultural body in the United States, a thoroughly representative body of wide-awake, up-to-date, although conservative, farmers, and was declared by William H. Hatch, for many years chairman of the house committee on agriculture, to have more influence with Congress than all other agricultural bodies combined. Its endorsement of state aid to road work will have much weight with the legislatures and with farmers generally, and opens the way for united action between its members and the farmers of the United States.

The passage of these resolutions is the result of the efforts of Otto Dorner, chairman of the highway improvement committee L. A. W., who has attended the sessions of the congress for three successive years. His farmer friends, who were delegates from Wisconsin, selected him to represent that state on the committee on resolutions at this last meeting, and this committee elected him as its secretary and passed the good roads resolutions he presented by a vote of 23 to 2.

The resolutions in full are as follows:

Resolved, That the best interests of American agriculture demand the construction of first-class roads connecting farms with market towns;

That the cost of their construction is too considerable to be borne by farm property alone;

That, as the entire population is interested in, and benefited, directly and indirectly, by good roads, all property ought to contribute to the cost of their construction, through the medium of a state tax;

That we endorse the system of state aid to roads, because it appears to solve the good roads problem in the farmer's interest; it largely decreases the cost of road construction to local communities, provides a means by which the large city taxpayers and corporations owning valuable franchises from the state are made to share in the expense, and properly leaves it optional with farming districts to avail themselves of its provisions or not, as they may choose;

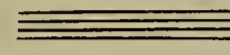
That we believe the state aid system suitable to most states in the union, and commend the efforts of the National Road Parliament, the League of American Wheelmen and the government office of road inquiry to make this system of road construction generally known and understood, and to bring about its general adoption.

### Taylor Will Ride At Home.

Edouard Taylore, the speedy young Frenchman who returned to his native land last week, says that, notwithstanding his fine of \$200 and suspension by the

THINK OF IT 

One Mile in

1:31 <sup>4</sup>/<sub>5</sub> 

made on  
an

**ORIENT CHAINLESS**

Can't  
you afford  
to handle this  
Record Breaker?

WRITE US  
FOR DESCRIPTION  
AND PRICES


WALTHAM MFG. COMPANY  
WALTHAM, MASS. 

**THE '99 LAMP  
WONDER**



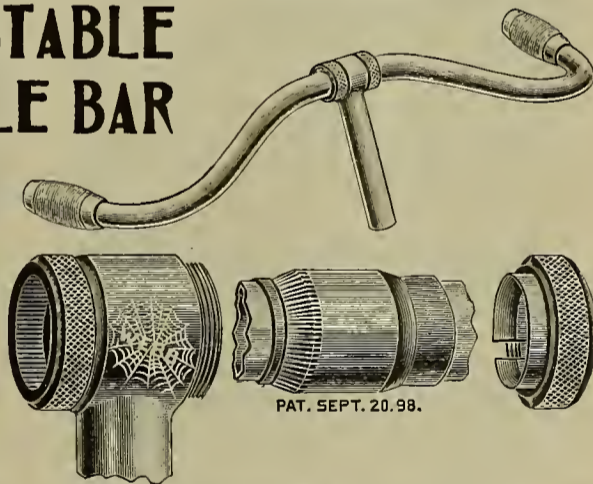
Lamps—  
Acetylene Gas

Weight, 8 ounces.  
Height, 4 1/2 inches.  
Burns 5 Hours.

Combination Bracket, Con-  
vex Lens, Jewels, Strictly  
High Grade 

THE SANFORD & POLLOW CO.  
235 Lake Street, Chicago, Ill.

**THE "WEBB" DOUBLE GRIP  
ADJUSTABLE  
HANDLE BAR**



Unlimited  
Adjustments.  
No Brazing.  
Perpetual  
Guarantee.  
Seamless Tubing.

Our Prices  
Are Right.

PAT. SEPT. 20, 98.

**BAY STATE  
WOOD RIMS**

- 5 PIECE NON-SPLITABLE. Finest Quality Made.
- 2 PIECE LAMINATED. The Peer of Any Lami-  
nated Rim.
- 1 PIECE K & C LOCK-JOINT. Strongest Joint Made.

Buy the best. Don't handicap your wheels with cheap, flimsy rims.  
Write for prices.

BAY STATE WOOD RIM CO.

Mention The Cycle Age

AYER, MASS.

**AGENCIES WANTED.  
AUSTRALIA AND NEW ZEALAND.**

Frank Grimley, 263 and 264 Clarence St., Sydney, N. S. W., importer of bicycles and their accessories, bicycle makers' materials and tools, for trade buyers, is open to negotiate for exclusive agency for manufacturers of those lines and to introduce and push the sale of their goods throughout Australia and New Zealand on manufacturers' account or to purchase right out. Quotations and samples of novelties invited. Unquestionable references on application to the proprietors of this journal.

L. A. W. for riding at unsanctioned meets in this country, he will resume racing in France. Regarding the matter, he is quoted as saying: "Why should I pay \$200 to the L. A. W.? I can ride at home. Our riders' organization is so nearly the same as the American Racing Cyclists' Union here and our plan of controlling the sport is so nearly the plan adopted here, that in France I am confident union men will ride as much as they desire. Our U. V. F. is composed of the track owners and promoters. So is yours. Our syndicate of racing men is the same as your union. The U. V. F. works with the syndicate, and the latter has representation in the U. V. F. The tracks in our country give meets once each year for the benefit of the racing men's fund, as yours will another year. The entire plan in France is the same as has been adopted here, and the U. V. F. has only to know that the National Cyclists' Association is the strongest to form an alliance with it. In the meantime, I anticipate not the slightest trouble in racing at home, and shall not worry at all."

#### NEWS IN BRIEF.

Platt Betts, the English rider, will desert the paced game next season and enter the sprints.

J. Frank Starbuck, of Harrisburg, Pa., has secured some one to back him for a racing trip to Australia.

Jimmy Warburton, who was a member of the N. C. T. A. pacing team last season, has gone on the vaudeville stage in London.

Tom Cooper is planning a trip to Europe next summer to enter into competition with the European cracks. It will be his first trip abroad.

Lee Richardson will go to London next year under contract to appear at the Alhambra theater June 4 for a three months' engagement.

Some of the best French cracks have gone away to serve their time as soldiers. They are Morin, Mercier, Boulay, Nieuport, Prevot and others.

Paul H. Nippert, a prominent young insurance man, and a lover of outdoor sports, has been elected president of the California Associated Cycling Clubs.

Eddie McDuffee, Harry Elkes and Harry Gibson have decided to follow Jimmy Michael to San Francisco. Each of the three hopes to arrange a match race with the little Welshman.

Trainer John West, who had decided to leave the race track, will accompany Miller to San Francisco and care for him in the forthcoming 142-hour contest. After that he says he will retire.

Eddie McDuffee has decided to do no riding for records this winter. He expects to go to California in order to arrange a match with Jimmy Michael. He has wanted such a race ever since the fiasco in Philadelphia last August.

A young Englishman named Albert Towner announces that he has determined to undertake the task, in which Teddy Edwards failed, of riding 365 consecutive centuries, beginning January 1. Towner says that he will not vary his route, but intends to ride from London to Brighton and back each day for a year.

W. A. Brady, promoter, is quoted as authority for the statement that a six-day race under the provisions of the Shanahan law will be run in Chicago some time this winter, probably in February or early in March. The long-distance men who are going to the coast to participate in the San Francisco grind are expected to be competitors in the Chicago affair. The Illinois law makes it compulsory on the men and management that the competitors rest every twelve hours or oftener.

A good roads bill is to be submitted to the Illinois legislature during the present session. The bill provides that the governor shall appoint a good roads commissioner which shall select several highways connecting the important cities and towns of the state to be improved at the expense of the state and of the municipalities through which the roads pass. It is proposed to employ convict labor to break the stone to be used for road-building material.

#### MORE IMPROVEMENTS.

Further additions in train service have recently been instituted by the Baltimore & Ohio Railroad in inaugurating a day-light schedule between Chicago, Akron and Cleveland leaving Chicago 10:25 a. m. via train No. 8 and reaching the points named the same evening. This is in addition to through train service with Pullman sleeping car between the same points via train 46 leaving Chicago 7:30 p. m. daily. Fares to Cleveland via the Baltimore & Ohio Railroad are lower than by any other line. For detailed information call at ticket-office, 193 Clark Street, Auditorium Hotel, Grand Central Passenger Station or address B. N. Austin, G. P. A., Chicago.

#### MISCELLANEOUS.

Advertisements under this head 5 cents per word first insertion, 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received.

#### WANTED

**WANTED**—One good agent in every large city in the United States for the best selling bicycle repair tool on the market. Big money for good agents. THE HEATH-QUIMBY CO., Minneapolis, Minn. \*

**WANTED**—I have simple and practical chainless device for bicycles; cheaply manufactured with ordinary machinery; would like responsible manufacturing company to apply for patents and manufacture. Address HENRY C. H. S., care Cycle Age.

#### FOR SALE

**FOR SALE**—Complete sets of bicycle pedal tools and dies for sale. Address PEDAL, care Cycle Age.

**NEW CHAINLESS BICYCLE**—Patent allowed for all claims presented. Mechanical simplicity; lighter, stronger, more speed; no expert adjustment or repairs, easy manufacture. Inventor desirous of co-operation in selling foreign patents. Address TWENTIETH CENTURY, Room 1308, Lord's Court Bldg., Exchange Place and William Street, New York City.

**REFEREE BICYCLES** are money making bicycles. Why? Because—best material, best workmanship, elegant finish, prompt deliveries, prices right. Investigate and secure exclusive territory. REFEREE CYCLE CO., 309 56 Fifth Ave., Chicago.

**TO MANUFACTURERS** of Bicycles and Bicycle Fittings; also Jobbers of Fittings. On account of retiring from business are closing out at bargain prices bicycle parts and fittings, also factory equipment, consisting of machinery, standard small tools in great variety, special bicycle tools, general line of equipment and supplies. All in first-class condition. Send for catalogue. Something in the lot sure to be of interest. Address THE MOORE CYCLE FITTINGS CO., 50 Mechanic St., Newark, N. J.

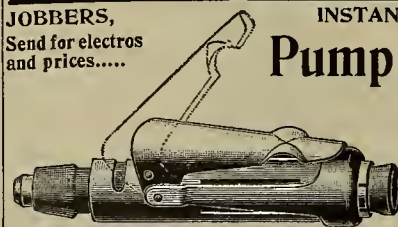
#### FOR SALE

10,000 feet Braze Interlocked Tubing, assorted, 3/4-in., 7/8-in., 1 1/8-in., 1 1/4-in.  
250 pair Seamless Fork Sides.  
250 sets Frame Connections.  
5 Screw Machines.  
4 Lathes.  
1 Oil Extractor.  
6 Drill Presses.  
1 Tool Grinder.  
3 Bicycle Trunks in good condition.  
Write for information and special prices to  
THE FRED J. MEYERS MFG. CO.,  
Hamilton, Ohio.—2

**FOR SALE**—Sprockets, 6,000 Billings & Spencer sprocket forgings, 2000 seat post clusters; very cheap. SHELBY CYCLE MFG. CO., Shelby, Ohio.—2

#### JOBBERS,

Send for electros and prices....



#### INSTANTANEOUS

#### Pump Chuck

For Foot Pumps.

Samples sent prepaid, 40 cts.

VEHICLE PUMP CO., 1556 Fulton St., Chicago, Ill.

#### The New Christy Racing Saddle

A slight swerve may mean the loss of a race. The long pommel gives just the support needed to keep the wheel steady in a spurt. Eddie Bald, Jimmy Michael and Earl Kiser use it, and they cannot afford to have anything but the best. Once a Christy Rider Always a Christy Advocate.

A. G. SPALDING & BROS., NEW YORK and CHICAGO

#### Crane is a Great Rhymester.

Charles S. Crane, the general passenger agent of the Wabash, is quite a poet, and has written many nice things. Recently he read the poem on the "Music of the Wheels," written by E. E. Coyle, for the Baltimore Morning Herald, which runs as follows:

#### MUSIC OF THE WHEELS.

When you're riding on the railroad  
At a mile-a-minute crack,  
Did you ever note the rhythm  
Of the wheels along the track?  
Is there any great composer  
Of sharps and flats and bars  
Can equal in his cadences  
The music of the cars?

Whether dashing through the meadow,  
Or the tunnel's choking grime,  
You will never hear them falter  
From the measured beat of time;  
Charging wildly 'mongst the mountains,  
Or by the river's bank,  
You will always find them playing—  
Click-clickety-click-clank.

Every air that has been written  
Since the days of wicked Cain  
Finds a fit and perfect setting  
In the rhythm of the train;  
From opera to comic song,  
From Patti down to Cline,  
You can hum all sorts of ditties  
While rushing down the line.

After reading the above Mr. Crane got his typewriter in order, and by screwing up the optical lever ground off the following:

It's too bad to spoil the story  
Told in cadence sentimental,  
But it's not so on the Wabash  
With its famous "Continental."

If you are about to travel  
Please note the following points,  
The Wabash track is perfect,  
And you cannot count the joints.

In its wheels there is no music,  
At a mile-a-minute gait;  
And of course there is no rhythm  
On a track that's up-to-date.

There is no measured beat of time;  
In fact it can't be measured.  
We beat our rivals every time,  
A fact that should be treasured.

#### WANTED

**WANTED**—To know whether the roller chain is better than the block chain.

#### FOUND

**FOUND**—That some of our customers prefer the block chain; others use nothing but the roller chain.

#### FOR SALE

**FOR SALE**—The Roller Block Chain, which combines the rigidity and lasting qualities of the block with the frictionless running of the roller chain.

#### PERSONAL

**PERSONALLY** the manufacturer and the dealer can afford to investigate the merits of a chain that pleases everybody. We show it below with our special coupling link which can be detached without tools.



THAMES CHAIN & STAMPING CO.  
NORWICH, CONN.

# THE CYCLE AGE

## AND TRADE REVIEW

Vol. XXII—No 10.

CHICAGO, JANUARY 5, 1899.

NEW SERIES No. 59.

### BOARD OF TRADE TO DISBAND REQUISITE STOCK VOTE CAST

Six Shareholders Meet and Satisfy the Wishes of a Majority of the Members.

New York City, Jan. 2.—Five stockholders fretted with impatience this morning in the rooms of the National Cycle Board of Trade while waiting for a sixth to appear and lend assistance in strangling the organization.

The absentee doubtless had scruples about running to a funeral.

"Let's go ahead without our absent brother," suggested the Man at the End of the Rope.

"But supposing it should slip again?" was the apprehensive rejoinder.

The headman shuddered.

It Was Necessary to Adjourn.

There was nothing to do but adjourn and visit the Poland water establishment across the street.

"This is on me," said the headman, thereby confirming his reputation for wit.

In the afternoon the missing stockholder put in an appearance and was greeted with tumultuous enthusiasm. He had skated across the north river from Jersey with forty-two shares of stock securely strapped to his back; time—2 hours and 11 minutes.

"We will now proceed to do those things which we have left undone," declared the Man at the End of the Rope.

"Are strangle-holds barred?" inquired the new comer.

"The committee on arbitration and laws will answer," blithely retorted the headman.

The secretary made a note of the joke and proceeded to count the shares represented.

"Announce the vote in a loud voice, Mr. Secretary," said the Man at the End of the Rope.

The secretary quailed—he is an ardent sportsman. He drew in his breath. He shot it out again. Then he spoke:

Twenty Shares to Spare.

"I see your finish, gentlemen. Two-thirds of the stock would be 594 shares—614 shares have been voted for the disbandment of the Board."

At the conclusion of the meeting the simple editor of the Wheel begged permission to read a paper setting forth his views on the subject of "Brazing by Immersion," but was told that his head tube was cracked and the spelter in it had run out.

Local Show Spaces at a Premium.

Philadelphia, Jan. 2.—The rivalry for desirable spaces among prospective exhibitors at the coming show of the Phila-

delphia Cycle Board of Trade recently became so bitter that the committee, as in former years, decided to auction off the choice to the highest bidders. The attendance at the sale was excellent and the bidding spirited. Among those present were representatives of not a few out-of-town manufacturers and the agents of two French makers of automobiles. In all, about 120 of the 200 available spaces were disposed of at premiums ranging from \$5 to \$65. Representatives of no less than half a dozen automobile makers, including the two French firms above mentioned, secured spaces.

### IDE PLANT RUNNING AGAIN.

Former Employes Secure Backing and Form a Company—Assembling Begun.

The plant of the F. F. Ide Mfg. company in Peoria is now being operated under the same name by a new company composed of men who were former employes of the old company, backed by some outside capitalists whose names are withheld. F. F. Ide is not interested in the new organization, which will not be a stock company, and it is not the intention at present to incorporate it. Instead of manufacturing the machines complete, the company has placed contracts with eastern makers for the parts, which will be assembled in the Ide plant. The product will be marketed for \$35 and will be built after the pattern of the Ide machines.

The old company sold off most of the machinery of the plant so that there were but a few pieces left in the building when it was decided to renew operations. Additional equipment has been purchased and set up, however, and the plant entirely renovated so that work could be recommenced with the beginning of the new year.

### President of Codling Mfg. Co. Dead.

Lester Goodenough, who was president of the Codling Manufacturing company of Bristol, Conn., died December 26. Though feeling his loss keenly, it is thought the business of the company will not be affected.

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### WANAMAKER TO SELL ORIENTS WILL GUARANTEE THEIR PRICES

Interesting Letter Which Discloses Wanamaker's Opinion Concerning the Late Humber Catastrophe.

Orient bicycles will be sold this year in New York and Philadelphia by John Wanamaker. He will handle no other high priced model. Last year he sold 16,000 machines at retail, and this year he expects to sell from 20,000 to 25,000. His line will consist of the Continental at \$25 and \$30 and Orient patterns at \$50, \$65 and \$75.

This information will surprise people who have been led to believe that Wanamaker was heavily responsible for the cut in Humber bicycles which electrified the trade toward the close of last season. But in a letter presented in full elsewhere in this paper, Wanamaker recites the history of this catastrophe so plainly and so defiantly as to leave no room for doubt concerning his part in the transaction. Parts of this letter are here-with reproduced:

Our business is conducted upon the soundest mercantile principles that we can understand, and catch-penny methods of any sort whatever find no welcome here. If there is one man in the United States that, more than any other, knows in his inmost mind and heart the truth of that assertion, it is the late resident director of the Humber company in America. Through him we made a contract in the autumn of 1897 for 2,500 bicycles. The roadster, the most important model in that contract, was to be sold at \$100—other models to be slightly higher.

### Cut Due to the Humber Co.

The early demand for bicycles was disappointing, and an agreement was reached in March for the reduction of the roadsters to \$75, and other models in proportion. The Humber director was more anxious than we for this reduction. Rebate checks were sent by us for the amount of the reduction to all previous buyers, and an allowance of \$5 a wheel was made by the Humber company on the entire contract. This sealed the fate of expected profits on our Humber bicycle business, as the margins were reduced below the cost of distribution.

Having implicit faith in the Humber company, and being assured of their support we guaranteed the price of the Humber wheels to all buyers, to the date of the expiration of our contract and fully expected, because of certain additional assurances, to maintain them until now.

### Did Not Violate the Contract.

We accepted and paid for all the wheels called for by our contract, and fulfilled our obligations in letter and spirit. In spite of a slow market we held our way firmly in consequence of a verbal promise from the Humber company that none of their wheels would be manufactured in excess of orders. Three responsible witnesses can attest to the truth of this statement.

Within a few days of the first of September we were astounded by the statement on behalf of the Humber company that they had accumulated a stock of 860 bicycles which they demanded we should buy for our own protection. The promise not to

manufacture wheels in excess of orders was the rock upon which we based our firmness as to retail prices. We vainly urged the demands of good faith that required the Humber company at least to carry their stock until next spring, and were met with the threat that, if we did not buy them they would be offered elsewhere.

#### Compromised by Humber People.

We refused, as would any self-respecting merchants, to be coerced. The Humber company had our good money. We had a large quantity of their wheels. Then followed the suicidal action of the Humber company. The wheels were sold and on September 10 we knew that roadsters were at stake, and we reduced the price to \$40. We were unwilling to be publicly compromised by another's loose views of square dealing. Various transactions in Humber wheels of which we were ignorant followed, and the wretched scramble about prices was the result. We never owned a Humber bicycle except such as we bought directly from the Humber company.

#### Will Guarantee Orient Prices.

After such a disappointing experience we naturally felt very cautious about making another deal for high grade bicycles, and from our former experience saw that it would be necessary not only to get a bicycle which was as good as the best, but one that was made by a reputable company who kept abreast of the times, and who sold goods at an honest price, and had one price for all.

We guaranteed the price of the Humber and upheld it until we were compelled to cut by the Humber company. We shall guarantee the price of the Orient, and do not believe that we shall be compelled to cut the price on it by the Waltham manufacturing company.

JOHN WANAMAKER.

#### Second Overman Dividend Deferred.

The creditors' committee having charge of the affairs of the Overman Wheel company, of Chicopee Falls, Mass., has voted that the January dividend to the creditors ought to be deferred and the cash in hand be devoted to the purchase of material and payment of labor for the continuance of the business. The committee consists of three of the heaviest creditors, who, with the trustee, represent about \$150,000 of the debts of the company. The creditors agreed last year to give the company two years from January 1, 1898, to meet the \$632,000 indebtedness standing against the firm, one-quarter, or \$158,000, to be paid semi-annually, beginning July 1 last. It was agreed, however, that the company could vary the time of the individual payments, provided that the whole amount be paid by January 1, 1900. The first payment was met July 1, and \$158,000 was paid. The second payment, due last Sunday, is the one which the committee has decided to defer. It is stated that the company could meet the present payment if the creditors deemed it necessary, but a large part of the money would have to be borrowed and the creditors decided that a postponement of the payment would better conserve their own and the interests of the company. The company has apparently a bright year before it, and there is renewed confidence that all the debts will be paid and the concern placed on a sound basis.

#### Tillinghast Patent Case Argued.

After nearly three years of evidence taking in the suits of Theodore A. Dodge against F. H. Porter, et al., doing business as the Reading Rubber Tire Company, for alleged infringement of the Tillinghast patent, No. 486,915, granted November 29, 1892, on single tube tires, the case was argued in the Circuit Court of Massachusetts before Judge Colt ten days ago. The testimony was voluminous, covering 1,200 pages of printed matter, and the courtroom was crowded with exhibits. This has been a bitterly fought case, neither party leaving a stone unturned to sustain or invalidate the patent. The defense attempted to show that the improvements were not patentable. Decision of the court was reserved. It may be many weeks before the result is known.

## PALMER-HUSS TIRE DECISION CLAIMS IN EACH PATENT VOID

### The Decision Does Not in Any Way Threaten the Main Claims of the Palmer Patents.

The text of the decision recently given in the Lozier-Palmer patent interference suit by the Circuit Court of Appeals at Cincinnati has been put in possession of the lawyers. The decision does not in any way threaten the validity of the main claims in the Palmer patents recently purchased by the B. F. Goodrich Co.

It is the opinion of counsel that the Goodrich company is left with a clear and unobstructed protection with regard to the Palmer tire under the patent reissued on July 25, 1898. The company is also left in possession of the Palmer fabric patent, involved in the above suit, except as to the first three claims thereof. This patent has eight claims, the last five of which are unaffected by the court's decision.

#### What the Goodrich People Say.

The Goodrich lawyers contend that all claim of Lozier to any right to interfere with the manufacture of Palmer tires, or to authorize others to manufacture Palmer tires, or to claim a royalty from those making or using Palmer tires, are utterly destroyed by this decision; but he has still remaining to him the patents of April, 1893, on the Huss thread tire, which is a tire having a single layer of threads running transversely across the tread of the tire with an interwoven warp and wool thread reinforcement at the sides thereof.

#### The Point at Issue.

In deciding the issue the court first says the nature of the controversy relates solely to the question whether the Huss patent granted May 14, 1895, for a fabric is valid or invalid, or whether the first three claims of the Palmer patent, issued March 7, 1893, are valid or invalid. The lower court had ruled that the only question in issue was the relative priority of the two inventors with regard to the subject matter of the three claims of the two patents, being bound to assume that the subject-matter was patentable and that one of the patents was valid.

#### Lower Court Ruling Rejected.

The Court of Appeals, after an extensive and technical discussion of the interpretation to be placed upon the statute authorizing this class of litigation, concluded that the lower court ruled erroneously; and that the question before the court was not merely the relative priority on an assumed patentable invention of the parties to the litigation, but also the validity of either patent for any other cause; and particularly that the court was authorized to inquire whether either patent was void because the same patentee had obtained an earlier patent upon substantially the same invention.

#### Priority Not Involved.

The court accepted without question the contention of each side as to the date that Palmer and Huss respectively made their inventions, and as to the specific nature of the steps of each in connection with this matter; but held that this question of priority was secondary to the main question of patentability.

On the matter of patentability the court showed that the Palmer fabric patent was applied for after the application of the Palmer tire patent, which latter was applied for on August 9, 1892, and was issued on January 10, 1893. The court called attention to the fact that the first three claims of the Palmer fabric

patent involved in the litigation with Lozier were substantially the same as certain claims filed originally with the application for the Palmer tire patent, and that the Palmer tire as described in the tire patent would in its preferred form necessarily employ the fabric claimed in the three claims in controversy.

#### Three Claims Unlawfully Allowed.

The court pointed out that on the expiration of the Palmer tire patent the public should be at liberty to make the Palmer tire exactly as described in that patent; but the subsequent issue of a separate patent on a fabric needful in the manufacture of the Palmer tire in its preferred form would debar the public from this privilege for two months beyond the term for which the Palmer tire patent was granted. The court held this to be contrary to the spirit of the law, and that the patent in controversy by reason of this condition was unlawfully issued to the extent of the three claims in controversy.

#### Ruling on the Huss Patent.

With regard to the Huss patent the court shows that Huss bases his claim to priority altogether upon certain work done by him in April, 1892, in his experiments in the manufacture of tires at the Chicago Rubber Works. The court also shows that as the result of those experiments Huss applied for and received two patents of April 15, 1893. The court holds that in these two patents Huss attempted to and did cover all the invention he made in the course of these experiments, and that he is not at liberty to separate part of those experiments or a part of his invention then made from the rest, and, making it the subject of a later patent, obtain a protection which will prevent the public from enjoying the free use of the invention patented in April, 1893, after the 1893 patent shall expire.

#### An Unprofitable Inquest.

The court makes reference to the contention of counsel that the fabric used by Huss differed materially from the fabric patented to Palmer, but declines to pass upon this question at all, saying that inasmuch as the first three claims of the Palmer patent are void, because their subject-matter is fully set forth in the Palmer tire patent and made an essential element of some of the claims of that patent, and that three claims of the Huss patent in controversy are void, because their subject-matter was fully described and claimed in certain claims of Huss' prior patents granted to him in April, 1893, the issue before the court resolved itself into an "unprofitable inquest as to who was the first discoverer of a nullity."

The court orders a decree to be entered, declaring the first three claims of the Huss and Palmer patents void.

#### Would Tax Bicycles in Washington.

Washington, D. C., Jan. 2.—The district commissioners, who have for some time had under consideration the draft of a proposed bill giving the commissioners authority to impose a fee or tax for the compulsory registration of all bicycles ridden in Washington, have reported to the chairman of the senate district committee that they think the bill should be amended to make a specific tax of not less than \$1 per year on each bicycle. Should the bill be passed it would become operative at once and would mean an increase of about \$50,000 yearly in the revenues of the district.

A tax on a business is not rendered invalid by the fact that it is onerous as compared with the taxation of other lines of business.

## THE MODEL BICYCLE SWINDLE CLEVER CIRCULARS SENT OUT

**Bicycle With Lamp, Cyclometer, Bell and Holder for \$3.85 Humorous Trickery With Ambiguous Words.**

The mail order system of doing business has its troubles. So many gay deceivers issue carefully worded circulars with offers of incredible bargains for the gullible, and so many persons are caught by their bait that ere long any small or unknown firm trying to do business by mail, however honest may be their intentions, are likely to be met with profound distrust. In this manner the fraudulent schemers largely benefit the department stores and well established large mail order houses, building up a great bulwark of general distrust which effectually protects the known houses against competition from smaller concerns.

### The Boldest Circular Extant.

The bicycle trade has had more than its share of fly-by-night concerns and the latest swindle of this kind is built up on a circular so cleverly, audaciously and withal humorously worded, that it merits reproduction. As taken from a letter received by a Muncie, Ind., man, it reads as follows:

New York, Dec. 15, 1898.

Kind Friend:—It is our duty to introduce our Model bicycle in every town, and to accomplish this and widely advertise our goods, we are prepared to make any sacrifice, and we make the following special offer to you, which has never been made by any company, bicycle or otherwise.

### OUR CHRISTMAS PRESENT AND SPECIAL NEW YEAR OFFER TO YOU.

For the next thirty days only we will distribute absolutely free 500 Model bicycles throughout the United States and Canada, only one to each reliable person, who will promise to show it around town to his friends; and we have selected you as one to represent your town. With each Model bicycle we also send a beautiful nickel-plated smokeless bicycle lamp with colored glass side lights, also a nickel-plated electric ringing bicycle bell, also a nickel-plated cyclometer, registering 10,000 miles, and a nickel finish bicycle stand.

We only ask you to send up \$3.85 to pay the cost of boxing, shipping, charges, expressage, etc., of goods to your address. Then we will immediately send (all forwarding charges prepaid) a Model bicycle, bicycle lamp, bell, cyclometer, and bicycle stand, and you can keep them without further cost.

The Model bicycle is a perfect charm and is the simplest and strongest made, strictly high grade, modeled after a \$100 bicycle. Frame in one piece, no awkward bolts or nuts visible, latest style drooping handle bars and newest detached steel chain. You cannot ride this wheel and puncture and cut tire. This is not a second-hand bicycle and does not weigh 30 pounds, but is light and easily carried and new from factory, with guarantee for one year. Don't pay \$100 for a bicycle, lamp, bell, etc., until you see this handsome model, and the beautiful lamp, bell, cyclometer and bicycle stand we send. This liberal offer of 500 Model bicycles given away may seem large, but we will do as we say to advertise them. Some concerns spend large amounts in advertising in papers and magazines to introduce their goods. We prefer to introduce ours by making you the above offer, and we know you will advertise them by showing them to your friends in your town, thereby introducing it and creating demand for sales. Take advantage of our offer now; it is only good for thirty days (offer will be withdrawn January 15), and you may regret it, as the above 500 Model bicycles will not last long. Send \$3.85 at once, to pay for shipping, etc., and promise to show it to your friends, and we will ship goods immediately after your money is received. During the year 1899 we expect to do a very large business through the advertising of our goods by you and those who accept our offer. Send money at once; don't delay.

MODEL BICYCLE COMPANY.

### Mistakes of the Schemers.

Model Bicycle company is an ornament to the profession to which it belongs. It has taken up the word "model," which by common consent is used incorrectly in the bicycle trade and, playing upon the famil-

iar understanding of the word as implying a full-sized, rideable bicycle, it expects to find shelter behind the correct meaning which implies only a miniature pattern. The company's little mistake of calling its ware "model bicycle" instead of "bicycle model" is, however, sufficiently grave to land its manipulators in the penitentiary, if caught, but the majority of victims who would receive "the perfect charm"—watch charm—which the company promises would probably take a less serious view and would consider that the joke was on them. Probably the "smokeless" bicycle lamp is part of the equipment of the charm, whose frame is "in one piece," and which "you cannot ride and puncture the tire," and which "does not weigh 30 lbs." Presumably the nickel-plated cyclometer always "registers 10,000 miles" in a lump, and the electricity for ringing the bell must probably be furnished by the \$3.85 purchaser.

The circular speaks for itself. It is so boldly humorous when read with some degree of complacency, that its authors are almost entitled to the "good time" which they undoubtedly expect to have in New York upon the proceeds of their scheme, before the gates of Sing Sing are opened for them through the instrumentality of the prosecuting postal inspector.

### Fichtenburg Ready to Settle.

The creditors of the League Cycle Mfg. Co., of Milwaukee, have been ordered to show cause why the assignee, Henry Herman, should not be allowed to accept \$3,750 from Moritz Fichtenberg, president and treasurer of the company, in settlement of the claims against him. Mr. Herman shows in his petition that he has disposed of all of the assets of the company excepting a claim against Mr. Fichtenberg for moneys amounting to \$16,672.87 and for bills receivable amounting to \$2,300, which he asserts have been wrongfully appropriated by Mr. Fichtenberg. The latter denies the allegation, and in answer to a suit which the assignee has instituted to recover the amounts asserts that the company was indebted to him in large sums, and that the money was paid to him in settlement. Mr. Herman says he has received an offer from Mr. Fichtenberg to settle the controversies for \$3,750.

### English Rubber Men to Combine.

An important combination in the British rubber trade has just been formed for the purpose of controlling competition and regulating prices for all kinds of rubber goods, which will probably affect the tire trade to a considerable extent. The reason for the existence of a governing body is that the rubber competition amongst British manufacturers has lately become so keen in order to keep machinery going, that prices have been reduced below what was thought to be a fair and reasonable margin of profit. This is partly due to the withdrawal of the business of the Dunlop company, which has erected works of its own for manufacturing rubber, instead of placing large orders with various manufacturers, and also to the growing foreign competition.

### Will Not Affect Pope Company.

Hugo Bilgrain, the Philadelphia patentee of gear cutting machinery, is quoted as saying that should his recently instituted suit against the Pope Manufacturing company for the use of machines which he believes infringe his patents be decided in his favor, the Pope company would suffer no inconvenience or loss, since it would merely be required to transfer to him the royalty it is now paying to the other party.

Frank A. Hill, a Dallas, Tex., cycle dealer, was arrested recently, charged with attempting to burn up his store.

## MOTOR VEHICLES FOR EUROPE TEN-YEAR CONTRACTS PLACED

**A Parisian, Associated With Boston Capitalists, Orders \$15,000,000 Worth of American Vehicles.**

It is noted with much interest and some curiosity that one Count de Jotemps of Paris, president and general manager of a corporation known as the American Motors General Agency, which purposes to place motor vehicles on sale in Paris, London, Brussels and Vienna, arrived in Chicago last Wednesday and immediately placed an order with the Fischer Equipment company for the construction of 500 of its electric vehicles yearly for the next ten years.

### Five Thousand Vehicles from Chicago.

The contract provides for the construction of several different kinds of vehicles, such as cabs, coupes, broughams, victorias and twelve theater buses. The average cost will be about \$1,000, making the total of the ten-year contract secured by the firm \$5,000,000.

The vehicles are equipped with the Woods storage battery system recently described in this paper. A large advance payment has been made on the contract, it is said, which provides that fifty of the vehicles are to be ready for shipment to Paris by February 1. The company anticipates no difficulty in filling the contract.

### Depots to be Opened in Paris.

On March 15 sale depots will be opened on the Champs Elysees and Boulevard des Italiens, in Paris, and as the goods arrive offices will be established in the other cities named. It is the purpose of the agency to reserve a number of the vehicles for public use in the boulevards and parks.

Count Jotemps is reported to be a person of means who has associated with him Albert Geirger of Boston, a large real estate owner, and other Boston capitalists. Before coming to Chicago he had examined all the leading motor vehicles made in Europe and those made in the eastern United States.

### Contracts Placed in the East.

During his visit to America the count has also closed contracts with the Holyoke Motor Works, Holyoke, Mass.; the Stanley company, Newton, Mass., and the Overman Wheel company, Chicopee Falls, Mass., to furnish 1,000 vehicles a year for ten years to his company. The Massachusetts factories are to turn out steam, gasoline and petroleum motors.

With regard to the Fischer vehicles, the count said that he knew something of them before coming west, and that he liked them not only because of their handsome appearance, but because of their ability to store superfluous power which can be used when occasion requires, as in mounting steep grades, running through snow or sand and over rough streets. He says there is a growing tendency in Europe to use motor vehicles, and thinks his company will be able to sell all the vehicles contracted for.

### Strike at Badger Brass Works.

Fourteen workmen went out on a strike at the Badger Brass company's works in Kenosha, Wis., recently. The men were employed in the buffing and polishing departments, and were earning good wages, the majority of them more than \$2 a day. They demanded higher wages. The state board of arbitration held a conference with the strikers to effect a settlement.

# No Trouble <sup>to</sup> Show Goods

**I**T'S a pleasure to show them, and talk about them and write about them. That's one of the good things about good goods, goods that don't have to be apologized for (our kind). It's a pleasure, down-right enjoyment, to talk or write about them, dilate upon their beauty, explain their points of elegance in construction and contour.

If you haven't seen our lines for '99, write us and we will see that you have a chance to do so as quickly as our representative can reach you.

## Write Us, Anyway

Ask questions, make suggestions, criticize—anything you like, so we have a chance to talk our goods to you.

Let us hear from you and we will show you the handsomest and best goods ever offered since saddles were made; and prices are right.

Catalogs and Booklets for the Asking

**R. B. McMullen & Co.**  
Sales Agents  
CHICAGO and NEW YORK

**Hibbard, Spencer, Bartlett & Co.**  
Chicago Distributors

**The Garford Mfg. Co., Elyria, Ohio.**  
**The Hunt Mfg. Co., Westboro, Mass.**  
**The Brown Saddle Co., Elyria, Ohio.**

Mention The Cycle Age



# THE CYCLE AGE

## AND TRADE REVIEW

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

Published every Thursday at 324 Dearborn Street, Chicago.  
Eastern Offices, American Tract Building, New York City.

Subscription price in the United States, Canada and Mexico, \$2.00 per year; in foreign countries \$6.00 per year.  
ALL remittances should be made to THE CYCLE AGE COMPANY.

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### A CHALLENGE.

The Cycle Age admits the decay of the National Association of Cycle Dealers and abandons the right to be known as its official organ. Hence our front cover is bare of its familiar superscription; but out of deference to the sensitive feelings of two snarling contemporaries we replace it with a phrase which is intended to test their courage and honesty in serving advertisers. Any jury they may select to decide the issue will suit us.

### THE CURSE OF THE INDUSTRY

Unsolicited responses are being received endorsing the efforts of the Cycle Age toward abolishing all those forms of speech and writing by which the public are still being induced to expect regular annual changes of design and construction of cycle goods.

Many of the bearers of the industry evidently appreciate the heavy burden which the public's anticipations of season's changes impose upon them, and are ready to support the policy outlined in the article headed "Almanack Cycle Construction," which appeared in this paper last week. The remedy proposed involves no expense and promises a substantial return. It requires watchfulness and careful editing of advertising matter by each manufacturer and each dealer, and especially by those manufacturers who supply their agents with text for newspaper advertising.

The Cycle Age will do its part. Whether the rest of the press, the dailies and the cycle papers, will do theirs, depends chiefly on their patrons. At all events it will be at the option of manufacturers to reach trade publicity through one medium which recognizes its obligation to refrain from poisoning the public mind with expectations which are now continually hampering the free play of intelligence in the directing of trade affairs and which should have been vigorously discouraged as soon as the school days of the industry were past.

In those days every pupil in the school of bicycle making was expected at the yearly examination to prove that he had made a great bound toward earning his diploma. But "commencement exercises" were held at the 1896 national shows, diplomas were distributed, and the school days were over. The school was disbanded. Bicycle making was an industry, and the public was relieved of the obligation to pay tax for teaching the young idea how to shoot. Previously the tax had been paid, more or less cheerfully, in the form of round prices for "new models" embodying mistakes and improvements promiscuously.

Post-graduate work finds no such generous encouragement. It must pay its way. But, on the other hand, it is relieved from the obligation of making phenomenal finds at fixed intervals in its limited field of research, and should be relieved from keeping alive any burdensome and price-depressing fiction which perpetuates the obligation to make such finds.

From this harmful fiction the industry can be relieved by the method proposed without in the least impeding real progress.

The road to progress is still open, but those who claim to have advanced on it beyond their fellows must prove their claim by the tests of commerce; neither the approval of the censor, nor the admiring glances of doting mothers, sisters and aunts will avail to draw the taxpayer—the cycle buying public at large—

out of the mildly indifferent frame of mind in which he says: "That maker may be all right, but he is putting on too many frills. I think I will wait and see how he stacks up." And wait he does.

The final reward for a real improvement is not by any means diminished by this attitude of the public; on the contrary, it is increased, but mechanical tomfoolery is discouraged and a warning is implied to those who imagine that the old label, "new models," will draw extra trade beyond that which could be obtained on pure merit of goods, reputation of maker and by shrewd business methods.

### THE WHEEL AND DIP BRAZING

Poor old Wheel! If it were not so venomous it might be pitied. In its dotage it is reduced to taking up articles from the Cycle Age and finding fault with them. It blunders when it goes alone; and it blunders when in opposition. It is now damning dip-brazing a year after several of the most representative manufacturers have found it a successful working method.

So long as the Cycle Age is right, the Wheel is bound by its spleen to be wrong. The trade and its interests mean nothing to it in comparison with scoriating the Cycle Age.

Poor old Wheel! While the trade progressed the Wheel dawdled the time away in contemplation of its own greatness. The trade wanted bread. The Wheel gave it storyettes. It was its easy maxim that the besweated fellows who hang around cycle stores were the pillars of trade and of trade journals. For these it wrote, while the trade was working; working out its own salvation. The Wheel fell behind in knowledge of those serious things which now govern trade.

The Wheel's ignorance on dip-brazing is of abysmal depth. In order to make out a case against the Cycle Age, which in a recent issue presented the reasons why dip-brazing is destined to be developed into the standard form of brazing in large factories, the Wheel states that it has learned from "employees of several factories" that dip-brazing is unreliable. Why does not the Wheel, if it will presume to guide, go to headquarters for information? It quotes "one superintendent" whose experience has been unsatisfactory. This superintendent has "used the process off and on for five weeks," and "is confident the process will never prove satisfactory."

That much for the Wheel's information on a subject in which the entire industry is deeply interested. Apparently it has not the faintest inkling of the fact that several of the very largest manufacturing concerns have been employing the dip-brazing process, not off and on but steadily, for nearly two years, using furnaces of their own construction; that about twenty concerns are using the Fulton furnace, a similar number the Timms furnace, and that the Welland-Vale company have a furnace on the market adapted especially for brazing small parts. Further, the process is spreading into other industries than that of cycle manufacture.

If the Wheel knew anything of the business in which it pretends to lead, it would obtain information from those who are in position to give it. By trotting out "several employees" and "one superintendent" who knows nothing of what he is talking about, while a mass of reliable knowledge is to be had for the asking, the Wheel makes laughing stock of its pretensions and puts to the blush every cycle trade journal which may be in danger of being classed with it.

### SURVIVAL OF THE FITTEST

There have been two forms of supremacy in the cycle industry to which the retail cycle dealer has tipped his hat. The manufacturer who was supposed to strive for utmost mechanical perfection somewhat regardless of factory cost, and who claimed the right to put a special price on the product in which this perfection was thought to be embodied, has had his followers among agents as among the public. The competing manufacturer in whose efforts the financial consideration was from the start foremost, and whose declared aim it was to produce the "best value for the money," represented the other side. His work was also appreciated by the agents and the public when it seemed to be done with honest regard for

the requirements of bicycle riders. Supremacy in either of the two forms of work was held entitled to recognition as against manufacturers who aimed chiefly to produce "the best appearance for the least money."

But now, through the force of competition and progress in factory methods, the two forms of supremacy have been blended, and the endeavor of the retail dealer is directed chiefly to the none too easy task of distinguishing the vague and waving lines that separate both from the lower forms of the industry, in which the arts of enameling and of nickeling are studied with much more ardor than the science of Applied Mechanics or the "physiology of cycling."

The blending of the two best forms of manufacture is one of the outgrowths of business conditions during the year which has just drawn to its close, and is in many respects a noteworthy feature of trade. It may be denied, perhaps, that any such change has taken place or that there has ever existed any real separation between the two classes referred to. The distinction was that, however, which exists between makers of an article of luxury and makers of an article which may most approximately be classed among the necessities of life. This distinction is effaced. No manufacturer in the cycle and allied trades can hereafter afford to insist upon selling quality regardless of price; neither can he afford to ask the top price of the market for a product for which the very highest quality may not creditably be claimed. Fancy is eliminated; and this is evidenced by the announcements of policy and prices with which leading makers of both the aforementioned classes have gone on record, and by the disappearance from the trade arena of firms which were not nimble enough to gracefully drop the exclusive manufacture of high-priced machines and push the manufacture of medium priced patterns while the chance was yet open to them to maintain the loyalty of their agents by so doing.

Those who are left are now all making bicycles—bicycles of varying grades and at varying prices—but nobody is in the business of making wonderful steel idols on wheels with a view to getting more money for them than that to which a sober estimate of factory cost entitles them.

This change, being caused by finally realizing the drift of the public temper, will, it seems, be very pronounced in its effect on retail business. By bringing about a certain equality in policy it has dulled the edge of competition and brought into sharp relief those other points relating to mechanical merit, reputation, ability to make prompt deliveries, etc., by which agents as well as the public, when other things are equal, are decided to give one manufacturer the preference over another. Many makers whose goods did not stand the test of time, or who had not the factory equipment or the commercial ability to sell at a competitive price without loss, are likely to find the new conditions very difficult to cope with. They are not as likely to find retail agents to represent them as in 1897 and 1898.

\* \* \* \*

Many people are speculating upon the eventual results of the new sales policy which has been foreshadowed as the substitute for department store representation. It is said that several of the firms which followed the department store plan—and several which did not—will hereafter give territory to agents only when a certain considerable quantity of bicycles are contracted for, and that in all territories where such arrangements cannot be effected, they will market their goods through any one, two or twenty firms in each locality whose owners shall prove ready to pay the wholesale price for one or more machines. It is at the present writing purely a matter of conjecture what the result of this arrangement will be. But it seems that most business men believe that it will result in a material reduction in the number of retail agents and a broadening of the credit allowed the reduced number. The reasons given for this forecast cover a wide range and to recapitulate them would involve a lengthy review of the entire condition of the trade. The upshot of the opinion is, however, that the prophesied contraction of the industry will commence with the retail trade, and that within the near future the ablest retail dealers will find themselves in position to carry a larger and more varied stock than ever before in the history of the trade. But, concurrently with this development, it is surmised that there will be a period during which a

large number of business men who are not professional cycle dealers will carry one or two of the best known patterns of bicycles in stock in a small way for the accommodation of their customers.

\* \* \* \*

Dealers carrying side lines will do well to anticipate the proper seasons for the best sales of the various articles comprising their stocks, and as such approach the exhibition of these articles should be slightly in advance of actual needs or expectations of purchase, thus serving to remind customers beforehand of the regular return of seasonable standard goods, as well as of the presence of novelties usually accompanying them. Whenever possible, the article should be shown in the position or state nearest practical use. For instance, if a prominent side line consist of phonographs and phonograph supplies, the attached talking trumpet, ready ear tubes and displayed cylinder rolls in good number and variety of speech and song will attract attention as much by their readiness as by their presence. Such openness of display puts the customer at ease in the matter of liberty of examination, and shows the confidence of the tradesman in the excellence of his stock. A certain amount of explanation concerning side lines must be given—much without prospect of profitable realization. Explanation of the merits of an article, or an advantageous demonstration of its novelty, frequently warms the chance inquirer into actual purchase.

\* \* \* \*

A number of newspapers are reprinting, with favorable comment, a prophecy made by Sir J. Wolfe Barry to the effect that bicycles will soon be sold profitably at retail for \$5. Says the knight, who enjoys celebrity abroad as an engineer:

The present price of bicycles will not, I suppose, rule very long, and we shall see these admirable machines made at prices which now seem unattainably cheap. The weight of a bicycle is so small that the value of the material, except the india-rubber tires, cannot be serious. And if all the parts of a good machine made watch can be manufactured and put together and sold for less than \$5 the manufacture and putting together of a bicycle ought not to cost more. If we add the cost of the steel and the india-rubber, it surely seems not too sanguine to suppose that a few years hence bicycles will be sold at about a fourth of their present price,

Watches sold for the price mentioned are made by the stamping process without any subsequent finish. As soon as anything is done to produce a high degree of accuracy in a watch the price of it rises as by magic, just as in the building of a bicycle the price must remain far above the low level of cost of raw material, plus brazing and assembling, if anything at all is done to secure excellence. There is more factory cost in a well made hub than in all of the parts constituting a cheap watch.

\* \* \* \*

There is mold on this lying statement:

The Wheel, the pioneer of cycling trade journals, has the largest and broadest general circulation among cycle riders, the cycle trade and kindred trades.

Three years ago the American Wheelman had some target practice at the same mark, shot it to pieces, and the "pioneer" took to the umbrageous shelter of the woods. With the advent of the Cycle Age the eclipse of the Wheel's circulation was rendered complete.

\* \* \* \*

Whatever fate befall the cycle shows in New York and Chicago it is certain that they will be disemboweled affairs in comparison with similar functions of other years. They will lack the two things which are essential for thorough success—completeness of exhibits representative of the industry, and spontaneous support of the trade.



# THE KING IN YELLOW

The time and money expended by the dealer in popularizing the wheel he represents is capital invested.

That capital will return dividends according as the bicycle he handles shall establish its value before the people.

The bicycle is a machine that deals with complex problems of mechanics and motion. Its builders must possess a deep acquaintance with the possibilities and limitations of the art—and, knowing them, must apply them rightly.

The makers of Stearns Bicycles have studied the needs of the business—their every improvement is toward the simplifying and perfecting of the bicycles they build.

The dealer who desires to maintain a successful business will build the structure of that business upon a good and permanent foundation.

The agents for Stearns Bicycles have found in the wheel they handle the full pledge of its value.

The trade on the Pacific Coast supplied from our branch store, E. C. Stearns & Co., 210 McAllister Street, San Francisco.

**E. C. Stearns & Company,**  
Syracuse, N. Y.

The trade in the Dominion of Canada supplied from our Canadian factory, E. C. Stearns & Co., 67 Adelaide St. West, Toronto, Ontario.

NEW TESTIMONIALS EACH WEEK.

# MILWAUKEE TIRES

PUNCTURE PROOF

**Pneumatic  
Single Tube**

**Resilient  
Easy Riding**

S. H. MEADOWS, Retail Drug Store,  
Corner VanBuren and Biddle Streets.

MILWAUKEE, WIS., Nov. 18, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF  
TIRE Co., Milwaukee, Wis.

Gentlemen: I heartily endorse your puncture-proof tires. They have proven to me to be all that you claim for them.

My wheel is used by the boys in my store in delivering packages, etc. It therefore receives a great deal more abuse than a wheel ordinarily would.

Previous to obtaining the puncture-proof tires I was greatly annoyed by the delay and expense caused by the puncturing of tires.

Since using your tires I have not had one puncture, nor a defect in them in any way. They are in first class shape today after eight months of very hard usage.

Yours respectfully,

(Signed) S. H. MEADOWS.

H. C. BOLCOM & CO., Car Shippers,  
Pacific Coast Lumber, Red Cedar Shingles.

WINONA, MINN., Nov. 23, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.

Gentlemen: Am pleased to recommend your puncture-proof tires. They are the Real Thing. Make it as strong as you like.

(Signed) N. M. BOLCOM.



EVANSTON, ILL., Dec. 10, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF  
TIRE Co., Milwaukee, Wis.

Gentlemen: In reply to your letter of Nov. 30th, I beg to say, that your tires which I purchased some time ago look today as good as new.

An Ajax wheel, which I have fitted with a pair of your Milwaukee Patent Puncture-Proof Tires, makes a wheel fit for a king.

Yours truly,

(Signed) NELS. SWANSON.

NEWPORT NEWS, VA., Dec. 16, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.

Gentlemen: I take pleasure in stating that the Milwaukee Puncture-Proof Tires have given me no trouble at all as regards punctures. They are undoubtedly Good Tires.

I am highly pleased with your tires. They are far superior to any others I have ever ridden, and I do a great deal of riding as I am collecting for a furniture house.

Very truly yours,

(Signed) E. P. BUXTON.

Representatives Wanted. Write for Prices and Other Information.

**MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.**

## FAST FREIGHT vs. EXPRESS

### Many Dealers in Large Cities Steadily Have Their Goods Shipped by Fast Freight

Unusual interest is being displayed by cycle dealers in the effort to compel express companies to moderate their extortionate charges. The proposal to use the fast freight as a substitute for express is unhesitatingly approved by traders in large cities, but agents in small towns are prohibited from solacing themselves with more than the hope that the liberal extension of and reduced rates for parcels post will work powerfully for reform in their behalf.

Herewith are presented some opinions recently received from readers of the Cycle Age, which furnish conclusive evidence of the hardships endured under the prevailing methods of expressing cycle merchandise:

#### Express Charges Never Decrease.

The express charges are beyond reason and any help I can give I will be only too glad to extend. I am a small builder of bicycles and my capital necessitates my buying in small quantities. I have to figure on at least 10 per cent for express. Again, I have to compete with factory-made machines, and, as good bicycles are built today as cheaply as they can be built, we cannot afford to pay as much express as when a bicycle was bringing \$75. There are points against fast freight, one of the most important of which is the delivery system. The freight arrives at the depot and then there is liable to be a delay if we do not keep close watch of the depot, whereas the express companies always deliver at once. I think the express companies charge for the risk they run in carrying on their business, but they charge just as much for a pair of rims as they do for tires, the risk being only about one-tenth as great. The rims are only worth 40 cents, while the tires are worth \$4.

As long as we sit still and pay, the express companies are not to blame altogether. But if we ask them to make the charges right and in proportion to the value of bicycles, and they still insist on adhering to their old prices, I am in favor of organizing and boycotting them entirely and patronizing fast freight.

Lansing, Mich.

F. L. HOLMES.

#### Present Freight System Is Poor.

We are pleased to note that there is a movement on foot to substitute a fast freight system in the place of express. It will certainly meet with the approval of the majority of shippers and tradesmen. The average business man is perfectly willing to pay reasonable transportation rates and to pay well for fast and prompt service, but when the rates are such as to net the transportation companies a profit of 80 per cent on the actual investment, this fact alone would tend to remove any doubt as to the exorbitant proportions of the present express rates. The arbitrary position which the express companies took with regard to compelling shippers to pay the necessary revenue on shipping bills, even after the courts had decided against them, certainly made them no friends, but on the other hand placed them in disfavor with every shipper in the country. So far as service rendered on the part of the express companies is concerned, this has been satisfactory to us with one or two exceptions. In one instance, after waiting two or three days over the usual time, we found the goods in question stowed away in the warerooms of our local express company.

The present freight system we have found extremely poor, it having taken in some instances ten days' time to get goods by freight from Dayton, O., to Minneapolis. Unless the present freight system can be greatly improved the dealers will doubtless continue to use express, especially through the busy season.

The matter of inaugurating a more satisfactory system of transportation for the general welfare of shippers and tradesmen is certainly commendable on the part of its promoters and of those who are pushing it along. We believe that it would be an excellent plan to place this matter before the various business men's organizations of the large cities, such organizations being composed chiefly of merchants and tradesmen

who would readily see it to their interests to assist any movement in this direction.

The Commercial Club of Minneapolis is an organization which is always ready to lend its support towards the promotion of any plans that tend to be beneficial to the city and the community at large.

Minneapolis, Minn. HAYNES-TRUSTY CYCLE CO.

#### Express Carriers Are Mean.

The express companies have taken half of our profits in the last three years, and we have often thought if there was some way of getting our supplies almost as quick with less charges we would do all in our power to make such a method a success. We are more than satisfied with the idea of fast freight. The express companies are the meanest people we have ever had any dealings with. We are more than in sympathy with the movement started in New York to compel these carriers to moderate their charges.

Pontiac, Mich.

BEATTIE BROS.

#### Sample of Trickery Practiced.

I am heartily in sympathy with the movement to make the express companies moderate their charges. I will give you a fair example of the way I have been treated by the express companies. I sent a tire casing to Chicago, and the charges were 25 cents. For some reason the case was not repaired, and it was returned to me in the same condition as I had sent it. But when I received it the charges were 30 cents instead of 25 cents. This I have had happen to me more than once. I asked the driver to explain, and he said that the package was heavier than when I sent it. When I had the same thing happen again I asked the manager of the express company to explain, and he said that it must have been weighed incorrectly. I told him that it was rather strange that the error should occur so often and never be corrected, and he did not have anything to say.

Detroit, Mich.

E. J. BURRELL.

#### High Charges on Small Packages.

I think the express charges on small packages are very unreasonable. Packages which would not cost over 15 cents at one ounce rates are made to cost from 25 to 30 cents. The repairmen and small dealers have little or no chance to handle goods at the same prices as the department stores, for their profits are eaten up by express charges, goods being ordered just as needed. I have often had to wait a week to get goods from Chicago when four days would be ample time for transporting them. There is something wrong either with the people that sell the goods or the express companies—perhaps both.

Wabash, Ind.

WILLIAM BROWN.

#### Masters of the Situation.

We have but one express company in this place, and their charges are made according to distance from pay day and the state of their bank account. One day they will charge 25 cents and the next day 40 cents, same distance and weight, and in case a crated bicycle is shipped, charges are from 40 to 70 cents, same distance and weight. In one case last summer they collected three charges on one package, with one return charge, afterward returned or remitted, one charge to consignor, but no return charges. They have also delivered c. o. d. packages shipped by me without making collection and have now been six months trying to trace it. These are only a few of the many cases that could be cited.

Alliance, Ohio.

CHAS. S. KEITH.

#### Use Express Only in Emergency.

For some time we have given up shipping wheels by express, except in extreme cases when it is necessary to get the goods on quick time. We will be pleased to help in getting a rate on all bicycle goods by express that will be right.

Port Huron, Mich. BEARD, GOODWILLE & CO.

#### Charges Are Variable.

I am certainly in sympathy with the movement to compel the express carriers to moderate their charges. I am in favor of using fast freight as I can get goods pretty near as quick. The Adams is the only ex-

press company that comes into Lexington, and I get it stuck to me every once in a while by them. Recently I had two bicycles come from Chicago by express. They had them charged \$2. I kicked, for I had got two for \$1.70. I paid the amount, but went to the company and made another kick, and they said I had been charged too much and they refunded the 30 cents. About two weeks later I had two of the same models of bicycles that weighed the same. They charged me \$2 and would not correct the matter. I have cases like this all the time. The other day I sent a front fork to Chicago, minus the stem. It came back with a new stem and weighing a good deal more, but it cost me 5 cents less for express charges. It was 30 cents going and 25 cents returning.

Lexington, Ky.

C. O. UPDIKE.

#### An Outfit of Robbers.

I certainly am in favor of the movement to compel the express companies to moderate their charges. The proposal to use fast freight instead of express meets with my approval. I think the express companies are an outfit of robbers, and many is the time I have paid them more express than the article was worth.

Manchester, Iowa.

J. R. TOOGOOD.

#### Falling Prices; Steady Express Charges.

I specify to ship by freight in most of my orders, excepting small ones. I find that shippers do not like to ship by express on account of the extra expense. The express companies are surely getting all they can. It is a fact that on all small articles used in the construction of bicycles the express bill is larger than that of the material. I think it is high time for the express companies to revise their scale of prices so as to keep pace with falling prices. There is but one way to make them realize this and that is to ship by freight.

Saginaw, Mich.

GEORGE FISCHER.

#### Says Reform is Impossible.

We are very large shippers by express, and have felt that the charges in many cases were excessive. No one would be more pleased with the reduction than ourselves, but we have little faith that it will ever be accomplished. So far as fast freights are concerned, we understand that the express companies pay a certain percentage to the railroads for handling their business, and this connected with the fact that the leading trunk lines are owned by the Vanderbilts, who also own large blocks of stock in the express companies, will make it impossible to accomplish anything along this line. The position the Cycle Age has taken in this matter is admirable, but we feel that its work can accomplish but little although we are in sympathy with it. These matters should be handled by legislation, but the legislators are always with the express companies and other corporations, and the reason is obvious.

Flint, Mich.

AMERICAN MACHINE CO.

#### Irreconcilable Express Charges.

We recently expressed a pair of gun barrels to Syracuse, N. Y., at a cost of 96 cents, with 25 cents extra charges at the other end. Also received one pair of racing rims from Plymouth, Ind., missent to Chester, Iowa, for which we were charged 75 cents express. From this you can plainly see that we are in sympathy with the movement started in New York. Fast freight meets with our approval. Our patronage of the express company has been very limited since the revenue stamp act.

Creston, Iowa.

MYERS & EDABURN.

#### Express Charges Eat Up Profits.

We are in perfect sympathy with the movement for the reduction of express charges, and approve of fast freight instead of express. We know of several cases where exorbitant express charges have eaten up the profits, and it is also noticeable that these charges fluctuate. This seems singular to us, as we suppose it does to others. Every retail merchant should give his hearty co-operation to this movement. We shall read with interest the progress of this movement through the Cycle Age, and hope that it will cause the revolution required.

Colfax, Iowa.

KIZER BROS. CYCLE CO.

#### Heavy Express Bill for the Year.

The Cycle Age's agitation to moderate exorbitant express charges meets our most enthusiastic approval. If the telegraph and express companies could be compelled to charge in proportion to the service rendered, we would all be a great deal better off. Our express bill is something horrible to contemplate, when viewed in its annual total. The unwillingness of the express companies to stand the brunt of the new revenue law is

an example of their greed. We are most heartily in favor of combining to bring about a compromise at least regarding the charges they make. The simple fact that they are rolling in wealth and declaring tremendous dividends every year is enough evidence that the charges they make are much greater than they should be.  
Des Moines, Iowa. THE W. B. CHASE CO.

#### In the Hands of the Oppressors.

I am in favor of the movement started in New York to compel the express companies to moderate their charges or use fast freight. Making customers pay the stamp charges imposed on the express people by government, the express companies using such widely different business methods—as between us using exclusive offices and those who do the same business through competitive offices—are the main complaints I would make in addition to heavy rates.  
Fayette, Iowa. GEO. A. HOOVER.

#### Exorbitant Charges on Less Than 100 Pounds.

We are in sympathy with the movement started to compel the carriers to moderate their charges. The proposal to use fast freight instead of express meets with our approval. We have to submit to exorbitant charges on less than 100 pound packages.  
Champaign, Ill. CHAMPAIGN CYCLE CO.

#### Rough Handling by Express.

Apparently I have always been a mark for the express companies. In the six or seven years I have dealt in bicycles I have failed to get one machine in as good condition as when it left the factory. I have just mailed a letter to a Chicago firm, asking them to wrap the tubing in corrugated paper, and build crates stronger to stand the abuse they are subjected to in transportation. In the case of a tire sent to be replaced, I have paid as high as 80 cents, very nearly half the cost of tire. If the express companies break your stuff up they will, may be, carry one way free, but you will have to stand the balance, as you will have no other redress. Fast freight would meet with my approval.  
Battle Creek, Mich. O. G. PENDILL.

#### Carriers Should Affix Revenue Stamp.

We are in sympathy with the movement started to compel the express companies to moderate their charges. Fast freight will meet with our approval. The practice of the express companies to make the people pay the revenue stamps on all their receipts should be stopped if possible.  
Frankfort, Ind. CLINTON CYCLE CO.

#### No Telephone Service.

We are in sympathy with the movement started to compel express companies to moderate their charges. The proposal to use fast freight instead of express meets with our approval. In this town of 7,000 the American Express Company is too "poor" to put in a telephone. Unless one is on the main street every time he wants to send a package, it is necessary to run to the office.  
Rochester, Minn. IRVING W. FOX.

#### Heavy Overcharge.

The express rate on 100 pounds from this point to or from Chicago is \$1.75. I had — wheels shipped from the Calumet Cycle Co., and the express charge was \$100. At that rate I was charged \$4 for 100 pounds. We have only the one road here, but would be glad to see the price put where it belongs.  
Merrill, Mich. JOHN WALKER.

#### Express Rates on Bicycles Too High.

We are greatly in favor of reducing express rates on bicycles and goods belonging to them. They are and have been one of the most paying articles for past years, and the carriers cannot afford to turn us down. On the other hand, we can afford to stand the decrease in charges arising out of the use of fast freight.  
Lexington, Ky. LEXINGTON BICYCLE WORKS.

#### More Powerful Than the Government.

We are heartily in sympathy with the movement to regulate charges of the express companies. They have shown themselves more powerful than the government in refusing to pay their small proportion of the war taxes, and now a strong united effort should be made to regulate their charges on a fair basis for all.  
De Soto, Mo. CUNNINGHAM & HAMEL.

#### Heavy Bill for Express Service.

We think that some measure should be taken to relieve us of oppressive express charges. The matter of 25 to 30 cents for a single package does not of course, amount to much, but in the bicycle business, when

receiving 20 or 30 packages a day, in a year it amounts to a very large bill. We have taken advantage of fast freight whenever we could and found it very satisfactory. We hope through your valuable journal that something to our relief may be brought around.  
Jackson, Mich. DENNIS MACHINE CO.

#### Trouble With Shipments From the East.

My experience in shipping from eastern points teaches me to order a year ahead of time, and let the goods come by stage route. In ordering keys or wire to fill stock, from Connecticut points, the express charges sometimes amount to as much as stock costs. I do not think any paper in a Christian country would print my full views on this subject. I just say what I know.  
Peoria, Ill. D. S. KENT.

#### Express Charges Equal Cost.

I am in sympathy with the Merchants' Association of New York in its effort to reduce express rates. I am also in favor of fast freight instead of express. I often get small parts on which the express charge is almost as much as the cost of goods. I sometimes think that they size up the package and put the express charge low enough so that I will take it from the office.  
Huntington, Ind. J. H. KINDIG.

#### Charge About 15 per cent of Cost.

Kindly listen to our little tale of woe. The express companies, it seems, are trying to get as much of our profits as they can and we are heartily with the Cycle Age in giving them a good calling down. We favor fast freight. Only last week we paid 35 cents for one pair of 24 inch tires wrapped in paper, and one set of frame fittings cost 40 cents, less bar, pedals and axles. These goods came from Chicago. Two packages of frame fittings from Buffalo cost each \$1 and \$1.25 respectively. We find that the express companies charge us about 15 per cent of the value of our goods.  
Peoria, Ill. PEORIA CYCLE & SUPPLY CO.

#### Makers Should Not Use Express.

We have recently ordered all goods sent by fast freight unless parcels are too small, and them we order to be sent by mail. We have no further use for express companies as they now exist. Manufacturers should send goods by freight unless otherwise ordered, instead of vice versa.  
Webster City, Iowa. SMISOR BROS.

#### "Lead Pipe Cinch Monopoly."

We have a great many complaints to make regarding the exorbitant express charges. We are in every instance using Merchants Dispatch. Fast freight is certainly the most profitable. The express companies seem to us to perfectly represent the "Lead-Pipe Cinch Monopoly."  
Indianapolis, Ind. C. G. FISCHER & CO.

#### Complain of Extortionate Charges.

We are in sympathy with the movement to compel the express companies to moderate their charges. The proposal to use fast freight instead of express meets with our approval. We complain of the extortionate charges.  
Minneapolis, Minn. GREAT WESTERN CYCLE CO.

#### Ready to Join in the Fight.

We think the express rates are very exorbitant, and the proposal to use fast freight meets with our hearty approval. We have been obliged to have a great many wheels come by express during the past few years and on account of their charges our margins have been cut materially. We shall be glad to join in the fight for lower rates.  
Minneapolis, Minn. SMITH & ZIMMER.

#### Practical Solution to the Trouble.

The movement started to bring the express companies to time is worthy of support. However, a good service of fast freight is probably the most practical solution of the trouble, as it would be fast enough for all bicycle deliveries and at the same time would be a blessing to all other lines of business.  
Downington, Mich. GEO. E. PAIGE.

#### Immense Saving in Fast Freight.

We are heartily in sympathy with the movement to use fast freight instead of express. We used only the fast freight from Chicago for the last four months, the difference in time has never exceeded 16 hours. The saving has been immense.  
Owensboro, Ky. JOHN G. DELKER.

#### Get Everything Possible by Freight.

We are in hearty sympathy with any movement which will compel the express companies to reduce their very extortionate

charges. We are in favor of fast freight every time, as we firmly believe this is the only remedy to bring the express companies to time. We have for some time shipped everything that we possibly could by freight, preferring a few days' delay in order not to be compelled to pay outrageous express charges. Unless our customers insist on it, we never have anything come by express that we can get by freight.  
Le Mars, Iowa. HAAS & HUEBSCH.

#### Approve of Fast Freight.

We are heartily in sympathy with the movement started to compel the express companies to moderate their charges. We are in favor of any mode of quick transportation that will take the place of express.  
Grand Rapids, Minn. W. J. & H. D. POWERS.

#### Strongly Favors Fast Freight.

I heartily endorse any movement to put down the exorbitant charges that retail dealers have had to pay the express companies. This is something that has been very annoying to me, and I presume that every dealer in the country has had the same experience. I am strongly in favor of fast freight.  
Ashville, Ohio. C. F. BRINKER.

#### All Goods Sent by Freight.

Practically all of our goods go by freight. We, of course, are interested in any movement that would tend towards reduction of express charges, and the Cycle Age will have our hearty co-operation in anything that is done.  
Minneapolis, Minn. DEERE & WEBBER CO.

#### All Goods Received by Freight.

I am in sympathy with the movement to compel express companies to moderate their charges. Fast freight and postal express suit me. For over a year I have ordered all possible goods by freight, and shall continue to do so unless there is a great change in express rates.  
Atwater, Ohio. E. H. HINMAN.

#### No More Business by Express.

I approve of any system of transporting goods which will put an end to the extortionate charges of the express companies. The express company charges here have been something awful, and I do not intend to give them any more business than I can possibly help hereafter.  
Menominee, Mich. D. F. FOYER.

#### Splendid Service from Fast Freight.

We are in thorough sympathy with any movement tending to reduce express rates. We have had splendid service with fast freight during the past season, especially from Chicago, and believe it the best means to make the express companies reduce their extortionate rates.  
Kansas City, Mo. E. P. MORIARITY & CO.

#### Fast Freight Good and Cheap.

We certainly favor the fast freight proposition. We can see no reason for the existence of the express companies, and have always maintained that the railroads could give just as good service at much less cost. Complaints against the express companies are too numerous to specify, and we hope that the movement will be a success.  
Sibley, Iowa. WALTON BROS.

#### Using Freight for Two Seasons.

We are most emphatically in favor of any combination or scheme whereby the express companies can be brought down to a legitimate basis in the matter of charges. We have been using freight for the last two seasons almost exclusively, suffering considerable inconvenience thereby, rather than patronize express companies. Sometimes we have been able to get bicycles from Chicago in three days by freight. Express runs from a day to a day and a half. We deplore the fact that the express companies evade the law in regard to the matter of revenue stamps.  
Bridgeport, Ohio. HALL & ENLOW.

#### Permanent Fast Freight Service.

Am not in sympathy with any movement to interfere with express companies' business. Have no complaints to make. Would be heartily in favor of permanently established fast freight service, and believe it would be liberally patronized by the bicycle trade.  
Marshalltown, Iowa. H. S. THURBER.

#### Lower Postal Merchandise Rates.

We are in hearty sympathy with any movement which will compel express companies to radically modify their present extortionate rates. We approve of the use of fast freight wherever possible. Our congressmen should be urged to secure a revis-

ion of postal rates on merchandise, making the rate not more than 8 cents per pound, instead of the present 16 cents. We believe that such a reduction would compel express companies to reduce their rates, at least on small packages. We are certainly pleased to see Cycle Age throwing its influence against the transportation pirates. We shall be pleased at all times to render whatever little assistance lies in our power to aid in the work of a thorough revision of the express rates.

Minneapolis, Minn. NORTHERN CYCLE SUPPLY CO.

#### Avoid Shipping by Express.

Out here it is most outrageous the way the express companies "sock" it to us when we cannot help ourselves. The only thing for us to do is to avoid the express companies as much as possible and keep out of their clutches. If the charges were more reasonable, we could patronize them more freely.

Chatfield, Minn.

FRANK UNDERLEAK.

#### Express Adds Greatly to Cost.

The proposal to use fast freight instead of express meets with my approval. At times express has not proven to be satisfactory. Often it happens that the article received by express is very expensive after the charges are paid. The fast freight proposal is all right.

Decatur, Ill.

PAUL HIEKISCH.

#### Prefer Fast Freight to Express.

We stand ready to do what we can in bringing about more reasonable express charges than are now made. We prefer fast freight, if we could get anywhere near the service given us by the express companies. If the information given in the Cycle Age is correct, we see no reason why these companies should not be willing to give the public service at a much reduced figure.

Flint, Mich.

FLINT BUGGY CO.

#### Consignors Have an Advantage.

We are in favor of fast freight. Express charges are too high. Sometimes the express charges are equal to the value of the article purchased. Sometimes the firms from whom we buy pay the express in advance for us, and in that way we get it for 18 cents—the other way it costs us between 25 and 35 cents.

Monticello, Ind.

STAR BICYCLE CO.

#### Approve of Fast Freight.

We are in sympathy with the movement started to compel carriers to moderate their charges. Fast freight meets with our approval. Express companies should pay the revenue tax and reduce rates. We trust that this movement now on foot will bring about the reform sought.

Lansing, Mich.

J. G. GROSS & CO.

#### Express is Convenient But—

Our express service certainly is preferred as to convenience, but heavy charges are very objectionable, and we certainly are in sympathy with the movement to have the charges moderated. We approve of fast freight.

Peru, Ind.

PERU CYCLE EXCHANGE.

#### New Puncture Proof Tire Company.

The Rochester Non-Puncturable Tire Company has been organized by a number of Rochester capitalists for the manufacture and sale of a new bicycle tire, the tread of which is made impervious to any kind of pointed instrument by means of small transverse steel plates riveted to a band encircling the periphery of the air tube. These plates lie between two layers of cotton webbing which prevent contact with and consequent wear of the rubber. The rubber tread or outer jacket is removable and can be replaced at small cost when worn out, while the tire proper will last indefinitely, it is said. Manufacturing has already begun, but preparations are being made for the establishment of a larger plant, enabling an increased output to meet the anticipated demand for this new invention.

#### Further Humber Reductions.

The English cycle trade was somewhat startled recently when the Humber company announced that the English Humber would retail at a few cents over \$50, but the Humber company has not stopped at the above figure and to meet the price

cutting of another prominent English concern has made a further cut of about \$12, bringing the price down to \$38.72. This price is on the Coventry Standard grade of Humbers and includes an equipment of Westwood rims and "A. B." tires.

#### THE PARIS CYCLE SHOW

##### Absence of English Exhibitors Causes Comment—American Firms Represented.

The recent Paris cycle show has seemingly demonstrated that the English cycle trade in Paris has practically ceased to exist. Whereas four or five years ago the majority of the exhibitors at the Salon du Cycle were English, and the larger part of the cycle dealers in the Parisian capital's cycle row, the Avenue de la Grand Armee, were of the same nationality, this year but one English cycle maker exhibited at the cycle show and but one or two English bicycle stores now remain among the dealers of the "row." At the show, however, were to be found several English concerns in the tire and accessories departments.

The English makers claim that the French machines are not up in a mechanical way to the standard of British product, and that ideas long since discarded in England are still in vogue in the gay capital across the channel. Among the points noted by the English makers as not being strictly modern were fork crown designs, cranked rear forks, and the failure to fit gear cases to all machines. The English trade, while it deplores the fact that it has lost its hold on the Parisian market, is agreed that there is still a field if the desires and styles of the Frenchmen are but studied and the English machines sent to Paris made with a view to meeting these demands and at the same time furnishing better quality of workmanship than is now displayed in the French cycles. The English tradesman considers the French cyclist a peculiar being. The director of a large English lamp firm which has a branch in Paris recently voiced that opinion when he noticed a French rider passing with a Chinese lantern slung from his handle bars. Said the Englishman: "How the dickens can we pay a dividend when they use things like that?"

Though the English maker was more prominent by reason of his absence than his presence at the Paris show, the American was in rather conspicuous evidence. The American firms represented were the Pope Manufacturing company, H. R. Lozier & Co., the Crawford Manufacturing company, Western Wheel Works and the Indiana Bicycle company.

#### Proposes to Manufacture Pegamoid.

Efforts are being made in Springfield, Mass., to organize a company with a capitalization of \$20,000 for the manufacture of "a new style of celluloid veneer"—probably pegamoid. Charles F. Church, of New Jersey, who has installed several plants in eastern factories for enameling bedsteads, bicycles, etc., has been conferring with the Springfield board of trade and with capitalists there, and has met with much encouragement. The intention is to form an incorporated company for the purpose of making the stuff to sell to cycle manufacturers, carriage makers, car builders, etc. The company will start in a conservative way, employing about twenty hands and occupying temporary quarters with a view to removal when business warrants.

#### Cease to Job Bicycles.

Baker & Hamilton, the large San Francisco jobbing firm which has for several years handled bicycles on a large scale on the coast, have announced that they will sell no more bicycles. Last year

they sold between 4,000 and 5,000 cheap machines, so their retirement will mean a large trade to be divided between the makers and agents of a higher class of goods. The reasons given for abandoning the sale of bicycles is that "A number of manufacturers have so reduced their lists as to make it unprofitable for the agent to handle bicycles, the cost of selling the cheaper machines being as great as that of selling the higher priced ones." The firm will, however, continue to job a complete line of sundries, repair outfits and material and one line of tires.

#### AMERICAN AND ENGLISH EXPORTS

##### Shipments From New York for One Week Almost Double Those From Great Britain.

Exports of bicycles and bicycle materials from the port of New York for the week ending December 27 are recorded as follows:

Countries—	Bicycles.	Material.
Germany . . . . .	\$ 7,094	\$15,493
England . . . . .	13,869	2,394
France . . . . .	7,324	.....
Australia . . . . .	9,272	2,509
Sweden . . . . .	2,213	1,125
British West Indies . . . . .	2,724	1,124
British East Indies . . . . .	1,871	475
British Guiana . . . . .	1,965	266
Denmark . . . . .	377	2,041
Belgium . . . . .	30	1,266
Italy . . . . .	395	578
Dutch West Indies . . . . .	222	.....
Mexico . . . . .	205	.....
Central America . . . . .	123	.....
Africa . . . . .	100	73
Scotland . . . . .	100	.....
Brazil . . . . .	45	.....
Cuba . . . . .	96	.....
Ecuador . . . . .	38	.....
Haiti . . . . .	30	.....
United States of Colombia... .	20	.....
Porto Rico . . . . .	14	.....
Totals . . . . .	\$48,127	\$27,344

The value of the exports of bicycles and materials from Great Britain for the week ending December 17 is recorded as follows:

Adelaide . . . . .	\$ 1,365
Alexandria . . . . .	300
Bombay . . . . .	1,085
Bordeaux . . . . .	300
Bologne . . . . .	1,850
Buenos Ayres . . . . .	150
Calcutta . . . . .	1,725
Cape Town . . . . .	4,290
Christchurch . . . . .	1,005
Cologne . . . . .	50
Demerara . . . . .	375
Durban . . . . .	1,915
East London . . . . .	645
Flushing . . . . .	2,380
Fremantle . . . . .	835
Hamburg . . . . .	250
Hong Kong . . . . .	275
Lyttleton . . . . .	1,980
Madras . . . . .	100
Malta . . . . .	240
Melbourne . . . . .	12,925
Newcastle . . . . .	70
Ostend . . . . .	225
Otago . . . . .	240
Penang . . . . .	230
Perth . . . . .	200
Port Elizabeth . . . . .	1,630
Rangoon . . . . .	100
Singapore . . . . .	1,190
Sourabaya . . . . .	510
Sydney . . . . .	450
Toronto . . . . .	100
Trinidad . . . . .	305
Wellington . . . . .	660
Zanzibar . . . . .	130
Total . . . . .	\$40,095

#### The Lovell-Johnson Controversy Ended.

The case of Lovell vs. Johnson in the patent infringement controversy between the Lovell Arms company and the Iver Johnson Arms & Cycle Works, which has been stubbornly contested in the courts for several years, was decided last week in the court of appeals, the judge rendering a verdict in favor of the defendant.

The minister of war of Belgium has just issued a decree providing for the formation of four companies of military cyclists from the regiment of carabinieri. Each company will be provided with 125 folding bicycles.

## COMMERCE IN FOREIGN MARKETS

### OUR TRADE METHODS ARE INFERIOR

Abroad we are poor traders. It is the opinion of one of the smartest men in the American consular service. The truth of this belief is emphasized every day in correspondence with American merchants and manufacturers and in observations of the way they are handling the new export trade and their endeavors to get into it. American export trade is rolling up like a snowball because of a 50 per cent superiority in manufacturing knowledge and natural resources, and despite a 15 to 30 per cent inferiority in trading knowledge, a heavy percentage of unwillingness to learn foreign trading customs, and a still greater percentage of lack of foreign merchant facilities and organization. If a small portion of the vast sum of money in the United States now seeking investment could be employed in some form of export scheme to handle American goods, we would soon be able to record a greater export of American goods than of the raw products of the soil, though to-day we are boasting of an excess of manufactured exports over the manufactured imports.

### OUR INTERESTS IN CHINA

China wants her communications to be opened up, her industries organized, her hidden wealth brought to the surface, her natural products utilized. As according to the traditional order of procedure of the English-speaking races, the enterprise of the people precedes and draws after it the protection of their governments, it follows that the infiltration of capital and skilled direction into China is the proper lever by which the governments of Great Britain and the United States may be moved to interest themselves actively in the welfare of that country. Only by such a policy can the predatory powers be kept from ravaging the country and precipitating anarchy and red ruin among the largest population on the face of the earth. Every line of railroad, therefore, every factory in China, under either British or American auspices, is a solid gain to the whole commercial world. It is "effective occupation" of the genuine kind, the only kind of occupation that will save the territory from being staked off into exclusive areas, that will keep the door open for the free intercourse of all nations. Consequently, the concession of a railroad between Canton and Hankow to an American syndicate is an event of happiest augury.

### SOMETHING WRONG SOMEWHERE

Certainly there is something wrong somewhere in the training and education of Englishmen, otherwise the British board of trade could never have issued such a report as the one recently published, on the causes of the decay in British trade. In this memorandum are summarized the reports of 116 diplomatic and consular agents in all parts of the world. One and all tell the same story. The English are being beaten everywhere in markets that were once theirs, because of pride, stupidity and lethargy. Germans and Americans are cutting them out everywhere.

Excessive arrogance and smug self-complacency, qualities which have so long made the English detested by their neighbors, are now exacting their penalty in the way of business. The British traders despise the foreigner, and if he will not

take what is offered him he is let go elsewhere; and as a consequence he has gone elsewhere. Rivals have none of this stupid pride about them. If a foreigner wants to have anything in his style they are humble enough to try and let him have what he wants without elaborately making him feel that he is a condemned fool for not preferring the British fashion. The board of trade memorandum might appropriately be issued as a sermon preached by the representatives of England abroad from the familiar text, "Pride goeth before destruction and a haughty spirit before a fall."

### RIVER FREIGHT RATES IN GERMANY

It is of considerable value that exporters should have knowledge respecting transportation facilities between the seacoast and the large inland cities in Southern Germany. Railway communication between these cities and Hamburg, Bremen, Antwerp and Rotterdam is very good; but river transportation is less injurious to freight, at the same time giving the shipper rates varying from 25 to 75 per cent less than the railway charges, depending upon the condition of the river and the character and class of goods shipped.

Merchants are in the habit of purchasing from the wholesale dealers in one of the larger seacoast cities, and after the railway freight rates have been added to the large commissions demanded by the wholesale houses, such high prices must be asked for the goods when they reach Mannheim that sales are slow. If American exporters will deal directly with the German importer and retail dealer, many of the popular prejudices now existing against our goods will be removed; the wares can be purchased at first hand and without the payment of high commissions, so that the retail dealers can dispose of them at prices within the reach of the average purchaser and yet make a handsome profit.

It is for this reason that low transportation charges figure very largely in the estimate of what goods can be sold for, so as to compete favorably with German product. The Rhine and its tributaries penetrate regions quite remote from the sea, while many canals ramify the country and connect with foreign water ways.

The following is a table of river steamer freight rates between Rotterdam and the chief Rhine ports:

	Miscellaneous parcels, etc.	Consignments of 5000 lbs. or more (11,023 pounds).....
	Cents.	Cents.
Between Rotterdam and—		
Emmerich . . . . .	15.4	14
Dusseldorf, Duisburg - Orsey, Wesel . . . . .	16.6	15.9
Cologne . . . . .	19	18
Bonn, Neuweid . . . . .	21	20.4
Coblenz . . . . .	23.8	22.6
Bingen, Rudesheim . . . . .	23.8	22.6
Bieberich, Mainz . . . . .	23.8	22.6
Oppenheim . . . . .	26	24.9
Worms . . . . .	28.5	27.1
Ludwigshafen, Mannheim . . . . .	28.5	27.1

### TO HELP OUR EXPORT TRADE

It is evident that the national exposition designed to foster American export trade, which is to be held in the autumn of this year, under the auspices of the Philadelphia Commercial Museum, will not want for financial support. The national government has given the en-

terprise its sanction and support. Congress has just made an appropriation of \$350,000 on behalf of the exposition. The city of Philadelphia has voted to the Museum \$200,000, and the state of Pennsylvania \$50,000. An additional amount sufficient to guarantee the success of the enterprise will be raised by private subscription.

### VERY LIGHT MACHINES FOR SPAIN

The bicycle trade is, comparatively speaking, in its infancy in Spain, but the demand for machines is yearly increasing from all parts of the country. It is estimated that about 2,000 machines were sold during the last twelve months, of which about one-third were of British origin; the rest came from France, Germany and America. There is a demand for very light machines. The continental makers do all they can to push the sale of their machines by establishing branch houses, advertising extensively, and by arranging professional riders to appear at races on machines made by their employers. British firms, on the other hand, will only deal with their agents as merchants, that is to say, the agent must buy their machines out and out and bear all the expense of advertising, etc. Very few machines are made in the country itself.

### CONCERNING FOREIGN CREDITS

Both the English and the American manufacturer expect to be paid in sixty or ninety days. The merchants in Oriental, Oceanic and African ports, and in parts of Europe also, expect six months' and nine months' credit, and sometimes more than that. These credits can generally be obtained from German, Belgian and French manufacturers. Of course the price must cover the interest for this longer period, but these continental manufacturers manage to make it pay them to give the customary credits. The seller must know the buyer pretty well to allow such credit, and here the continental manufacturer seems to have the advantage over the Englishman and the American; he has more agents of his own nationality in foreign parts and he knows better whom he can trust.

### CYCLE MANUFACTURE IN ITALY

Many bicycles are made in Italy, though tubes, balls, chains and saddles are imported from England and America. Gear cases are seldom used. The English first-class make of machine is preferred to those of Italian manufacture, but the difference in price being so considerable, there is little trade done in them. American-made machines, on the contrary, which are comparatively cheap, are much used. In imports an increase over the preceding year is noticeable, and the exports, with few exceptions, have also increased or maintained the average. Cycling has become very popular at Spezia. There are now six depots where cycles may be hired at very cheap rates. The machines are mostly of Italian and German manufacture.

One of the exhibitors at the Paris cycle show just concluded stated that bicycles for the French, English and German trade are fitted with entirely different saddles and tires, the French preferring a light, the English a medium, and the German a heavy weight article in each.

# MENACE TO EXPRESS SERVICE

## Lower Parcel Post Rates and Increase in Weight Limit Asked from Congress

It is generally believed that lower domestic parcels post rates on merchandise will greatly relieve shippers and the public at large from the burden of extortionate charges which are now imposed by the express companies. It is not expected that this agency alone will afford thorough relief, but with its ally, the fast freight, which is now in such high favor among shippers and traders in large cities and towns, splitting business with the express companies it is reasonable to indulge in the hope that the tyranny so pitilessly carried is rapidly nearing its end.

### Lower Parcel Post Rates

Congress is being memorialized to authorize the transportation of domestic merchandise throughout the country by means of the postal service at rates at least equal to those enjoyed by the people of Great Britain, to which there can be no objection unless it be that the average haul in this country is somewhat longer than in the United Kingdom. In this view, slightly higher rates than those current in Great Britain might be imposed. It is also demanded that the weight limit for packages suitable for transmission by parcels post be increased from 4 pounds to 11, which latter is the weight limit of parcels sent through the British mails.

### Comparing British Rates With Ours.

Parcels post rates in Great Britain are 6 cents for the first pound, and 2 cents for each additional pound, up to 11 pounds, while the rate on merchandise in this country (limited to 4 pounds), with some exceptions covered by second and third class matter, is one cent for each ounce or fraction thereof. The disparity between the parcels post rates of this country and those of Great Britain may be readily seen in the following table of comparative rates for domestic parcels, assuming that the present weight limit of four pounds in the United States be increased to eleven pounds.

Lbs.	United States.	Great Britain
1	\$0.16	\$0.06
2	0.32	0.08
3	0.48	0.10
4	0.64	0.12
5	0.80	0.14
6	0.96	0.16
7	1.12	0.18
8	1.28	0.20
9	1.44	0.22
10	1.60	0.24
11	1.76	0.26

### Mercantile Interests Neglected.

It has been the custom of the Post Office Department for years to carry newspapers, periodicals, books and commercial literature as second class mail matter—with no weight limit—for one cent a pound or fraction thereof, and while all appreciate the importance of carrying such matter at low rates, yet it is of the first importance that the mercantile interests of the country obtain similar concessions. The minimum express rate for domestic parcels, with a few trifling exceptions such as catalogues, which come in competition with present postal rates is 25 cents.

### Present Parcels Post Does Not Pay.

The Post Office Department has facilities equal, if not superior, to the express companies for the transportation of merchandise. John Wanamaker, at once a

great merchant and a genius in mail transportation, held that the present parcels post of 4 pounds does not pay, because the short hauls are almost invariably taken by the express companies, and the long and expensive hauls, upon which money is lost, are left for the department. A New England business house has a contract with an express company to carry 25,000 or more packages of third class matter, weighing 30 ounces each, at 13 cents per package, and after the express company selects such as it cares to handle, the department is obliged to carry the balance at 15 cents per package. But this is an unusually low figure and the hauls are unprofitable. The benefit of the full parcels post (and the reason why it is so extensively demanded) is that the post reaches thousands of localities where the express companies do not find it profitable to go

### Four Strong Objections.

There are but four strong objections to the parcels post, and they are the four great express companies, who would be just as well off with an 8 or 11 pound parcel post if the heavy freight of the executive departments and the immense packages of bogus serial books that are now thrown upon the mails were shut out and turned over to the express companies, where they belong.

### Our Foreign Trade is Hurt.

Our foreign trade is hurt by the disparity between one parcels post facilities and those of England, France and Germany. The parcels post privileges from the United States are confined to a limited number of foreign countries, and are not nearly so extensive as those enjoyed by England, France and Germany. It is believed, independently of other considerations, that by such a discrimination between this country and such other countries, the commercial interests of the United States are placed at a correspondingly great disadvantage. For illustration: A wholesale merchant in Detroit recently received an order from Australia for a caliper, weighing 4 ounces, which cost \$1.76 to transmit to its destination, by the existing methods of transporta-

tion in this country, while a competitor, in Windsor, Canada, across the river one mile, could send the same package for 12 cents by the parcels post rates of Great Britain. It is estimated that foreign business of this character, should we enjoy the same liberal provisions as now exist in Great Britain, could easily be increased three-fold at least.

### Extent of Our Foreign Service.

The trivial extent of our foreign parcels post service is shown in the table at the foot of this page. But by special agreement we can mail samples of merchandise not exceeding 12 ounces in weight to Gibraltar, Malta, British North Borneo, Ceylon, Cyprus, Hong Kong, Labuan, Straits Settlements, Cape Colony, Gambia, Gold Coast, Lagos, Mauritius, Natal, Seychelles and Sierra Leone.

### Duty Charges Not to be Evaded.

The prohibitory legislation of certain other countries, based on the assumption that the same is necessary to exclude dutiable articles, it is believed can be overcome by postal agreement or arrangement between this country and such other countries, whereby such articles shall be forwarded in a peculiar package, so as to show the nature of its contents, or by allowing such packages to go through in such a manner as packages are now received "in bond." All possibility of evading duty thus would be prevented.

### Comparing Foreign Service Rates.

In the following table a comparison is made of foreign parcels post rates on packages sent from this country and Great Britain:

	From United States.		From Great Britain.	
	3 Lbs. Amt.	11 Lbs. Amt.	3 Lbs. Amt.	11 Lbs. Amt.
Bahamas	\$0.36	\$1.32	\$0.60	\$1.98
Barbadoes	.36	1.32	.46	1.76
Colombia	.36	1.32	.60	1.44
Costa Rica	.36	1.32	.56	1.32
Hawaii	.36	1.32	.72	2.64
Jamaica	.36	1.32	.54	1.98
Leeward Islands	.36	1.32	.42	1.54
Mexico	.36	1.32	.24	.84
Salvador	.36	1.32	.84	1.68
British Guiana	.36	1.32	.60	1.76
Newfoundland	.36	1.32	.54	1.32
Honduras	.36	1.32	.56	1.36

### A Tip for Lamp Makers.

Lately a large quantity of American lamps were received by a Scotch house. But the thumb screw which clamps the lamp, instead of being operated from the front or side as on British lamps, was

### FOREIGN PARCELS POST RATES AND DIMENSIONS.

COUNTRIES.	Greatest Length	Greatest Length and Girth Combined	Greatest Girth	Greatest Weight Lbs.	For a Parcel not exceeding 1 Lb.	For every additional Lb. or Fraction of a Lb.	EXCHANGE POST OFFICES.	
							UNITED STATES.	FOREIGN.
Bahamas	Ft. In. 3 6	Ft. 6	Ft. 6	11	Cts. 12	Cts. 12	New York	Nassau
Barbadoes	3 6	6	6	11	12	12	New York	Bridgetown
Colombia	2	4	4	11	12	12	All offices authorized to exchange mails between two countries.	
Costa Rica	2	4	4	11	12	12		
Danish West Indies	3 6	6	6	11	12	12		
Hawaii	3 6	6	6	11	12	12	San Francisco	Honolulu
Honduras (British)	3 6	6	6	11	12	12	New Orleans	Belize
Jamaica, including the Turks and Caicos Islands	3 6	6	6	11	12	12	New York	Kingston
Leeward Islands	3 6	6	6	11	12	12	New York	St. John
Mexico	2	4	4	11	12	12	All offices authorized to exchange mails between two countries.	
Salvador	3 6	6	6	11	12	12	New York and San Francisco	San Salvador
British Guinea	3 6	6	6	11	12	12	All offices authorized to exchange mails between two countries.	
Windward Islands	3 6	6	6	11	12	12		
Newfoundland	3 6	6	6	11	12	12	New York and Philadelphia	St. Johns
Honduras Republic	3 6	6	6	11	12	12	New York and New Orleans and San Francisco	Tegucigalpa Puerto Cortez Amapala Trujillo





TRADE MARK



50



MANUFACTURERS ARE FURNISHING

# Dunlop Detachable Tires

On their wheels AT NO EXTRA COST, either wholesale or retail.

Agents should see that the manufacturers whom they represent are among this number. Write us about it.

1899 IS GOING TO BE A DUNLOP YEAR.

## The American Dunlop Tire Company

134 Lake Street, Chicago.

Belleville, (North Newark) N. J.

36-38 Lombard St., Toronto.



TRADE MARK



### TO AIM HIGH

and certain should be the

### COMMON AMBITION

of all. We not only aim to produce a machine of

### HIGH GRADE

but we do

### ACTUALLY ATTAIN

that destination. AN AGENCY FOR

### SNELL BICYCLES

means much to him who possesses it.

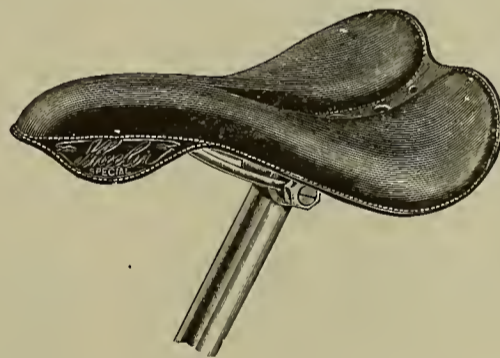
MINIMUM REPAIRS  
EASY SELLERS  
GIVING ENTIRE SATISFACTION

WE SOLICIT CORRESPONDENCE

Investigate a popular line at a popular price.

The Snell Cycle Fittings Company

TOLEDO, OHIO, U. S. A.



## WHEELER SADDLES

HAVE ALWAYS BEEN MADE WITH THAT CURVE IN THE BACK.

OUR LINE FOR '99 COMPRISES BUT FOUR DISTINCT MODELS:

- "EXTRA" Woman's . . . Broad, Soft and Easy.
- "EXTRA" Men's . . . Hygienic and Durable.
- "SPECIAL" Roadster . . . An ornament to any wheel.
- "CORK-TOP" Racer . . . Light and Graceful.

These saddles are made and finished in the careful and stylish manner that has always characterized Wheeler Saddles.

Send for samples of the most popular saddle on the market.

## THE WHEELER SADDLE CO.

1427-1457 Woodward Ave., DETROIT, MICH.

Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT.  
New York Distributing Agents: HARTLEY & GRAHAM.

operated from the back, and as few English cyclists ride without brakes fitted and always fit their lamps to the head, the screw could not be turned, the brake being in the way.

### WORKMAN'S LIEN LIMITED

**Bankruptcy Law Places Wage Claims Older Than Three Months Equal With Common Creditors.**

By a decision of the United States circuit court of appeals in Chicago a precedent has just been established which will be of general interest in regard to a number of cases now under adjudication under the federal bankruptcy law. It refers especially to those states whose statutes are at variance with the new federal law. The point in dispute arose in the involuntary bankruptcy proceedings of Rouse, Hazard & Co. of Peoria, Ill.

The new bankruptcy act provides that wages due workmen for work performed within three months before the commencement of bankruptcy proceedings shall be given priority of payment among the debts. The statutes of Illinois also make this provision of priority of claim, with the difference, however, that there is no statement as to a three months' time limit.

The district court of northern Illinois had allowed priority of payment to a certain number of workmen, but this order was taken to the court of appeals on a petition to review and revise, and the judges of the court of appeals found that while the Illinois statute does not state any limit as to the time of service, this does not give the laborer a further priority of claim under the bankruptcy act. They ordered the other court's decision on this point set aside.

Workmen who allow their wages to accumulate in the hands of their employers for more than three months will therefore hereafter in all likelihood lose their claim for preference for that part of the amount which dates farther back than the three last months before bankruptcy proceedings are instituted. Probably the books of the firm will be accepted as evidence of the age of workmen's claims, and they may therefore safeguard themselves somewhat by providing for having such part payments as they may receive applied to the oldest arrears on wage account that are entered on the books of their employers.

### Profits of English Makers.

Herewith are presented more reports showing the state of the English cycle manufacturing industry:

	Loss.	Profit.
Humber & Co. (Extension).....		\$52,625
(a) Osmond Cycle Co.....	\$ 40,970	.....
(b) Bard Cycle Co.....	.....	10,335
Adams Cycle Co.....	.....	2,325
(c) Joseph Appleby (chains).....	.....	29,165
(d) Caper Fittings Co.....	.....	65,000
(e) Bayliss, Thomas & Co.....	.....	27,550
(f) Elswick Cycle Co.....	.....	36,080
(g) Raleigh Cycle Co.....	.....	148,495
(a) The liabilities of this concern, which lost heavily in 1897, are \$1,108,470, with assets of about the same amount.		
(b) No dividend was paid.		
(c) This profit was on 18 months' trading.		
(d) This is the net loss for two years' trading.		
(e) A dividend of 10 per cent was declared.		
(f) A dividend was declared only on preferred stock.		
(g) This loss absorbs the whole of the accumulated reserve fund. This company has amalgamated with another concern. The banks are creditors of the Raleigh company to the extent of \$200,000.		

### How Mexicans Ride.

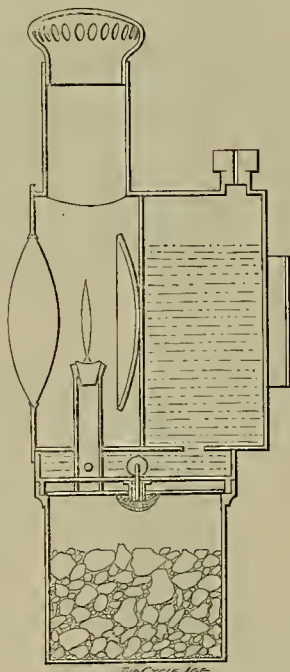
The Mexican wheelman has not yet accepted the American knickerbocker. He gathers his wide bottomed trousers around the ankle with a strap and lets it go at that. He not only retains the picturesque garments which he used to affect on horseback, but he has them made

in still more striking colors, adds a few more bright buttons, a little more gold and silver lace. He keeps his wide brimmed sugar loaf hat and decorates it still more lavishly. He does not use drop handle bars; therefore he does not hump over. He rides erect, as he used to on his horse, head up, shoulders thrown back and eyes alert for approving feminine glances. He smokes the inevitable cigarette—after he has become sufficiently expert to manage his machine with one hand. He is no scorcher. He does not boast about his mileage record nor indulge in century runs, but he comes out in the cool of the evening and circles around the public square where the band is playing. While Mexico is not exactly a wheelman's paradise, there are plenty of good roads to be found in the country. In the City of Mexico there are many miles of broad, smooth boulevards, and these make bicycling very popular in the capital.

### FIRST BICYCLE GAS LAMP

Was Designed by F. N. Fuller in 1895—Crude but Contained Essential Features.

It was in May, 1893, that Willson first accidentally produced calcium carbide and it was two years thereafter before anything was done with this discovery of a



commercial method of manufacturing this substance. One of the first uses thought of was in small portable lamps and it was as long ago as the end of 1895 that one of the officials of an acetylene company ordered an acetylene bicycle lamp made in Chicago.

This lamp, illustrated herewith, was probably the first acetylene bicycle lamp made in this country and was actually used for some time on a bicycle with satisfaction and success. It was designed in December, 1895, by F. H. Fuller and made for the Illinois Acetylene Co. At that time there was no generator on the market and this lamp was made for experimental purposes. It was built of brass, not nicked, brazed, was 7.5 inches in total height, the combustion and water chambers were cylindrical, 3 inches in diameter, with the smoke stack 1 inch and the carbide chamber 2.25 inches diameter. The water supply plug was perforated as are those of today; between the carbide and water lay the screw valves for supply gas and water. Their ends were conical and one was placed on each side of the lamp. Upon the top of the carbide chamber, which was screwed on, rested a plate carrying a grating through which the water dropped upon the carbide below and which prevented any lime clogging up the water tube. A large opening on one side let the gas above it, and

being cooled by the water chamber above, much of its moisture of saturation drained back upon the carbide. The burner was a Brag 2-hole made of brass and produced a flat flame consuming about one-fourth a cubic foot of gas per hour. About 2 ounces of carbide was required to charge it. We have not advanced much beyond this, even in some of our present designs, and although this early lamp was crude and made in a hurry principally to show that it could be accomplished, yet it contains many of the essential features of the lamps now on the market.

### Worcester Cycle Company Affairs.

F. S. Smith, receiver for the Worcester Cycle company of Middletown, Conn., has filed his inventory of the property of the company, showing assets of \$79,466.87. C. C. Goodrich, trustee of the company, has been granted permission by the United States circuit court to inspect the property any day next week, but the Central Trust company of New York city, complainant in the suit against the Worcester company, has filed notice of appeal from the recent order of the court recognizing Trustee Goodrich, appointed by the state court in the insolvency proceedings.

### Denies Rubber Combination Canard.

Regarding the alleged consolidation of several of the rubber manufacturing companies, as reported last week in the daily press, the following point-blank denial of any interest in the deal has been received from the makers of the Hartford tires, the denials of the two other most prominent firms mentioned having been published in this paper last week:

To the Editor.—Some few days ago it was announced in an Associated Press dispatch that The Hartford Rubber Works Co. had entered into a combination with various other manufacturers of rubber goods. So far as The Hartford Rubber Works Co. is concerned, there is absolutely no truth in the report. The Hartford Rubber Works Co. has always been successful in managing its own affairs, and will undoubtedly be able to continue to do so for some time to come.

THE HARTFORD RUBBER WORKS CO.

### To Continue Making Nonotucks.

To the Editor:—I have purchased the machinery, tools, all parts of wheels and stock on hand, with the good-will of the Hampshire Cycle Mfg. Co., of Northampton, Mass., and it is my intention to continue the business for the year 1899 and possibly permanently in connection with my other business. The Nonotuck wheel will continue to be made, and we hope to keep up its good reputation and make it even better than heretofore. Although the number of wheels manufactured may be on a somewhat smaller scale than previously produced, yet we shall do all the business we can with the limited capital at our command.

CHARLES E. HERRICK.  
Northampton, Mass., Dec. 30.

### Hold no Stock in Columbus Co.

To the Editor:—I noticed an article in your paper of December 29 stating that H. L. Chapman had purchased a controlling interest in the Columbus Bicycle Company. Mr. Chapman purchased the stock of J. A. Pfeifer at public sale to protect a loan made to him some time ago, but immediately sold and transferred same to G. C. Urlin and Lewis Fink. Neither H. L. Chapman nor the writer hold any stock in the Columbus Bicycle Company.

Columbus, O., Dec. 30. F. B. CHAPMAN.

A business good will may be sold by itself, and the sale is none the less valid because unaccompanied by any "plant" for the transaction of such business.

## SUBJECTS OF GENERAL INTEREST

REVIVAL  
IN  
BUSINESS

The country has been watching so long for a revival of business, and has so thoroughly concentrated its attention upon a condition hoped for in the future, that it is in some danger of not recognizing what has already happened. The truth is that what this country now needs is not so much a glorious boom as a happy continuance of present conditions.

These conditions are not universally satisfactory; there are localities and there are lines where the revival does not seem so substantial as might have been desired, and it is a general fact that the rate of profits is smaller than it was years ago. But this decline in the rate of profit is not so much due to any difficulty of selling goods as it is to the vast accumulation of capital and the energy of competition in production; it is very much like the reduction in the rate of interest. This is an unfavorable change for the capitalist, as such, but it is unquestionably a gain for the community as a whole.

What used to be known as business booms were largely speculative. If the country is not having one now, it has no reason to deplore the fact. It is certainly doing an enormous business of a healthy character. There is no evident reason why the present volume of trade should not continue and expand with the increase of population and the growth of capital. In a disposition to overtrade, and the inevitable reaction, there is some excuse for regarding panics as an essential feature of commercial growth, but with improved business methods and improved banking, and a currency above suspicion, the superstition that a panic is certain at periodical intervals can be exploded.

EXTINCTION  
OF WROUGHT  
IRON

With the resistless force of a glacier, but with a rapidity which is only slightly appreciated, steel is now supplanting all forms of wrought iron. Forcible arguments in favor of iron for certain purposes may be made, numerous engineers may continue to specify iron for special classes of work to which they consider it is better fitted than steel, and prejudice may incline the masses of iron workers to prefer the material which can be welded with least trouble, but the day is near at hand when wrought iron will be an exceedingly scarce commodity.

Complaints continue to be heard among mechanics of hard spots in steel which make it of an uncertain character in working, and of its comparatively rapid oxidation when exposed to the weather or to the action of water. For such reasons a reaction of more or less strength is from time to time noted in favor of wrought iron, but the greater cost of puddled iron as compared with steel silences the complaints, the steel maker sedulously endeavors to turn out a more reliable product, and steel continues to preserve its ascendancy.

The end of this century will in the estimation of even those who are deeply interested in wrought iron see the end of wrought iron as a distinctive designation, except, perhaps, in the case of Swedish iron or some other high priced iron specialty. Ordinary bar iron will have completely disappeared. It is becoming increasingly difficult to secure material from which to manufacture genuine bar iron. Scrap has long been

the chief dependence of the bar manufacturer.

But the greatest stocks of scrap iron are nearing exhaustion, iron rails are becoming a scarce commodity, and a new supply of cheap material for iron rolling mills is out of the question. It is almost an impossibility now for an expert scrap dealer to detect the difference between wrought iron and soft steel in the old material offered him.

And so much more steel is now being consumed than wrought iron that the production of steel scrap is increasing at a rate so rapid that wrought scrap will very shortly be steel principally.

THE  
EARNING POWER  
OF RAILROADS

The gross earnings of railroads from freight are substantially the same as the running expenses; there are in this country at present nearly 200,000 miles of railroad, and the operating expenses are about \$800,000,000 a year. The freight receipts are substantially the same—\$800,000,000 a year. When commercial operations are extensive freight receipts increase, and along with them there are increases in the expenses of operation, which usually keep pace. When business interests languish and freight receipts fall off there is usually a corresponding reduction in operating expenses, so that it may be said that the running expenses generally are paid from freight receipts, and the other items of revenue, passenger receipts chiefly and mail receipts to a minor extent, pay the interest on bonds, the dividends and the profits—when there are any.

The question is sometimes asked why it is that such vigorous efforts are made by railroad managers to develop the passenger business in preference to freight traffic, but the explanation is to be found in the fact that while the revenues from the former are usually regulated by the volume of business, the passenger receipts are regulated generally by the character of the service offered, independent of the condition of business. Necessarily a railroad, to enjoy a large measure of passenger business, must be in very good physical condition, and for this reason some of the poorer roads are unable to compete successfully for passenger trade—the trade which pays the profit from operation of American railroads, \$1,000,000 a day on the average.

RESULT OF  
WAR  
IN EUROPE

Taking the statistics of former great wars as the basis of calculation, we find that the daily expenditure needed for a conflict in which the five continental great powers were engaged would amount to about \$21,000,000. Over and above this sum it would be necessary to expend on the families of the soldiers about \$990,000. In other words, the annual cost of a European war, exclusive of indirect losses, would, according to the calculations of experts, reach the fantastic total of \$8,735,600,000. But if, as experts believe, this Titanic combat would last for two years, the ruin of the belligerents would be complete and irreparable.

Meanwhile, while Europe was busy bleeding herself to death, America would secure forever the markets of the world. Even now, handicapped by no more than the burden of an armed peace, Europe offers no parallel to the industrial and commercial advance of the United States.

The United States are not merely by far the richest of peoples, but the rate at which their national wealth increases is considerably greater than that of any other nation. The main cause is the absence of militarism. And the more deeply indebted the European becomes, the more rapidly the Yankee is paying off his financial obligations and the easier it is for him to compete with his European rivals. The great war, if it came, would leave us master of universal trade.

This aspect of the question is said to have appealed with the greatest force to Kaiser Wilhelm, whom the Czar consulted about his plan for universal disarmament.

ELECTRIC  
MOTOR  
USES

The value of the electric motor as a factor in the reduction of working costs is well known. But its more complete adoption in the near future will lead to the revival once more of a number of small and independent industries such as existed, but under different conditions, in former years. The possibilities are already being grasped by the artisan here and abroad. By the aid of the small electric motor he begins to find that he can at least hold his own in competing with immense manufacturing concerns and combinations; he has a practically unlimited available power at his own door which offers an inducement to become his own master. In a very small and limited degree the gas engine has already accomplished something in this direction, but its many imperfections, its cost, and the fact that it has never been available on the hire system, have kept it more or less in the background.

STEEL WOOL  
FOR  
POLISHING

The demand for a substitute for sandpaper has led to the introduction of a material known as "steel wool." It is made from tempered steel shavings in different degrees of fineness, which cut as smoothly as the finest emery and much quicker. Being held in bulk, it readily adjusts itself to the form of the surface to be operated upon, reaching into the finest corners and cutting away all that is desired, doing the work without clogging. As it does not clog up and wears long, it is cheap to use.

The wooden bicycle used by Blondin in his famous ride across the Niagara falls on a rope is still in existence, and was sold in Paris not long ago for half a crown.

The crew of the Japanese cruiser Kagsagi, recently launched in this country, carried home a large number of American bicycles when the vessel sailed. There was almost one apiece for the entire crew.

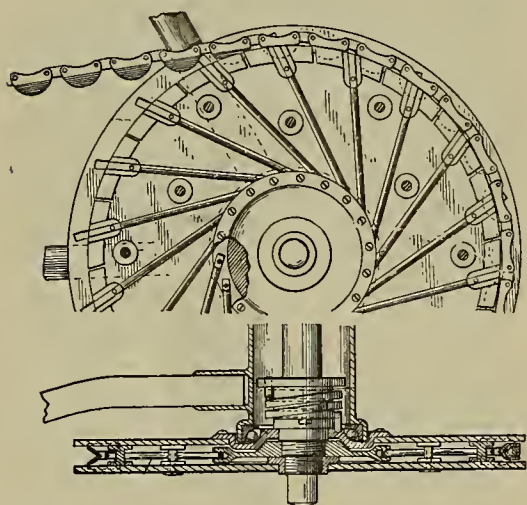
The chief of police of Atlanta, Ga., has recommended that as repairs upon the fourteen bicycles now in use by the department cost the city about \$30 a month, a small repair outfit be purchased by the police board so as to enable the officers to do most of their own repair work.

As a result of the recent experiments with automobile fire engines the Paris municipal council is considering the advisability of introducing automobile machines for watering and sweeping the streets.

## RECENT PATENTS

## Automatically Changeable Driving Mechanism—Single Point Contact Gear—Three-Wheeled Cycle

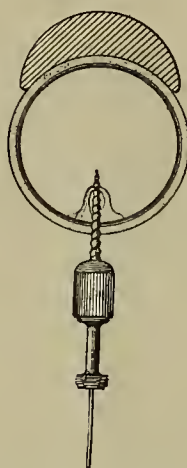
**Variable Size Driving Pulley.**—This device, which comprises a set of driving and driven pulleys and which may be adapted to use on bicycles, is so constructed that when the load put on the driving pulley exceeds a certain limit that pulley will be automatically decreased in size while the driven pulley will be at the same time correspondingly increased, thus lowering the gear of the driving set and, if it is on a bicycle, lowering the gear of the machine and allowing the rider to cover the hard riding on the low gear, which will return to the normal size as soon as the load again drops to the fixed limit. The driving pulley transmits its motion to the driven one by means of a chain composed of V-shaped links which are received by V grooves around the peripheries of the pulleys. These grooves are not continuously formed in the bodies of the pulleys, but in each case a set of segmental pieces approximating the circumference of the pulley are attached to tangentially arranged spokes secured to the pulley hub. The segmental pieces are guided and supported laterally by side plates. These side pieces are



attached to hub parts which surround the crank axle and are connected therewith through the medium of a coil spring, the action of which is limited by a slot and pin device. The hub piece which supports the inner ends of the tangential spokes is rigidly secured to the axle. When the load on the pulley is normal, that is, less than the tension of the spring, all of the parts will rotate together, but as soon as the load becomes heavier than the tension of the spring the latter gives to the extent allowed by the slot and pin and the axle moves that much forward in its relation to the side plates of the pulley. The axle in carrying with it the hub supporting the spokes causes the tangency of the latter to be increased and the circumference of the segmental pulley groove to be diminished. The pulley on the rear wheel hub is similar in construction with the exception that the operation of the spokes is opposite, so that the circumference of the rear pulley will be increased when that of the driving pulley is decreased, thus preventing chain slack. The inventor is J. C. Pratt, Hartford, Conn.

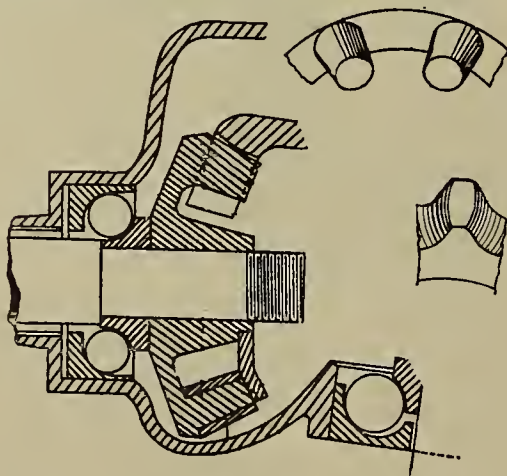
**Cement Injector.**—Theoretically one of the reasons why the injection of heavy cement through punctures in single tube tires does not always stop the leakage is that the cement being pushed out of the injector nozzle through a single delivery

hole gathers in a bunch, lying mostly on one side of the puncture, unless the person who makes the repair is experienced enough or has foresight enough to twist the nozzle around in withdrawing it so that the cement will be worked into a button lying directly over and completely closing the hole. The injector in this invention is applied to an ordinary cement holder from which the cement is forced into the nozzle by a screw



plug, and instead of being a round, smooth tube, is tapered and threaded on the outside. The cement passage ends in a transverse hole a short distance back of the point and has an opening on each side. When the nozzle is pushed through the puncture it gains entrance by being turned, thus screwing down into the hole without tearing the fabric or enlarging the puncture, the tire body material being merely pushed aside. The cement on flowing out of the nozzle falls to the interior of the tire in bunches of practically equal volume, one on either side of the puncture. To remove the injector the operator is compelled to screw it out backward and in so doing causes the cement to be twisted and formed into a single mass directly over the puncture. The tip of the nozzle in passing out of the puncture will also draw a small amount of cement with it, thus tending to further close the hole. The inventor is William Herrick, Chicago, assignor to Morgan & Wright, same place.

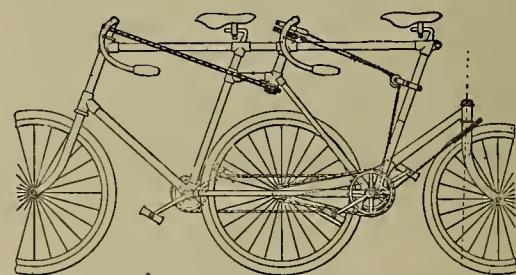
**New Form of Bevel Gear.**—To reduce as much as possible the friction between the engaging teeth in bevel gears and



other similar chainless driving gears for bicycles this bevel driving gear is cut with the acting faces of its teeth convexly curved and engaging teeth on the

pinion which have the shape of frustrated cones. The cones are cut out of the pinion stock itself and may be accurately located. The supposition of the inventors is that as the engaging teeth can touch each other at but one point instead of along a line the friction is reduced to a minimum. It is one of the first laws of friction that its amount is not dependent upon the extent of surface between the contacting surfaces but upon the weight or pressure exerted upon the moving parts. It is thus evident that if a convex tooth slides over a conical engaging tooth and in sliding touches only at one point it will still produce the same amount of friction as though the faces of the teeth were straight and touched for their entire width, other conditions being equal. The gear, however, doubtless has the advantage of being able to adapt itself to small changes in the alignment and relative positions of the gear and pinion. The inventors are J. A. N. and C. B. H. Rasmussen, Copenhagen, Denmark.

**Anti-Vibratory Three-Wheeler.**—This invention has the object of furnishing a cycle on which the rider does not feel with common severity the jolts and jars occasioned by rough roads, and the manner of attaining the desired end is novel in that no spring or cushion devices are employed. It embraces the use of three wheels, but the parts of the frame occupied by the rider are strictly rigid in their relation to each other, a point which is not carried out in the three-wheelers now made. As shown in the patent office sheets, the invention is worked out in a tandem machine, although the same scheme may be applied to singles. The middle wheel, which acts as the driver,



is not secured rigidly in the frame, but is hung in a fork hinged at the rear crank hanger and projects forwardly in an approximately horizontal direction between the double horizontal tubes connecting the front and rear hangers. The front chain drives to the rear hanger axle and the rear chain runs directly forward over the sprocket on the driving wheel. The fork carrying the driving wheel extends backwardly and upwardly from its hinge at the rear hanger, as a single tube connecting with a short steering head carrying the forks of the third or trailing wheel. With this arrangement of the two rear wheels, when the driving wheel strikes an obstacle and rises to surmount it the rear crank hanger, which is the rear corner of the frame carrying the riders, rises only about half of the distance that it would were the driving wheel rigidly placed in the frame, and when the trailing wheel reaches the same obstacle the frame is again raised a similar distance. In other words, were a two-inch obstacle met, the rider, through the frame, would experience instead of one severe two-inch jolt two less effective one-inch jars. The value of the machine depends upon the question as to which would be easier on the rider in the long run: A certain number of severe jars or twice the number of jars half as great. Unnecessary parts are added to the machine by the rigging up of steering connections whereby the trailing wheel is turned by the handlebars in unison with the front wheel of the machine. The third wheel being hung as a trailer is

# CRESCENT BICYCLES

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Because they are money makers and quick sellers. Crescents are well and favorably known the world over. It is easy to sell a bicycle with an established reputation---not always easy to sell one without it.

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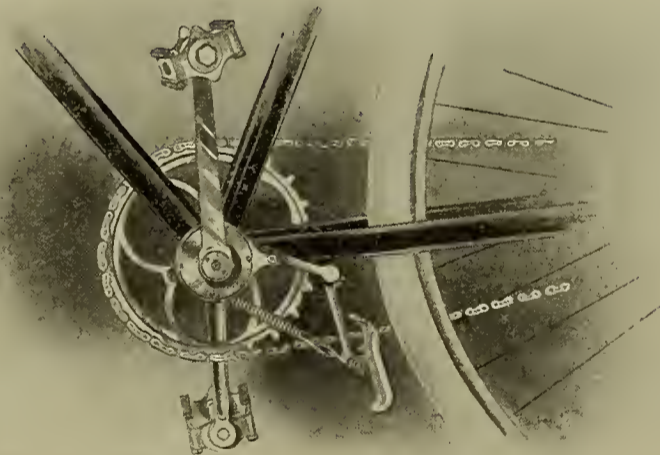
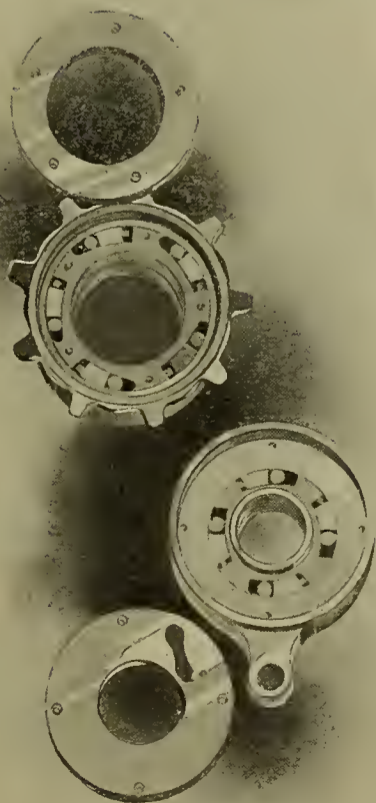
Because Price as well as Quality is **guaranteed**. New features are never adopted in Crescents until they have been thoroughly tested. We do the experimenting---the public reaps the benefit.=====

1899 CRESCENTS ARE NOT 1898 MODELS

....CHICAGO—WESTERN WHEEL WORKS, Makers—NEW YORK

## Use this Hanger

And Build Your Cycles for '99.



## Fitted with the Morrow Automatic Coaster and Brake =====

We furnish the Hanger with all necessary parts for the Brake—and a pair of Morrow Hubs with the Automatic Rear Sprocket.

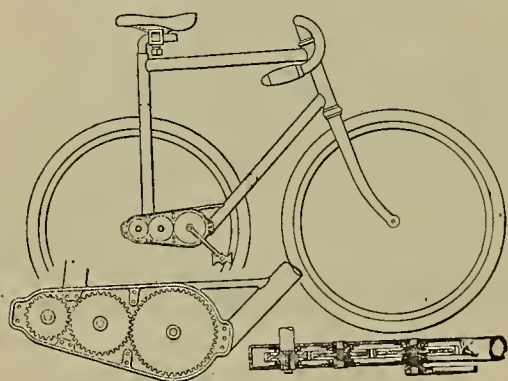
Write for prices on  
Complete Sets

Mention The Cycle Age

**Eclipse Bicycle Company**  
Elmira, N. Y.

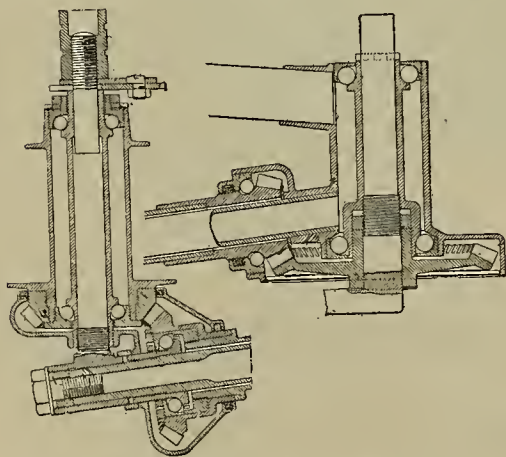
bound to follow the track of the bicycle without the aid of steering connections. Another evidence of needless caution on the part of the inventor is that he places the central line of the steering head of the trailing wheel in a position inclining slightly backward from vertical in order that when the trailing wheel is raised to pass an obstacle the steering head will not incline forward from vertical. As long as the central line of the trailing wheels's steering head, which is indicated by a dotted line in the illustration, touches the ground ahead of the point of contact of the tire, the wheel will trail properly no matter what may be the inclination of the steering head ahead of the vertical. The inventor is Robert Miehle, Chicago.

**Spur Wheel Driving Gear.**—A short, compact chainless bicycle, of the old "Broncho" type, with the saddle directly over the rear wheel, but without the constant danger of bucking backward, is embodied in this invention. The cranks are independent inasmuch as each drives a



separate chain of three spur gears which are supported in boxes built in the frame. The cranks maintain their proper relations to each other because the gears drive the same axle. The gears bring the cranks enough forward of the rear wheel axle to allow the rider to assume an ordinary riding position and at the same time to have his saddle far enough in front of the center of the rear wheel to prevent the front wheel from being lifted from the ground. The inventor is George Cad-dick, of Allegheny, Pa.

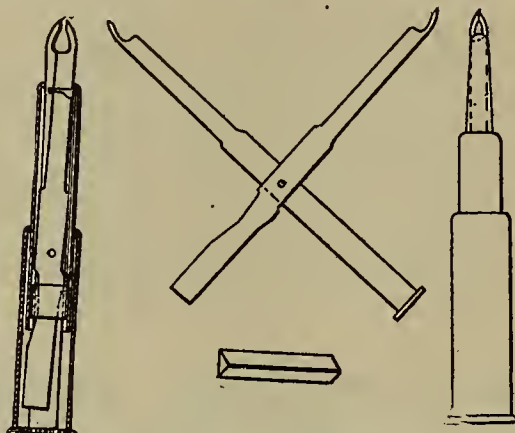
**Bevel Driving Gear.**—This is a form of bevel gear driving mechanism, in which the principal point covered is the arrangement of the right rear fork of the bicycle frame. This fork tube is located inside of the driving shaft connecting the



front and rear gear sets, instead of outside, as commonly, the driving shaft being supported between exterior ball bearing seated in the gear boxes. The inventor is John Parker of Philadelphia, Pa.

**Tire Plugger.**—This tool is novel since it uses a plug comprising a short triangular piece of rubber instead of the usual headed plug. The plugger in the main consists of a pair of jaws hinged to each other and one of which is secured to the bottom of a hollow handle piece. A ring

slipped down over the jaw arms and sliding on the tapered depression in one of the arms is used to open or shut the jaws as desired, it being operated by another ring near the top of the jaw pieces and joined to the lower by a narrow connecting piece. A cylinder made to telescope inside of the hollow handle and with an returned flange at its outer end allows a narrow circular opening between its in-



ner edge and the slide ring. The triangular rubber is slipped through the conical opening between the jaws, after which its ends are bent downward and the telescopic piece pushed down over them, doubling the rubber piece upon itself along the sides of the jaws. The plug is then ready for insertion into the puncture, the tool being pushed down into the hole nearly to the telescoping slide retaining the ends of the rubber. The tool may then be withdrawn, leaving the doubled rubber in the puncture. Just how the jaws are loosened sufficiently to allow their withdrawal from the tire without pulling the rubber out also the patentee does not make clear. The inventor is C. P. Gifford, Erie, Pa.

George Harden, Toledo, has been granted a patent on his chainless bicycle, which is already familiar to the trade. The invention embraces the use of ordinary bevel gears in the same manner as those in the common bevel gear chainless, the main difference being that Mr. Harden employs two sets of gears, one on each side of the machine, the object being to make it possible to employ small gears without their structure and alignment being endangered by torsional strains in the rear of the bicycle frame. Further points brought out in the invention include the casing of the gears in such a manner that ready access may be had to both the forward and rear gears or pinions on the longitudinal driving shafts for adjustment and other similar purposes; the provision of removable cases for the engaging gears at the crank hanger, and the utilization of parts of the bicycle frame for holding these cases against lateral movement or displacement.

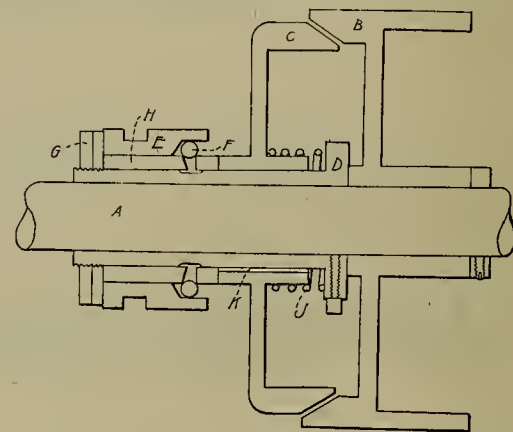
**COUNTER-SHAFT CLUTCH**

Use of Balls Obtains Easy, Positive Operation and Quick Release—Simple to Make.

The arrangement of light machine tools such as cup and cone grinding machines, etc., on benches and in similar positions, makes desirable the use of some kind of counter-shaft clutch to dispense with the shifting belt and the tight and loose pulleys. If the counter-shaft driven pulley be arranged with some suitable clutch whereby it runs loose on the shaft when the machine to be operated is not in use and may be held tight on the shaft when it is desired to run the machine, much of the trouble and annoyance commonly caused by the shifting belt may be dispensed with.

In the accompanying illustration is shown a practical friction clutch especial-

ly adapted for use with counter-shaft pulleys. To the counter-shaft, A, the pulley B, is fitted to run loosely. At the right of the pulley hub a locking ring with securing set screw stops end play of the pulley toward the right, while a long sleeve, D, also attached by means of a set screw, keeps the pulley from playing toward the left. Fitted to the sleeve, D, with a feather and spline, K, so that it revolves with the sleeve but yet may slide longitudinally on it, is a disk, C, the right turned flange of which is tapered on its edge to match the left taper end of the pulley. The two taper surfaces are normally out of contact by a very small distance. Between C and the flanged end of D is a spiral spring, J. At the left of the hub of C are two hardened steel sleeves the outer of which, H, is set a short distance away from the inner and has its adjacent end tapering outwardly. Fitting around H is a sleeve, E, the counter-bored end of which has a taper bottom. Between E and the hardened sleeves and lying over the opening between the two latter is a row of steel balls, F. End movement of the sleeves, H and E, toward the left, is limited by the lock nuts, G, screwed onto the threaded end of the sleeve, D. An annular groove in E permits of the attachment of any desirable lever or other means for its longitudinal movement on H. When E is pushed to the right the inclined bottom of its counter bore presses the row of balls down into the taper opening between the hardened sleeves, thus causing them to sep-



arate. As H cannot move to the left its mate sleeve must move to the right pushing before it, against the pressure of the spring, the flanged disk, C. The taper surface of C then binds and wedges against that of the pulley, B, which accordingly no longer runs free from the counter-shaft but rotates the latter with itself. A slight annular groove in the counter-shaft is placed to allow the balls to be pressed clear down below the outer circumference of the hardened sleeves, though it is evident that if these sleeves have a wall thickness greater than the diameter of the balls this groove will not be needed. Upon the return of the sleeve, E, to the left the spring will release the friction clutch and force the balls again to the top of their expansible seat.

The clutch has but few parts, is quick and positive in its action and can be made on any ordinary lathe, there being no milling machine work except the fitting of the spline and feather, K, between the disk, C, and the sleeve, D.

**An Opening in Philadelphia.**

Manufacturers and jobbers desiring representation in Philadelphia and contiguous territory are requested to address "B," P. O. Box 292, Philadelphia.

Francis & Nygren's bicycle factory in Chicago was burned last Wednesday in a fire that destroyed the building erected last spring by E. T. Harris at a cost of \$10,000.

# BARNES BICYCLES

**I**T is the substantial, well made bicycle that wins in the long run.

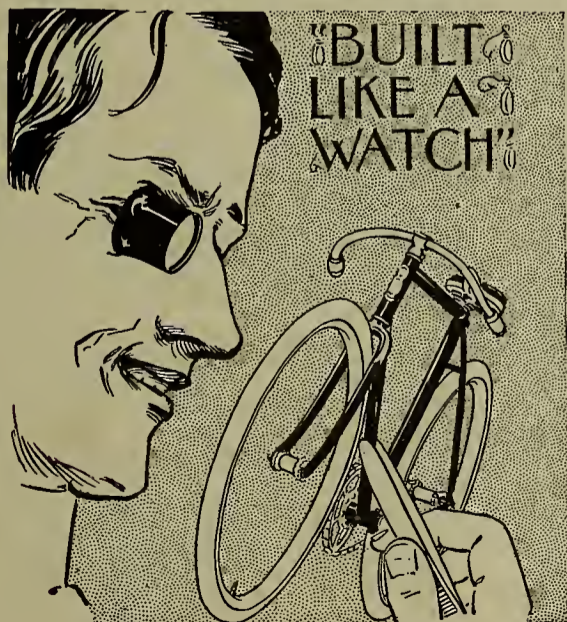
The quality of the BARNES Bicycle has never been questioned, and for graceful outline, fine workmanship and stylish appearance, it has no equal.

It will be noticed that prosperous agents usually have the sale of Barnes Wheels. Get the sale of our 1899 line, the best we have ever made, and insure your success.

The Barnes Cycle Co., Syracuse, N.Y.

# THE STERLING

"BUILT LIKE A WATCH"



A RIGID INSPECTION PROVES

Our 1899 Models to contain RADICAL CHANGES, also that

The Sterling Quality

Is Maintained.

The reduction of our Selling Price was not made possible by a Re-Hash of 1898 Models, nor by cheapened construction, but by good, honest business economies, and a largely increased output. Our catalog and proposition await you.

**STERLING CYCLE WORKS,  
KENOSHA, WIS.**

## SPEED AND GEAR CHANGES

### Ways and Means for Imparting Flexibility of Power to Gas Engine Vehicles

The electric driven carriages have usually no change of gear. The motor drives the compensating gear disk with a fixed speed reduction of about 12 to 1 in case a single motor only is used; if two motors are used, one for each driving wheel, thus avoiding the compensating gear altogether, the case is still the same so far as the gear is concerned, each motor geared with a single fixed reduction of 10 or 12 to 1, to the wheel it drives.

With the explosion engine motor driven wagons an altogether different practice prevails, from two to four changes of gear being introduced between the motor crank shaft and the compensating gear disk, or the driving wheels of the compensating gear is omitted. The idea is, with the electric motor, to vary the power of the motor by means of the controller, so that when a slow rate of travel is desired it can be obtained by reducing the driving power, and current expenditure, and when a high speed on the road is required it can be obtained by increasing the power of the motor, thus increasing its revolutions per minute, at the expense, of course, of more current consumed.

#### Customary Change-Gearing.

The theory most commonly adopted in respect to the explosion engine, is that the revolutions of the motor shaft should be kept nearly the same at all times, and that changes of wagon travel rate should be had by throwing different trains of gearing into action, between the motor shaft and the driving wheels. The result of such an arrangement of mechanism is the very strong driving of the wagon at low speeds, which is desirable in covering muddy or snowy roads, and in hill climbing. To produce the desirable result with the explosion engine motor three or four trains of gear, either belted or toothed, are commonly employed; one train is low speed, one medium, and one high speed forward, and one reversing low speed train is introduced to obtain a backing movement. This makes four separate trains of gears from the motor shaft to the drivers, and involves the use of four shifting devices of some sort by which any one of the trains of gear may be placed in action while the other three are rendered inoperative. These multiplied trains of gearing are highly objectionable in themselves, as they increase weight, take up room, cost money at first, and demand time and labor and more money to keep them clean and in good repair. The clutches or belt shifters, or belt tighteners, "jockey" pulleys, pinching rolls or what not, used to effect the gear changes are even more objectionable than the gear trains themselves; if the clutches are made with plain interlocking jaws they cannot safely be thrown into action except at slow speeds; if friction clutches are used they must be nicely adjusted and are always liable to give trouble; if the gears are made to slide axially into and out of mesh with their coacting members—a favorite French plan—then the engagement is effected at the risk of breaking the gear teeth, and in short there is absolutely no really good and acceptable way to make a change of gear speed known in mechanical construction today. There are a thousand devices which can be used for this purpose, but not one which a judicious engineer de-

sires to incorporate as a part of his work.

#### One Gear Change Indispensable.

What real need is there for a gear change in a gas engine driven wagon?

In the first place, if the gas engine runs only one way then there must be at least one gear change in order to obtain a backing movement, which is an absolute necessity for a road wagon. A reversing gas engine is not unknown, but so far all of the motorcycle designers, or at least almost all of them, have trouble enough to make gas engines reliable when running in one direction only, and prefer to reverse by gearing rather than by trying to make the gas engine run either way at will, as the steam engine does.

This makes one change of gear a necessity for the explosion engine driven wagon, same as for the steam engine driven vehicle, or the electric carriage. If this change can be made by reversing the gas engine itself more easily than by the introduction of a change gear, the motorcycle designers will discover the fact some day, and act according to their light. At present the practice is to back the gas engine wagon by the use of a clutch and a change of gear, and to back the steam wagon by changing the direction of motion of the steam valves with relation to the piston travel direction.

This one change of gear needful for the explosion engine is not so very bad, since it may be compact and so may be wholly enclosed without much trouble, and it may be taken as fully proved that no successful motorcycle can ever have any running parts left accessible to road dust.

Granted, then, that one change of gear must be used with the gasoline engine motorcycle motor, must there be more than that one gear change introduced?

#### When Several Cylinders are Employed?

This is a question of the greatest practical importance. It is also a question which requires a careful common sense balancing of favorable and unfavorable elements and actions before an intelligent answer can be given.

The first essential element of this problem is the number of motor cylinders which are to be used.

If there is to be but one cylinder, after the Benz manner, Otto cycle, then there is no more to be said. The fly wheel is indispensable, and the velocity of the fly wheel rim must be kept constant, or nearly so, and there should be no less than three changes of gear on the forward motion, and there cannot be less than one backing gear, making four gear changes in all. The same is true of that form of two-cylinder explosion engine, cranks at 180 deg., in which the working strokes of the cylinders are made simultaneously—the fly wheel velocity must be maintained and variable carriage travel can be had only through gear changes.

But when the number of cylinders is so increased as to give a continual torque say, as written in a previous article, to 5 cylinders, then an entirely new set of conditions and possibilities present themselves, because the necessity for a constant velocity of the fly wheel rim has disappeared, and in fact the fly wheel itself may be wholly eliminated, or at least so greatly reduced in weight as to cut no important figure in the vehicle propulsion. With 5 cylinders—the wagon

to carry two passengers, with a total weight of from 750 to 800 pounds—the cylinders would require to be about 2½ to 2¾-inch bore, and the admission valve should be so moved as to make the small charge somewhere about half the piston displacement in volume, and the cylinder clearance must of course be reduced so that this minimum in partial charge will be compressed sufficiently to explode. With the full cylinder charge the compression and consequently the initial pressure would be very high, with the resulting possibility of making the engine two or three times as powerful with the full charge as with the smallest charge which could be exploded.

#### One Shortcoming of Cylinder Plurality.

Such an arrangement would very closely approach the power conditions of the Stanley steam wagon, and a single gear reduction from the engine shaft to the compensating gear disk would answer perfectly for the good road and hill climbing functions of the wagon. For a very muddy or snowy road, where slow speed and high power are needed, this 5-cylinder single geared drive would probably lack something of the effectiveness of a low speed gear, with the velocity of the single cylinder driven fly wheel maintained at a constant speed. This 5-cylinder drive would be perfectly controlled by varying the volume of the explosive charge, and the greatest power exerted by the motor could be made two or three times as much as its least power. The whole effect of this drive would be a close approximation to the steam driven wagon in its best form. Perhaps 5 cylinders, 2½-inch bore by 5-inch stroke, reduction 3 to 1 from the engine shaft to 28-inch driving wheels, would be found satisfactory, as such a gas engine would give at its best at least 175 or 180 pounds initial pressure. I should expect a wagon weighing 800 pounds total, so driven, to do at least twelve miles per hour on grades of 1 in 10, and from 20 to 25 miles per hour on the level, without water and without noise.

HUGH DOLNAR.

### COMPRESSED AIR OMNIBUSES

System Competing Closely With Electricity to be Installed on Fifth Avenue in New York.

The very worst line of omnibuses in the world is about to disappear from Fifth avenue, New York city. It has changed hands, and the new owners assert that the miserable wagons and wretched horses of that line will be immediately replaced with mechanically driven vehicles, using either compressed air or electricity as the motive power.

No more favorable opportunity for a thorough exposition of the practical value of compressed air for driving passenger vehicles could be desired than that afforded by the Fifth avenue line service. The line is not very long, and the grades are not very heavy, while with good carriages the traffic would be large and hence remunerative. There is no more trouble in supplying a line of omnibuses with compressed air than with electricity; in fact, the figures will probably show something in favor of compressed air for the motive power steam and compressing plant, while the filling of the "bottles" of a compressed air driven wagon with a fresh charge of compressed air requires only two or three minutes, as against the three hours required for recharging a storage battery; and the weight of motive machinery carried by each vehicle may be far below the battery and motor weight demanded by vehicles of equal capacity driven by electricity.

All of this looks very favorable for compressed air in this special instance, and it would not be at all surprising to see a trial of compressed air motors made



on this route. The compressed air makes as clean a drive as electricity, and can be equally still. The compressed air motors require a little fire, but not much, and it would take no great exertion of mechanical ingenuity to make a compressed air wagon to have a cold floor in summer weather, which would be really a point in favor of the system.

The total weight of the compressed air vehicles could be kept some hundreds of pounds below that of electric 'busses of equal capacity, and it seems that it would be quite the correct thing to try the compressed air system out, now that such a really suitable place for its use is offered.

HUGH DOLNAR.

### EASTERN AUTOMOBILE ACTIVITY

**French Order for Fifty Vehicles Placed in Holyoke—Overman Order Not Confirmed.**

Springfield, Mass., Jan. 2.—A dispatch from Chicago last Thursday announced that a large contract for motor vehicles had been received by the Overman Wheel company, of Chicopee Falls. With regard to the subject, President Overman could not be seen, but one intimate with the affairs of the company disclaimed to a Cycle Age representative any knowledge of the reported contract. From the same source, however, it was learned that the Overman carriage is progressing and will be in the race for public favor with other makes that are being perfected.

During the past week a bona fide order for fifty motor carriages, to be completed by October 1, was placed with the Holyoke Motor Works, of Holyoke. The carriages to be made by this company will cost \$1,400 each. The company has not facilities for filling so large an order in its own works and will have part of the work done outside. The assembling, however, will be done at the company's plant in Holyoke. The carriages will be sent to Paris, the order being placed in the United States, it is said, on account of the inability of French makers to supply the demand in that country.

Interesting rumors about other Connecticut valley motor carriage promoters are current and some important happenings are likely to be made public in the near future. One or two large bicycle makers hereabouts, who have heretofore been skeptical concerning motor carriages, are known to be experimenting with automobile models.

### Metallurgist Branches Out for Himself.

Henry Souther, an expert metallurgist, chemist and bicycle constructor, who has rendered valuable services to the Pope Manufacturing company for more than five years as superintendent of the department of tests and of the manufacture of steel of all grades for special purposes, resigned his position with that company on December 31 and has established an office and laboratory as consulting engineer and expert in metals at 438 Asylum street, Hartford, Conn.

### Canadian Automobiles for France.

A Toronto company called the Canadian Motor Syndicate is making arrangements for the sale of its line of electric carriages and victorias in the French market. The company states that its 5-horse power carriage, fitted with hydro-carbon motor, weighs 750 pounds unloaded and its victoria storage battery of 5-horse power has a total weight of 800.

The Triumph Cycle Company, the Raglan Cycle Company, J. K. Starley & Co., and Allard & Co., all of Coventry, England, are beginning the manufacture of motors for motorcycles.

## THREE CYLINDER GAS MOTORS

### GEARING OFTEN UNNECESSARY

#### Slow Driving Made Practicable and Available Power Increased by Multiple Cylinders—The Heat Radiation.

To the Editor.—The writer took pleasure in reading an article in a recent issue on the advantages of multiple cylinders for gasoline motors. The Duryeas have spent much time and money on this part of the gasoline motor problem. They have believed that the American public wanted the best article possible to produce, regardless of its cost, and have not confined themselves to the single cylinder motor because of the less cost. Our earlier experiments were made with single cylinder gasoline engines, but the difficulty of overcoming the vibration and the lack of elasticity of movement led us to try double cylinder motors. These were a marked improvement and have given excellent satisfaction, but were not considered absolutely final, and a triple cylinder motor was next tried. This motor runs with less vibration than the two cylinder, and gives an almost constant torque to the driving shaft. It receives an impulse each two-thirds of a revolution and is therefore almost constant in action. When fired with battery spark, pulling one piston past the compression point will start the motor so that less than a full turn suffices to get the motor going. This is so simple that it may be performed by the operator sitting in the seat of the vehicle, in most cases.

#### Between Two Extremes.

A single set of two to one spur gears operates the cam shaft for all three cylinders, and the added complexity of parts is not proportionate to the added number of cylinders. There are of course the additional inlet and exhaust valves, which need attention, and the additional sparking mechanism, but thus far we consider the multiple cylinder an improvement and a decided one.

Whether four or five cylinders would be a further improvement we are not in position to say practically. There is no doubt but that increasing the number of cylinders adds to the complexity, which is as objectionable, on one hand, as the single cylinder, with its few impulses, great vibration and little elasticity are on the other. Whether the three cylinder is the "golden mean" between these two sets of disadvantages, or whether more cylinders would be better probably remains to be proved, but we are certainly much pleased with the results obtained from three cylinders, and regard same as being the best yet produced.

We find that we are able to run the vehicle at very slow speeds with the triple cylinder motor, because there is no danger of stopping between impulses. It is common practice to drive our vehicles on the street with the motor running at less than 100 revolutions per minute. This is about one-third the speed possible with a single cylinder motor. On the other hand, each cylinder is capable of just as high speed as the single cylinder, and so the three cylinder motor will run as rapidly as any single cylinder, and give three times the power.

#### Few Reversing Parts.

These facts permit us to drive our vehicle on all good roads without the use of gearing, and we therefore attain the much boasted simplicity of the steam engine without its complex and troublesome boiler. For heavy hill climbing and similar service we use a low gearing, and, by an additional friction clutch, this gearing serves to give us a reversing motion. We consider, therefore, that we can re-

verse our vehicle as quickly and with as few reversing parts as a steam engine; while the advantage of low gearing for hill climbing or mud makes our vehicle more capable than a steam driven machine.

The writer of the article referred to contended that small cylinders could be depended upon to radiate heat sufficiently fast to keep them cool, but our experience does not carry out that statement. A single cylinder throws off heat in all directions, but, if placed between two or more other cylinders, it loses a goodly share of its opportunity to radiate heat, and is, therefore, liable to give trouble.

It might be possible to set these cylinders at equal distances around the crank shaft, but this disposition is not convenient for motor vehicle service. There is, doubtless, considerable opportunity to experiment along this line, but success does not seem positively assured.

The writer will be pleased to hear from others on these points.

Peoria, Ill.

CHAS. E. DURYEA.

### Automobiles in Italy.

The automobile industry in Italy is slowly but surely getting a hold. A year and a half ago a few Italian sportsmen started an automobile club in Milan, which organized a few competitions on the road between the different horseless carriages, but owing to the way in which things were arranged no interest was taken in the matter by the public, and the club is hardly likely to give the necessary push to the new industry. However, a new club has just been started in Turin and many influential and rich people have joined. In Turin a new company is being formed with a capital of \$50,000 for the construction and sale of automobiles with the Daimler motor.

### Motor Vehicles in Paris.

The Paris public will shortly be able to enjoy motor drives with the new cars which are to be put on the streets by the Compagnie des Petites Voitures. Three different kinds of vehicles are to be introduced, coupes with three and four seats, victorias for four and five, and landaus for four persons. The vehicles, which are to be driven and lighted by electricity, will have a speed of ten miles an hour. The accumulators take only two minutes to charge and last for forty miles.

### Open an Ice Skating Rink.

The Barnes & Riblet Cycle company, of Aberdeen, S. D., has opened an ice skating rink for the winter. The admission has been placed at 10 cents and skates can be rented for the same amount. A warm waiting room has been provided and the rink will be kept open every afternoon and evening when the weather is favorable. Announcements of open days and special features are posted in the company's store window. As a winter venture when trade and repair work on bicycles is slack this enterprise promises good returns.

### Spaces at Montreal Show.

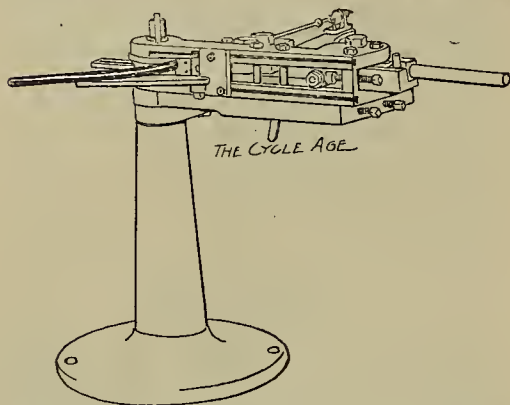
No spaces will be awarded before February 1 for the Canadian cycle show to be held in Montreal so that all applicants will have the same opportunity. Already there are a number of applications from manufacturers in Canada and the United States who wish to exhibit.

An international motor vehicle show will be held in Verona, Italy, in the early part of next March, in connection with the horse show. All vehicles exhibited will have to take part in the Verona to Milan and return (320 kilometers) road race.

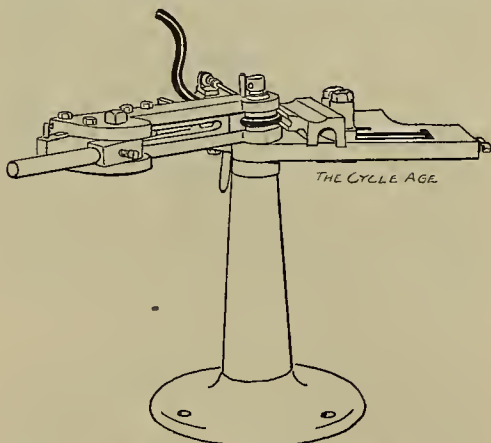
# INFORMATION FOR BUYERS

## BRIDGEPORT TUBE BENDING MACHINE.

The Bridgeport Tubing Co. of Bridgeport, Conn., makes the tube bending machine here shown, which, while it is especially intended for bending handle bars and curved tubes for ladies' frames, may also be used for curving any kind of tubing for any purpose, the combinations of curves and intervening straight portions in the tube to be bent being unlimited. The machine is designed to take any size of tubing up to 1 1/4 inches in diameter and bends unfilled tubing.



The tube is bent accurately to the form desired and maintains, with but the slightest variation, its circular cross section after the operation. The surface of the tube on the inside of the bend is left smooth and free from ridges. The bending is done on a grooved roll mounted on a spindle projecting from the top of the column. The roll is engaged by a sliding table, correspondingly grooved, and which, in connection with the roll, grasps the full circumference of the tube. In the groove lies a mandrel attached to an adjustable rod which extends to and is attached to the rear of the machine. On this rod is an adjustable gauge on which the end of the tube rests, that all bends may be of uniform length. The grooved roll is doweled to a yoke and both revolve on the spindle. Between the yokes is a sliding bar, on the end of which is a gripping device and which is grooved to match the groove of the roll and table. When two bends are to be made in a handle bar, leaving a straight portion between them, a horizontal gauge is fastened to the edge of the yokes in order that both bends may be in the same plane, but when only one center bend is to be made, the gauge is not needed. Two men, one to feed and the other to work the lever handle and sliding table, are required to successfully perform the bending operation, which is as follows: The tube is placed on the mandrel to the stop gauge and the sliding table forced up to the rear of the yokes. The first forward motion of the hand lever acts on a compound lever, which forces the sliding table against the roll, thereby firmly clamping the tube. The continued movement of the lever rotates the roll, the clamps drawing the tubes from the mandrel, while the sliding table, starting with the yokes, supports the tube till the

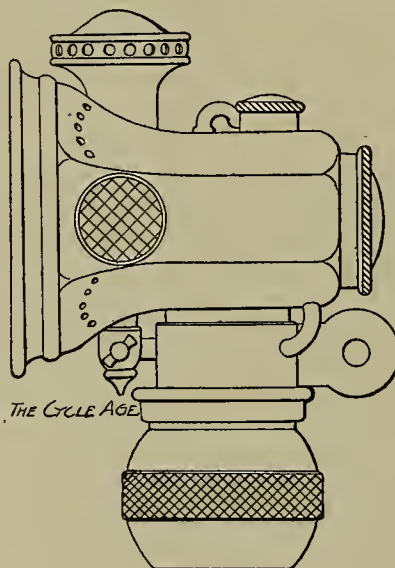


end of the stroke, which is regulated by a stop dog. The sliding table is then pushed back, the yokes returned to place and the tube removed. From the above it will be seen that bends may be formed in almost endless variety.

## HINE-WATT SELF REGULATING LAMP.

Hand made samples of the new Self Regulating Octagon gas lamp made by the Hine-Watt Mfg. Co., 16 North Canal street, Chicago, have been completed, and have proven so satisfactory that the company is making

vigorous efforts to place the lamp on the market in a commercial shape within the next few weeks. The lamp, an exterior view of which is shown herewith, is very compact in construction and made entirely of metal. The water chamber, located in the longitudinal octagonal body back of the combustion chamber, is directly over the vertical axis of the lamp. The carbide, any form of which may be used, is held in a removable receptacle screwing on to the lower end of the lamp body. The generated gas does not pass directly to the burner, but first goes through a small chamber at the rear of the water reservoir and there works its way through some dry carbide, which absorbs all moisture in the gas and leaves it dry when discharged at the burner. One of the strongest claims for the lamp is based on the water feeding mechanism, by means of which the flow of water is regulated automatically by the gas pressure. The water is fed to the carbide in proportion to the size of the flame being burned, and is not dependent upon any regulation of water valves—in fact, there are no water valves. A small gas valve below the burner allows the operator of the lamp to control the size of the flame, which simultaneously regulates the water feed. Though seldom needed, a safety valve is fitted to make the lamp safe, no matter in what position it may be carried. Bicycle accidents or other causes which tend to upset the lamp have no effect upon its operation. As soon as the flame is turned out the water ceases to flow, and no more gas is generated. This



makes it possible to turn out the light, set the lamp away over night, and relight it the next evening without any surplus gas having been generated or having escaped to cause a disagreeable odor. The weight of the sample lamps is 18 ounces each, but the company is confident that the weight of the machine made commercial lamps can be reduced to 12 ounces.

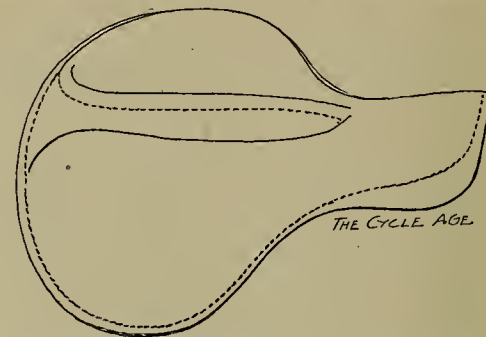
## PEERLESS MACHINES AND PRICES.

The Peerless Mfg. Co. of Cleveland announces that it is listing its Peerless road machines at \$50 and placing a price of \$35 on the Triumph models. The Peerless machines are made with long, low, rakish frames, having flush joints throughout and tapered forks and stays, with D-shaped rear ends. The Peerless tubular fork crown and a special two-piece hanger group are also features. The finish is in plain lustrous enamel. The lady's machine, which has a graceful double curved front frame, allowing ample mounting and skirt room, is built in other particulars the same as the man's model. The metal chain guard is lined to prevent rattling. The Triumph men's and women's machines are built on popular lines, with arch crowns, flush joints and one-piece hanger group. The finish is black, carmine or Peerless green, either plain or ornamented. All four of these patterns, as well as the Blue Bird track racer, will be furnished upon special order with frame lines changed to accommodate 30-inch wheels. The double diamond tandem, which is furnished in both single and double steering types, lists at \$75. For the combination tandem \$85 is asked.

## RUSCH BICYCLE SADDLES.

Five patterns of hard and padded Rusch saddles are catalogued by N. Schroder, 91

Thompson street, New York. Model 8, which is here illustrated, is a man's padded saddle fitted with flat springs. It has no metal base and will conform to the shape of the rider on account of the peculiar construction of the cantle. The top is 9 1/2 inches long by 7 3/4 wide. The lady's saddle to match this pattern has the same cantle construction and is made quite wide to allow comfortable seating. The pommel is short enough to offer no hindrance in mounting, though it is still not too short to help the rider to sit steadily on the seat. An unpadded racing saddle and a saddle on similar lines but



padded and intended for those road riders who desire a light rigid seat of racing shape but which shall still be comfortable, are also among the leading models of the line.

## GREAT VARIETY OF BICYCLE HOLDERS.

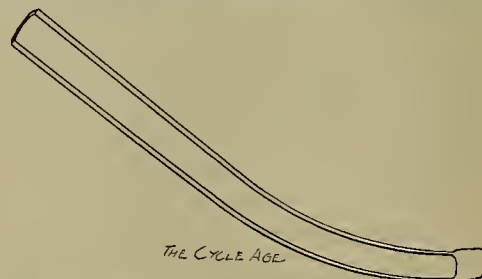
Rochester, N. Y., Jan. 3.—The Snow Wire Works of this city have made a deal whereby they come into possession of the stock and business of the Westcott Jewell Company of Seneca Falls, N. Y., and assume the sole control of the patented line of bicycle holders heretofore owned by the latter firm and known to the trade as "Security Holders." This deal is of special interest to the jobbers and the trade in general, as there has been an open question the past year in regard to infringement on adjustable bicycle holders. One of the patents secured by the Snow company covers all wall holders having two parallel wires or springs, which hold the wheel and which are adjustable, and the new owners propose to enforce this patent vigorously. With the addition of the Westcott Jewell line, the Snow company will have between 40 and 50 varieties of wall and floor holders.

They will greatly reduce the prices of the "Security Holders" and in every way possible will endeavor to make it an object for the dealers of the country to fit up their stores with strictly high grade holders. There is no one thing, they contend with much truth, which cheapens a store and naturally the goods in it as much as a cheap looking holder.

Their line of holders will be exhibited in spaces 147 at the Chicago show and 187 at the New York show.

## SMITH TAPER GAUGE FORKS,

The C. J. Smith & Sons Co., Milwaukee, is manufacturing a taper gauge fork in which the aim has been to eliminate useless metal and to thicken the walls at the points of



heaviest stress. In many ordinary seamless forks the metal is heavier at the lower end than at the top, straight tubing of even gauge having been swaged into a taper, thus thickening the walls in proportion to the increasing diameter reduction along the taper. The Smith taper gauge fork is a reversal of this, the wall being thickest at the top and gradually thinning toward the bottom. This company states that practical tests have shown its forks to be able to stand from 35 to 50 per cent more strain than ordinary forks, and that when the Smith forks do bend, a gradual curve runs along the entire length of the fork, there being no sharp bend directly below the crown. The process employed for making the taper

HE'S TELLING HIM ABOUT THE NATIONAL BICYCLE



**Good Bicycles at Fair Prices.**  
ONE GRADE ONLY.  
Get our Catalog and ask our traveler to call.  
NATIONAL CYCLE MFG. CO.  
BAY CITY, MICH.

26

Mention The Cycle Age

# Plain Talks on Andrae Cycles

THEY NEVER DISAPPOINT

... III ...

One great, undeniable reason why you should handle Andrae Cycles is their money-making possibilities.

It is not the profit that you make on one Andrae that counts.

It's the profits on the sales that can be traced to that first sale.

Almost every agent who was selling Andraes five years ago is selling them to-day.

The selling record of no other bicycle is as clean as the Andrae record.

After an agent has made up his mind to sell Andraes we keep right on working in his interest.

We try to create a demand for Andraes in his town—we send customers to his store.

An Andrae agent need not turn away a possible purchaser. He has 14 models, at \$60, \$50, \$40, \$30, with which to please him.

We want to hear from you.

## Julius Andrae & Sons Co.

MILWAUKEE, WIS.

Eastern Export Branch: 95 Reade St., New York City.

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# TOE CLIPS



SEE THOSE HOOKS  
Anti-Rust Trump Toe Clip.  
Price, 35 Cents per Pair.

We have a dozen other kinds of toe clips, and these are only one of our specialties for 1899.

Send for Our Complete Catalogue.

**G. W. COLE & CO.,**  
Makers of the Famous *3 in One*

141 Broadway, New York.

That Positively Cannot Rust

That Positively Cannot Slip

Did you ever sell any?

They are made of spring brass and nicked. Brass never rusts. The two hooks slip over the pedal plate, and the clip cannot turn either way—not a fraction of an inch.



SEE THAT BULGE!  
SEE THOSE HOOKS  
Anti-Rust Jewel Toe Clip.  
Price, 30 Cents per Pair.

To See a....

# Hollenbeck

Rawhide Saddle

Is to covet it. See it before you decide upon the equipment of your '99 bicycle.



See It at the Cycle Shows

CHICAGO { F. S. Waters Co.  
Eugene Arnstein.  
Snell Cycle Fittings Co.  
NEW YORK, Space 94, Main Floor.

Hollenbeck Saddle Co. makers, Syracuse, N. Y.

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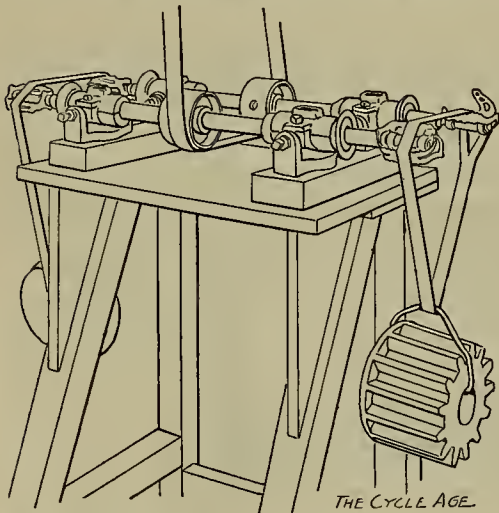
gauge forks at the Smith factory and the machine equipment installed make it possible for the forks to be produced and sold at a very reasonable price.

#### THE TWENTIETH CENTURY BANNER.

Then Twentieth Century Mfg. Co., 17 Warren street, New York, is sending to the trade a neat little catalogue covered in red and gold, describing the construction and operation and bringing out the main technical and commercial advantages of the Twentieth Century oil and acetylene gas bicycle headlights. The catalogue also lists various small cycle lantern accessories made by the company and devotes part of its pages to the new Twentieth Century cyclometer. The company, in keeping with its liberal advertising policy of the past, is also sending out a new wall poster displaying with bold effect both patterns of lamps and in one corner a small picture of the cyclometer.

#### MODAN PEDAL TESTING MACHINE.

The Modan Mfg. Co. of Cleveland, O., is now testing those patterns of its pedals in which any changes in construction have been made, by running them on the machine shown in the illustration. The machine was designed and built in the factory of the Modan company, and while extremely simple, it furnishes a test for the wearing qualities of pedals which is perhaps as near to practical riding tests as any mechanical means could be. Four pedals may be tested on the machine at one time, there being two belt-driven shafts, into the ends of which the pedals are screwed in the same manner as when being attached to bicycle cranks. From each pair of pedals is suspended a 50-pound weight by means of a strong belt. The machine is then run to 440 revolutions per minute, a pedal speed which on a bicycle geared to 76 is equal to



THE CYCLE AGE

about 100 miles per hour. The machine, being so simple and so easily constructed, furnishes very ready means for testing in a comparative way the wearing qualities of different makes and styles of pedals. The Modan Mfg. Co. states that its Banner, Rover, King and Professional pattern pedals have been run on the machine for 927 hours each and showed but little or no wear at the end of the run. The distance traveled is equal to that of a pedal on a 76 geared bicycle running 92,700 miles. The makers are now in a position to fill orders of any size without the least delay and will take season's factory orders and guarantee to supply the pedals on the dates specified.

#### AIMS TO SUPPLY ALL WANTS.

The recent purchase of the entire stock and business of the Manufacturers' Agents & Supply Co. of Chicago by the Excelsior Supply Co., also of Chicago, has more significance than that implied by the mere transference of the property mentioned. The Excelsior Supply Co. has taken, under a ten-year lease, a five story and basement building at 88 to 90 Lake street and is now fitting it up into what will be one of the most complete bicycle supply houses extant and which will furthermore be operated on a plan which is novel at least to the bicycle trade. Besides carrying a regular stock of standard parts and fittings, the Excelsior company will make it its business to sell to bicycle dealers, repairmen, manufacturers, large and small, anything that they may ask for. All orders, no matter what they may call for, will be filled without delays, admissions of inability to get desired parts or substitutions of similar parts for those requested. In other words, the Excelsior Supply Co. will from now on endeavor to be to the bicycle trade what it has for the past twenty-two years been to the sewing machine business. So carefully has the work of supplying sewing machine parts of all kinds and dates of making been systematized by this company that today it can fill the order

of anyone for any part of any machine made. The bicycle dealer and repairman have long expressed the desire for such a supply house in their business, and it is the intention of the company to fill this vacancy. If some out-of-town repairer sends for a crank with a slotted pedal pin hole for some bicycle of several years back, or if he asks for a pair of handle bars with an odd size of stem, he will have his order filled with the same promptness and accuracy as though he had ordered several thousand feet of Shelby tubing, which by the way will occupy an important place in the Excelsior company's stock. No orders for material of any sort will be turned down, none will be but partially filled, no back order sheets will be kept. The completeness with which the detailed work is being laid out is well illustrated by the fact that a small machine shop will be placed in the establishment for the purpose of making such minor parts as cannot be readily found in the market, but which are liable to be wanted in a hurry by the patron ordering them. The Excelsior company is staking its policy on the logical assumption that the buyers of bicycle material throughout the country desire to buy at one house as much as possible and that the house which can fill difficult orders will be the house that will get the easily filled ones. The building occupied by the company has been completely rearranged inside and will include, besides spacious stock rooms, cash buying departments, offices, etc., a finely furnished sample room for the out-of-town purchaser.

#### SANGER HANDLE BAR PATENT ALLOWED.

The Sanger Handle Bar & Plating Co. of Milwaukee has received notice from the United States patent office that the application for a patent on the Sanger adjustable handle bar had been allowed on December 31. All of the claims made in the original specifications were granted and the company is congratulating itself on its success in obtaining complete protection on its bar. The factory of the Sanger company is now running an extra large force of men both day and night and the production of bars is said to average 1,000 pairs every twenty-four hours. Most of the machinery used is automatic and all is new and up-to-date. The company has established distributing agencies in New York for the eastern trade, the bar being represented by Walter E. Lindsay & Co., 253 Broadway, and Case & Schlaudecker, 92 Wall street. The latter firm will handle all of the export trade as manufacturers' agents. Walter C. Sanger will be at the New York cycle show in the interest of the Sanger bar.

#### CONSOLIDATION OF MICHIGAN DEALERS.

Grand Rapids, Mich., Jan. 3.—The partnership of Studley & Jarvis, jobbers and retailers of bicycles, sundries and sporting goods for the past three years at Grand Rapids, Mich., expired by limitation December 31, 1898.

E. G. Studley is the oldest dealer in bicycles, sundries and sporting goods in Michigan, and Mr. Jarvis for several years prior to the formation of the partnership managed this department. They had the state agency for several years for a number of well known lines of bicycles, but discontinued the jobbing of bicycles a year ago, and have for the past season done practically an exclusive retail business on Cleveland bicycles, continuing only the jobbing of sundries, specialties and sporting goods. During the past season the firm marketed over 200,000 pairs of bicycle grips to the jobbing and manufacturing trade.

Mr. Studley has never given his personal attention to this business, being interested in other companies which required his attention.

The new firm, which has now been formed, are successors to this business and that of W. S. Daniels & Co., handling Hamilton-Kenwood bicycles, sundries, etc.

W. B. Jarvis and W. Smalley Daniels are the firm members and will continue the business, and are now remodeling and modernizing the store.

The new firm will continue the jobbing of bicycles, sundries and retailing of bicycles and sporting goods, continuing the Cleveland as their leader in the bicycle line. They will also continue their J. & D. leather grip business, having already secured contracts for over 130,000 pairs.

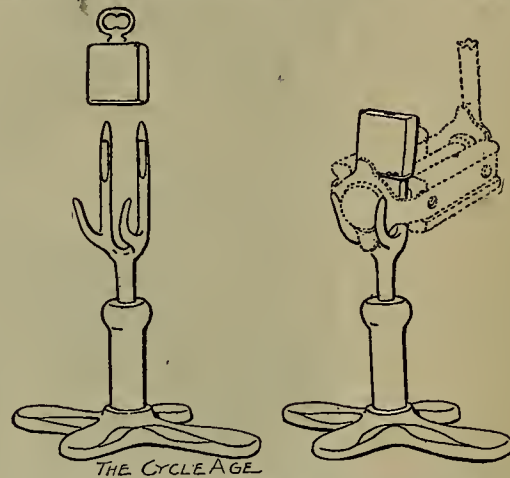
#### PARTS FOR JUVENILE CYCLES.

The Frazer & Jones Co. of Syracuse, N. Y., has issued a price list of parts for its Elfin juvenile bicycles. While the prices given are for the latest models, they will apply generally to similar parts on machines previously put out. The list embraces wheels, tires, handle bars, frames, forks—front and rear—hangers, cranks, crank axles and bearings, chains, pedals, seat posts, brakes, saddles, guards, and the component parts which make up the assembled groups mentioned. Orders for parts can be filled promptly and without mistake

if the party ordering will be careful to designate the desired parts by the same terms as those used in the price list, and to state year, model, height and color of machines for which the pieces are intended. If possible, it is also desirable that the number of the bicycle be given.

#### COMBINED LOCK AND SUPPORT.

The accompanying illustration shows a simple device for supporting and locking bicycles in the house, store or club. When in use, the barrel of the pedal rests between the forks of the stand and the lock is then sprung on, fastening automatically. The stand holds the bicycle firmly at a slight



THE CYCLE AGE

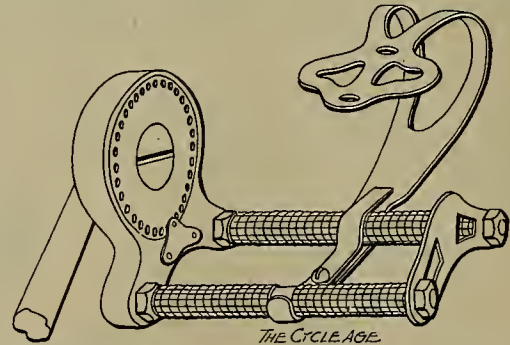
inclination from the perpendicular. The finish is in black enamel and nickel. The patentee and maker is William H. Hart, Jr., 242 Chestnut street, Philadelphia.

#### SPRINGFIELD ONE-PIECE HANGER.

The Springfield Drop Forging Co., Brightwood postoffice, Springfield, Mass., is making a specialty of its crank hanger which has cranks and axle in one piece. The detachable sprocket has a special design of star spokes and the cranks are bayonet shaped. The lugs on the bracket, which is a drop forging, are bored out on the inside to reduce weight and milled off on the outside to receive the frame tubes flush joint fashion. Other bicycle forgings made by the company and furnished either in the rough or accurately machined are fork crowns, seat clusters for both diamond and drop frames, and one-piece steering heads. Two patterns of fork crowns are made, one being of special narrow and light design for use in racing machines. The company states that users of its one-piece hanger will be fully protected.

#### RAMSEY PEDAL PATENT ALLOWED.

Patent was allowed December 27 to Robert H. Ramsey, president of the Ramsey Swinging Pedal Co. of Philadelphia, on his well known swinging pedal invention, application for which was filed December 22, 1897. All the claims and specifications of the patent as issued are embodied in the following extract: The invention consists in the combination in a bicycle pedal of a fixed or reversible anti-friction casing provided with depending ears and roughened tread-bolts, foot-rests or plates which are screwed or otherwise removably attached to the anti-friction ball casing so as to be easily detached. A horizontal line drawn from the top of one bolt to the top of the other



THE CYCLE AGE

passes below the center of revolution of the ball casing, which can be made reversible so that the bearings may be changed and the life of the cones and balls increased. The studs or screws that secure the pedals to the crank arms are made separate from the other parts of the pedals and can be made to fit a great variety of threads of different sizes in the crank arms of the various makes of bicycles now in use.

#### STEARNS' ANTI-VIBRATION MODELS.

From the earliest period of bicycle making inventors have studied to make riding easy and comfortable. All manner of spring and



## DID YOU EVER NOTICE

how a snowball grows in size as it rolls along? It's all simple enough—nothing but holding fast at each revolution to what the last revolution attached.

Precisely so in business—old customers must stick if the business ball is to grow. What makes them stick? A good many things, but the foundation is always the same—sound, reliable goods—goods that keep your promises—goods that work and wear.

League Tires are **business-holders**—light, lively, lasting. From tube to tread everything is first class—not an ounce of dull, heavy rubber, not an inch of cheap, short fibre fabric. Every "Get there and get back" tire is a running advertisement for some one—why not for you? Call or write.

### LEAGUEKIT

is a thoroughly practical repair tool. Plug goes in easily, without pliers, small end first. Pulls back into place with string Can't fall into tire. Makes either plug repair or cement repair. Write for prices.

New York.....25 Park Place.  
 Boston.....24 Summer Street.  
 Philadelphia.....308 Chestnut Street.  
 St. Louis.....210 No. 12th Street.  
 San Francisco.....509-511 Market Street.

**WESTERN DISTRIBUTING AGENTS.**

A. G. Spalding & Bros., 147 149 Wabash Ave., Chicago.

**NEW ENGLAND DISTRIBUTING AGENTS.**

Geo. F. Kehew & Co., 129 Pearl St., Boston.

**NEW YORK BELTING & PACKING CO. LTD**

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## THE "ADMIRAL"

List \$30

M. & W. tires; 1¼-in. flush joints; 2 piece hanger; 3-16 in. chain; oval crown; D rear forks; large sprockets.

We want a few more good jobbers to handle this fast seller.

**MARCH-DAVIS CYCLE MFG. CO.**

FACTORY: MFRS.  
 44th and North Aves. 47 Warren Street,  
 CHICAGO NEW YORK



## Dealers and Repairmen, Attention!

Our buyer has been at no end of pains to make a first-class, up-to-date selection of

### Bicycle Sundries and Novelties

for the coming season. We shall not carry in stock a "little of everything"—so much as to confuse and perplex—but a sufficient stock of the "best of everything" to fill all orders promptly and satisfactorily.

Write us for our new '99 Catalog, soon to be issued. It will be attractive and will please you.

**THE SIDNEY B. ROBY CO.,**

67-71 MILL ST., ROCHESTER, N. Y.



... THE ...

## INDIANA

Single Tube for 1899.

As good a tire as it is possible to make, and at a price that's popular.

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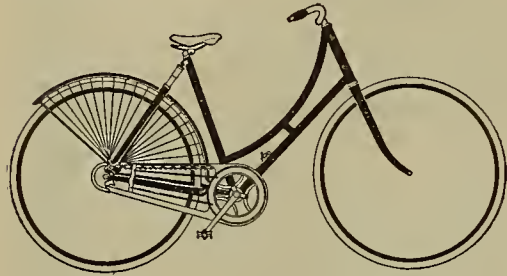
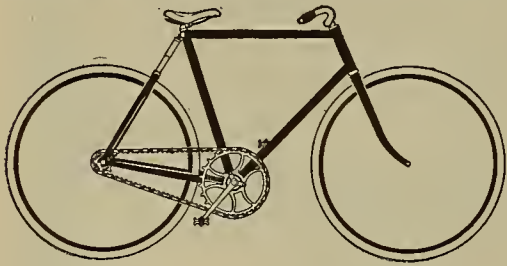
**THE INDIANA RUBBER and INSULATED WIRE CO.,**

JONESBORO, IND.

PRICES QUOTED BY

**THE THORSEN CO.,** 56 FIFTH AVE., CHICAGO.  
 Sole Selling Agents.

elastic contrivances have been used with variable success, but most of them have developed such serious objections that they have finally been abandoned. In the hygienic cushioned Models K and L of the Stearns '99 line, herewith shown, the desired result has been accomplished. No change is made in the general lines of the frame. The cushion action being entirely concealed within the tubing over the rear wheel, there are no



points of marked difference that would attract the attention of the observer. The weight is increased but little. There is no loss of power in propulsion because there is no deviation in the distance between the saddle and pedals, nor between the sprockets. Notwithstanding the fact that the cushion device is placed in the rear frame only, it relieves the rider from shock to both wheels. In hill climbing the rear wheel adjusts itself so quickly to all obstacles in its path that hill climbing is, if anything, less of a task than with a rigid frame. The hygienic cushion frame is free from sudden vibratory motion and the sensation of riding it is as easy as the cushion effect of a large pneumatic tire blown soft. It has no bounding or swinging motion which would be disagreeable and dangerous, but gives a peculiarly deliberate play and graduated action. It has special points to commend it to women as the jarring experienced in passing over rough places is at once dissipated by the gentle, yielding action of the cushion frame.

#### SELLING AGENTS FOR ELECTRO GAS LAMP.

The Electro acetylene bicycle lamp, made by the Electro Lamp Co. of New York, is now controlled by three distributing agents from whom dealers and jobbers can obtain territory. Greene & Haskell, 3 Union Square, New York, look after the states of New York, Massachusetts, New Jersey, Rhode Island, Ohio, Indiana, Maryland, Pennsylvania, Maine, New Hampshire, Vermont, Virginia, West Virginia, North Carolina, South Carolina, Kentucky, Tennessee, Georgia, Florida, Alabama, Mississippi and Louisiana. W. J. Buckley & Co., 204 Dearborn street, Chicago, control Illinois, Michigan, Wisconsin, Minnesota, North and South Dakota, Indian Territory, Missouri, Kansas, Nebraska, Texas, Arkansas and Iowa, while the states of Colorado, California, Idaho, Oregon, Montana, Wyoming, Utah, Nevada, Arizona, New Mexico and Washington are supplied by N. Pendleton Rogers, 106 Wall street, New York. One important item for the jobber's consideration is the fact that the Electro Lamp Co. has two large factories which are to be devoted entirely to the manufacture of this lamp. Lamps are now in stock, ready for immediate shipment, and about 3,000 are being completed each week. The aim of the manufacturer is to produce a lamp which does not need the care of a mechanic to keep it in proper burning order and which can be turned out in thousand lots as successfully as when but a few are carefully made by hand. The Electro is one of the smallest and lightest acetylene cycle lamps made, it weighing less than a pound.

#### PRATT BROTHERS FORM NEW COMPANY.

Pratt Bros. & Co. is the name of a new firm which succeeds the late Manufacturers' Agents & Supply Co. of Chicago in its business of jobbing bicycle materials for factory trade alone. The present headquarters of the company are at 115 Lake street, Chicago, and 127 Duane street, New York, the eastern and foreign trade being handled from the latter office. The general trade and business of the Manufacturers' Agents & Supply Co. having been sold to the Excelsior Supply Co., Pratt Bros. & Co. will cater only to the large jobbing and factory trade, and will control the following lines: Ferrite Steel Cycle Fittings Co.'s ferrite metal castings for bicycle and special work;

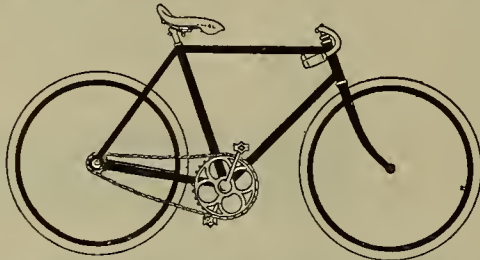
Lanz Owen & Co.'s "E. Z." and "Cork Face" saddles and full line of tool bags; Snell Cycle Fittings Co.'s pedals, hubs, drop forgings and handle bars; J. C. Spiers & Co.'s cycle wrenches; Elastic Tip Co.'s cements and rubber specialties, and Scoville Mfg. Co.'s oil cans, pumps, bells and special work in brass done on contract.

#### HANGER AND MORROW HUBS IN SETS.

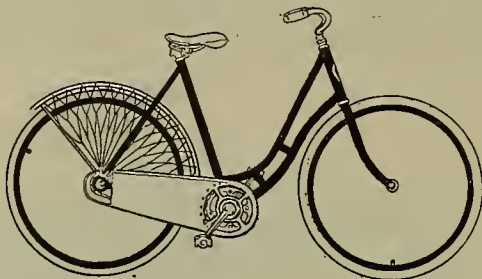
The Eclipse Bicycle Co. of Elmira, N. Y., has decided to place a complete hanger in the market, to be sold in combination with a pair of Morrow hubs, so that small builders throughout the country can build machines fitted with the Morrow automatic coaster and brake.

#### THE YALE CYCLES.

The leading models of the line of Yale bicycles built by the Kirk Mfg. Co. of Toledo, are men's and women's special roadsters selling at \$50. They are cleverly designed little machines with attractive frame lines, flush joints, eccentric chain adjustment at hanger and other popular features of the time. The frames are made in several heights and are enameled in black, Yale blue, green, tan or maroon. V section maple rims striped in colors to harmonize with the frame enamel are used in the wheels, whose further makeup includes Excelsior spokes, specially designed hubs with positive adjustment, and Morgan & Wright, Hartford, Dunlop or Defender tires. Model 33 is the smallest size made in the men's special road pattern, it having a 20-inch frame. If desired it is equipped with guards over the rear wheel, thus converting it into a fine de siecle mount for the lady cyclist who

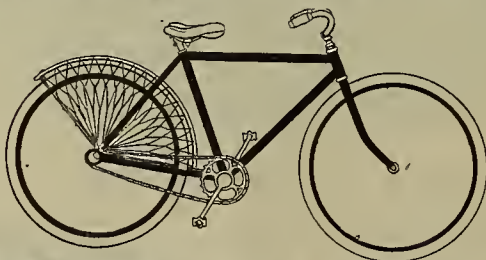


Model 34—Men's Special roadster. Price, \$50.

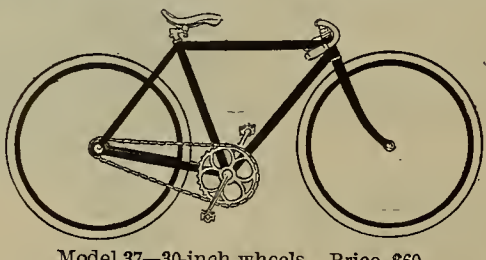


Model 32—Ladies' Special roadster. Price, \$50.

desires the rigidity and lightness of the diamond frame. The special roadster sells at \$60 and is altered in frame construction in such points and ways as to best suit the incorporation of 30-inch wheels. It is built with 23 or 25-inch seat mast and on account of the eccentric chain adjustment the hanger drop may be  $3\frac{1}{4}$ , 4 or  $4\frac{1}{2}$



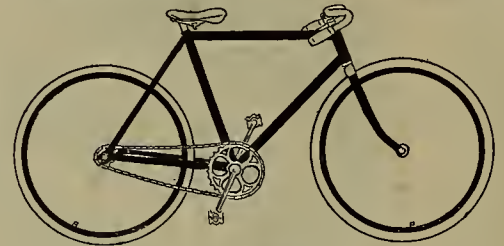
Model 33—Ladies' diamond frame roadster. Price, \$50.



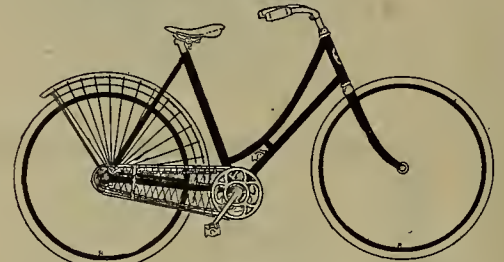
Model 37—30-inch wheels. Price, \$60.

inches. Other specifications and the general design are the same as in the 23-inch wheel patterns of the Yale Special. Two models, a man's and a woman's, each built in frame heights to suit and bearing the name of Yale roadster, are listed to sell at \$35. They have all the up-to-date features and the stylish appearance necessary to gain favor among the trade and are honestly and conservatively

built with view to supplying dealers with machines which can be sold at a popular price and which will be entirely off the dealers' hands when once delivered. They are not intended to increase the profits of the repairmen. Large sprockets, 3-16-inch Indianapolis chain, Avery two-piece hanger, Brown pattern saddle, Morgan & Wright double tube, Hartford No. 70, Defender or



Model 28—Men's roadster. Price, \$35.



Model 26—Ladies' roadster. Price, \$35.

Indiana tires, and any shape of fixed steel or ordinary adjustable handle bars are among the many attractive fittings offered. The enameling is in the same colors as those offered on the \$50 models and is finished either plain or with striping. The Kirk Mfg. Co. is bidding for direct business with capable agents and is not selling to jobbers.

#### END CUTTING JIG MADE IN MILWAUKEE.

The jig for cutting tube ends at an angle to fit snugly around the head tube of a bicycle, as described in last week's issue of Cycle Age, was designed by the C. J. Smith & Sons Co. of Milwaukee, who make it for customers at a low price, so that they may use the Smith flush head without inconvenience.

The Monarch Cycle Mfg. Co. of Chicago will exhibit its models of Monarch bicycles in spaces 39 and 46 at the Chicago cycle show, which opens Saturday.

The Adams & Westlake Company of Chicago is preparing to open a New England branch in Boston under the management of C. A. Underwood.

#### Competition That Pays.

There is but one form of competition which is really remunerative, and that is the competition of novelty and variety in goods. In contradistinction to the rivalry which produces a reduction in prices, the former is both laudable and legitimate. It may be freely indulged in by all merchants with a view of raising the standard of the store to the most exalted position attainable. In this way the most popular and salable goods only are kept in stock, and displayed in the most attractive manner possible. Such competition makes money for those who are able to succeed in it, for it is the kind which calls forth all the latent ability of the merchant in originating, executing and developing the best methods by means of which business may be made to thrive and prosper. It certainly requires more study and mental effort of every kind to succeed in this way than the other more common and objectionable one of underselling. Any one, even a child, could mark down figures and advertise cut prices with a great flourish in the newspapers; whereas it requires real talent to compete in the quality, workmanship and design which goods may possess. It necessitates personal trips to the market, a receptivity of mind in adopting the new ideas which are gleaned from observing the methods of others and a constant desire to improve upon the past. In short, keep the different lines of goods vying with each other in wholesome rivalry for the most praise and popularity.—Stoves and Hardware Reporter.



MR. DEALER:

Doctors advise cyclists not to contract the chest—not to prevent free respiration. Therefore it is advisable to handle the Claus Bar, because it is the only bar that retains its width at all adjustments. Our prices will interest you.

THE CLAUS HANDLE BAR MFG. CO.  
Milwaukee, Wis., U. S. A.

Initial Tension  
Expansion Spring

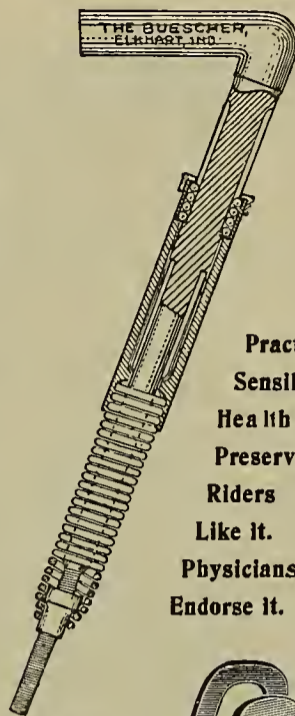
# SEAT POST

The Only True Jar Absorber.  
(Patent Pending.)

PRICE, \$2.50 EACH.

ONYM FOR THE BEST IS THE  
NAME OF

THE BUESCHER MFG. CO.  
ELKHART, IND.



Practical,  
Sensible,  
Health  
Preserving  
Riders  
Like it.  
Physicians  
Endorse it.

The jobber, the dealer  
and the user of bicycle sun-  
dries know this.

Our products are stand-  
ard and reliable in style,  
quality and price.

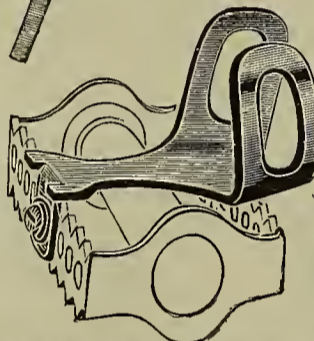
'99 CATALOGUE  
mailed at your request. It  
will pay you to see same  
before ordering a single  
sundry.

Complete lines of  
Pumps, Lamp Baskets,  
Toe Clips, Coasters, the  
best Spring Seat Post, etc.,  
are shown in it.

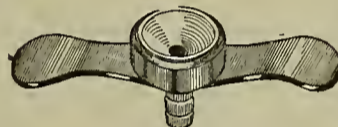
See our Trousers Guard.  
We make specialties—  
write for estimates.



No. 7 FOOT-  
PUMP, barrel  
1 1/8 x 12. Solid  
stirrup. Price  
80c Each.



No. 3 TOE-CLIP Patent  
Correct practical Sept. 14, '97.  
design, 35c pair.



No. 3 COUPLING.

Latest and Best. Every Pump should be fitted  
with it. Pat. July 14, 1896.

## “DEWEY”

...MAKE...

### Bicycle Spokes and Nipples

Well, we should smile.  
Get our prices and you will, too.

TILEY PRATT & CO.,  
ESSEX, - - CONN.



Model T

Our '99 Line

NOW READY.

## Cutting Saddles

Superb Quality and Low Prices.

CUTTING, KAESTNER & CO.,  
241-247 S. JEFFERSON ST., CHICAGO.

SEND FOR SAMPLES AND PRICES.



BEGIN  
THE NEW YEAR  
AS  
YOU SHOULD



## “High Pressure” Brand

Of Cements, Oils, Graphites, Vulcanizers, Brazers,  
Enameling Ovens, and

### Bicycle Supplies

This is a Tip Meant  
For You.

Send for Catalogue—  
FREE.

THE  
NATIONAL CEMENT & RUBBER  
MFG. CO.

TOLEDO, OHIO, - U. S. A.

Ask for “High Pressure”  
Brand Always.

Chicago Show  
Space 65.

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Space 169

Call and see us.



# THE PASTIME AND SPORT

## GIBSON EASY FOR ELKES

Given a Long Handicap the Ohio Boy Loses His Match by Four Laps Other Races.

New York City, Jan. 2.—The ten-mile paced match race between Harry Elkes and Harry Gibson, the Ohio ex-amateur styled Michael No. 2, which was the principal event at the New Year's eve meet at Madison Square Garden, was monotonous and almost farcical in the ease with which the world's hour champion ran away from his competitor. Gibson was given a handicap of forty-five seconds, equivalent to three and a quarter laps, but despite this Elkes finished more than four and a half laps in the lead. Gibson's pace was inferior to that of Elkes, but owing to the breaking of a chain the New Yorker had to ride a full lap un-paced. Elkes' time for the ten miles was 20:30 1-5, an average speed of 2:03 to the mile.

The first heat of the pursuit race between tandem teams of brothers was won by the Butler brothers, who passed the Turville brothers at seven and three-quarters laps, or about three-quarters of a mile from the start, in 1:32 1-5. In the second heat the Kraemer brothers of Chicago, who have come into prominence the past year, defeated the Lawson brothers, also of Chicago, in ten and three-quarters laps, the time being 2:15 1-5. This brought the Butler and Kraemer brothers together in the final, in which the Boston team gained rapidly on the Chicagoans after the first two laps and overhauled them after going six and three-quarters laps in 1:22 4-5, the laps being ten to the mile.

Brown and Adamitz won the two-mile amateur tandem pursuit race by overtaking Schreiber and Wahrenburger just as the two miles were finished, the time being 4:14 4-5. The defeated team rode the last half with a flat tire.

The one-mile professional handicap was a hot fight between Newhouse, Terrill and Leonert, who finished in the order named about a yard apart. Time, 2:15.

Joe Downey, the Boston boy wonder, rode a mile exhibition paced by a tandem in 2:05 4-5, doing the first half in :59 2-5, lowering the indoor record by two-fifths of a second.

## Spalding on Racing Control.

Concerning the mooted question of the relinquishment of League control of racing, A. G. Spalding, whose long experience in such matters through his interest in the national sport of baseball entitles his opinion to unusual consideration, is quoted as follows:

The L. A. W. is the natural body to control racing, and, in fact, it is the only national body organized today that is competent to handle it. While in the past they may have made some mistakes in meting out proper punishment, yet I am satisfied that the majority of people in this country who take an interest in cycle racing believe in the honesty of purpose that prompts the action of the officials of the L. A. W., and without such confidence of the public no sport, especially professional, can be successfully carried on very long. I think it might be possible to organize an association for the exclusive control of professional cycle racing, but to be successful it must be national in character and controlled by representative men in the leading cities in the country. Not only would it require representative men in whom the public has confidence, but it would also, probably, take considerable capital to properly carry it on. Until such a representative association is organized, I am strongly of the opinion that the L. A. W. is much better equipped to handle the racing of this country, both

amateur and professional, than any other organization. While to some it may seem incongruous for an amateur organization like the L. A. W. to take under its direction and fostering care professional racing, yet in order to keep this sport clear from corruption and misdirection, and as the tendency of all sport where great skill is required is toward professionalism, I think it would be a mistake for the L. A. W., a mistake for the racing interest, and a mistake for the racing men, to give up its control of professional or amateur racing.

## MAY BE A LOVE FEAST

Opposition to Keenan Disappears and Leaves a Clear Sky—The League Will Benefit.

Philadelphia, Jan. 2.—The opposition to T. J. Keenan, Jr., for the presidency of the L. A. W. has so nearly disappeared that it is not improbable that his name will be the only one mentioned in that connection at the meeting of the National Assembly next month. The report that the majority of Pennsylvanians were in favor of Buffalo for the next League meet undoubtedly had its effect in whipping the New Yorkers into line; and President Potter's refusal to run again probably helped a little—at any rate the Empire state will offer little or no opposition to the gratification of the Pittsburgher's aspirations. Sams will be content to wait till next year, so that at the present time everything appears favorable for a veritable love-feast at Providence next month.

This is a happy state of affairs for if ever the League stood in need of a pull-together policy it is now. The heartburnings that have followed every gathering of the National Assembly for the past half-dozen years and a convention marked by an utter absence of the usual bickerings and political methods will do much to bring about a restoration of the former good feeling and enable the League to present a formidable front to the foes that beset it.

## Pitman for Racing Board Chairman.

Will R.—more often yclept "Happy Days"—Pitman, one of the founders of the L. A. W. and winner of the first bicycle race in America, is being boomed by his friends as a candidate for the chairmanship of the racing board of the League in opposition to "Uncle Jerry" Mott, the present much criticised incumbent of that office, and C. W. Means, of Cleveland, an aspirant for the honor of wearing George Gideon's big shoes, which he believes he can comfortably fill now since his success as an original Keenan man. Pitman favors the retention of racing control by the League—of course—and if appointed says he will reorganize the racing department of that body and meet the racing men half way, although he does not favor the admission of the pros to membership. He has the backing of Potter, Gideon and Chief Consul Belding of the New York division.

## Algerians Interested in Races.

The first meet of the European winter circuit held on African soil was run at Oran, Algeria, December 19, and drew an immense attendance. Banker won the 1,000-meter handicap from scratch in 1:24, with Tommaselli, 15 meters, second, and Grogna, 25 meters, third. These three also won their heats in the grand prize of Oran, the final of which was to be run Christmas.

M. Baliff, founder and president of the Touring Club of France, has had conferred upon him the decoration of the Legion of Honor.

## AUSTRAL WHEEL MEET OPENED

First Day's Races Run on Melbourne Grass Track —Bookmakers Prominent—The Races.

Sydney, Dec. 3.—The Austral Wheel race meet was opened on Saturday, November 26, on the Melbourne grass track, in the presence of 15,000 spectators. The second day's races will be run this afternoon and the meet will conclude with the events of next Saturday. The bookmakers attended the opening day in large numbers. All the leading Melbourne bookmakers have opened books on the Austral race, and if any man was lucky enough to be able to pick the winner he could win \$250,000. The Melbourne Bicycle Club has also opened a consolation sweepstake on the event, with \$1,000 as first prize.

The first event was a 1½-mile handicap for the Melbourne B. C. plate and \$250 first prize. The race was run off in thirteen heats and a final. A. A. Middleton, who won the Austral in 1894, captured the first prize in this event, from 40 yards, in 3:25 1-5. The veteran led entering the last lap and won by a wheel length from A. E. Tame, 75 yards, who went after him. A. J. Berry took third from 100 yards.

The one-mile scratch race was run off in five heats and a final. R. Mutton created a big sensation when he beat B. Walne in his heat, though an excuse was found for the champion in the fact that he had had a bad spill the day before while training. Jack Pearson lost his heat to A. C. Forbes. The final went to W. C. Jackson in a hard fought finish won by a wheel length in 3:17 4-5. L. Barker took second, and D. Walker third.

The 25-mile scratch race for \$250 first prize had thirty-nine starters who were sent off with a flying start. In the fourth and twelfth miles there were spills, in the second of which Middleton dislocated a shoulder blade. Entering the last lap Forbes led and Jack Parsons went after him, and half a lap from the tape passed him momentarily; but Forbes regained the lead and rode in an easy winner, with six lengths to spare. J. Carpenter finished second, and L. M. Jackson third, while Parsons came in fifth. Time was 1:06:13 4-5.

## Chicago Club's Scorch to Pullman.

The tenth annual 2:50 club scorch to Pullman of the Chicago Cycling Club was won last Sunday by Fred Nelson, brother of O. B. Nelson, who won the Decoration Day road race in 1896. His time from the start at Thirty-fifth street to the finish, about fourteen miles, was 45:00, which is fourteen minutes slower than A. J. Nicolet's time last year. The rough and icy condition of the course and the 10-above-zero weather accounted for the great difference in the times. About thirty riders started. There were several falls but no injuries and only one punctured tire. There were no official timers, but the leaders finished about one minute apart in the following order: Fred Nelson, O. B. Nelson, W. B. Ferguson, John Nelson, Orlando Adams, James Levy, N. B. Van Sicklen, A. T. Helwood, C. G. Sinsabaugh and C. P. Root. E. Lingenfelder reached Pullman first, but was disqualified for cutting the course.

## Illinois Would Admit Professionals.

At a meeting of the Illinois division L. A. W. held at Springfield last Thursday the delegates voted to work for the admission of professionals to membership in the League and instructed the delegates to the National Assembly to cast



# "Orient Cycles Lead the Leaders"

THE LARGEST RETAIL BICYCLE  
DEAL EVER MADE ❁ ❁ ❁ ❁ ❁ ❁

A letter from the largest legitimate retail bicycle dealer in the world telling why he wanted the ORIENT, the recognized leader of the High Grade Bicycles of the world.=====

New York, December 31st, 1898.

WALTHAM MANUFACTURING COMPANY,  
Waltham, Mass.

Dear Sirs:

We thank you for your favor of the 28th inst. and for your enclosure of an article concerning our relations to the retailing of Humber Bicycles, clipped from a trade paper of October last. This is the first information that has reached us that articles so lacking in accuracy and sound reasoning in the matter of our bicycle business are in circulation, and we must also plead ignorance as to the injury that their injustice may have done.

We think we could well afford to allow the whole matter to rest upon its merits as already presented, and that it will probably be a waste of time to draw the question from present oblivion that we may dignify it by reply.

Evidently you do not share this opinion and in deference to your views we add the following to what we have already made public:

Every intelligent person at all familiar with our affairs knows perfectly well that the term "department store," as contemptuously used toward our business by various writers on Cycle subjects, is a misnomer without foundation in fact or reason in application. Our business is conducted upon the soundest mercantile principles that we can understand, and catch-penny methods of any sort whatever find no welcome here. If there is one man in the United States that, more than any other, knows in his inmost mind and heart the truth of that assertion, it is the late resident director of the Humber Co. in America. Through him we made a contract in the Autumn of 1897 for twenty-five hundred bicycles. The Roadster, the most important model in that contract, was to be sold at \$100—other models to be slightly higher.

The early demand for Bicycles was disappointing, and an agreement was reached in March for the reduction of the Roadsters to \$75.00, and other models in proportion. The Humber director was more anxious than we for this reduction. Rebate checks were sent by us for the amount of the reduction to all previous buyers, and an allowance of \$5 a wheel was made by the Humber Co. on the entire contract. This sealed the fate of expected profits on our Humber bicycle business, as the margins were reduced below the cost of distribution.

Having implicit faith in the Humber Co., and being assured of their support we guaranteed the price of the Humber wheels to all buyers, to the date of the expiration of our contract and fully expected, because of certain additional assurances, to maintain them until now.

We accepted and paid for all the wheels called for by our contract, and fulfilled our obligations in letter and spirit. In spite of a slow market we held our way firmly in consequence of a verbal promise from the Humber Company that none of their wheels would be manufactured in excess of orders. Three responsible witnesses can attest to the truth of this statement.

Within a few days of the first of September we were astounded by the statement on behalf of the Humber

Company that they had accumulated a stock of eight hundred and sixty bicycles which they demanded we should buy for our own protection. The promise not to manufacture wheels in excess of orders was the rock upon which we based our firmness as to retail prices. We vainly urged the demands of good faith that required the Humber Company at least to carry their stock until next Spring, and were met with the threat that, if we did not buy them they would be offered elsewhere.

We refused, as would any self-respecting merchants, to be coerced. The Humber Company had our good money. We had a large quantity of their wheels. Then followed the suicidal action of the Humber Company. The wheels were sold and on Saturday, September 10th, we knew that Roadsters were to be advertised at \$50. Our reputation was at stake, and we reduced the price to \$40. We were unwilling to be publicly compromised by another's loose views of square dealing. Various transactions in Humber wheels of which we were ignorant followed, and the wretched scramble about prices was the result. We never owned a Humber bicycle except such as we bought directly from the Humber Co.

The responsibility rests solely on the Humber Co. for our heavy losses and their depreciated trade mark.

If these statements be true, and they cannot be denied, are not the condemnations of trade journals of our course in the Humber Bicycle business utterly unfounded? The much exploited recklessness of methods falls back with crushing force upon the Company that lacked the wisdom, to say nothing of the higher obligations, to conduct its business with reason and common sense.

That we should be regarded as so lacking in ordinary judgment as to wilfully and recklessly throw away tens of thousands of dollars in a competition of destruction is not complimentary to our pride—our consolation is in the dullness of the writers that could imagine such a possibility. On the other hand money considerations weigh little with us when our reputation is at stake.

After such a disappointing experience we naturally felt very cautious about making another deal for high grade bicycles, and from our former experience saw that it would be necessary not only to get a bicycle which was as good as the best, but one that was made by a reputable company who kept abreast of the times, and who sold goods at an honest price, and had one price for all.

After thorough investigation we believe that we have found such a wheel in the Orient and such a company in the Waltham Manufacturing Company. Therefore our policy for '99 will be to advertise the Orient bicycle as our leader, and to guarantee the price during the season of '99. We guaranteed the price of the Humber and upheld it until we were compelled to cut by the Humber Co. We shall guarantee the price of the Orient, and do not believe that we shall be compelled to cut the price on it by the Waltham Manufacturing Company.

Very truly yours,

(Signed) JOHN WANAMAKER.

MR. DEALER:—Is it not to your interest to handle a bicycle that is "as good as the best" and one that is made by a progressive company who keep abreast of the times, and who protect their agents and hold up the price and reputation of their goods at all hazards? If so, write to=====

WALTHAM MFG. COMPANY, 315 Crescent Park, WALTHAM, MASS.

their votes and influence to that end at Providence. The action means that the west will make a strong fight for the pros and will join forces with the eastern divisions that are interested in the movement.

### QUESTIONS THAT PERLEX

#### Movements of the Midget—Is Riding Horses in New Orleans Now—Marriage Affirmed.

Michael's double game of cyclist and jockey is a hard one to understand, except on the supposition that he is fortifying himself against the time when his phenomenal ability as a bicycle rider wanes in order that he may still enjoy the distinction of being rated as the best of his class by the world, or upon the other less complimentary supposition that while his inclinations pull him toward the turf his friends and those who admire him as a cyclist influence him in the other direction so strongly that he vacillates between them. Promptly upon the heels of the report that he had secured Al Weinig as a trainer and would enter into competition on the cycle track again this year comes a telegram from New Orleans this week stating that the pair arrived in the Crescent City on Monday, where Michael was given a jockey's badge by Secretary Clark, having already had a license from the Turf Congress to ride. The Midget reiterates his intention to become a jockey, it is said, and will put in his mornings at the track schooling himself to break from the gate.

Apparently the question of his marriage is now definitely settled in the affirmative by the following statement from a firm of lawyers, Aberman, Wales, issued subsequent to a report in the London papers upon Michael's arrival in England last fall that the Welshman was not married: "As the solicitors representing the estate of the father of the young woman who is Michael's wife, we cannot allow the statements to go uncontradicted any longer. We have before us the certificate of marriage dated March 13, 1896, which proves that Michael is a married man."

### NEWS IN BRIEF.

The Paris-Roubaix road race will be run April 2.

The membership of the Illinois division has fallen off more than two-fifths in the last year.

The Grand Prix de Paris will be run on the municipal track of Vincennes on June 18 and 25.

Willy Arend, the world's mile champion of '97, has retired from the track in Germany and gone into business.

Jack Robertson, the Englishman who raced in America last spring, has retired from the path to take up the practice of law.

Orlando Stevens is visiting his team mate, Floyd McFarland, in San Jose, Cal., where he will await the opening of the circuit in the spring.

Frank Kramer, the amateur champion of the L. A. W., has become an "outlaw" through competition at the Madison Square Garden unsanctioned races.

The Paris-Bordeaux motorcycle race will be run May 24. A German sportsman has offered a prize of \$2,000 to anyone making the trip without stopping at intermediate towns.

E. C. Smith, one of the contestants in the December six-day race, has brought suit against the management of Madison Square Garden for ruling him out of the race for alleged disability.

A new motorcycle hour record of 30 miles 2,136 yards was established December 15 by Rigal in France, who three days previously placed the kilometer standing start motorcycle record at 1:17 4-5.

Henri Fournier is anxious to take on another match race similar to that in which his motor bicycle broke down December 26. Had

the driving belt not broken, he says he would have tired out the human pacemakers.

Arrangements have been completed by Jack Prince for a southern indoor circuit during February embracing Atlanta, Savannah and Jacksonville. The meets will be conducted by the National Cycle Racing Association.

From a Mansfield, O., source it is learned that Arthur Gardiner may retire from racing at the request of his father, who is now in Europe recuperating his health, while Arthur fills his position here, which is an important one.

During 1898 the German bicycle tracks gave 236 race meets, at which 1,208 races were run and 1,093 riders competed. Cash prizes to the value of \$58,018.75 were given and 2,672 medals, cups and other objects of art were put up for amateurs.

Nat McDougall of Milwaukee, who holds the quarter-mile, one-mile and five-mile Wisconsin championships and who defeated Earl Peabody at Green Bay and Oshkosh last year, may compete at the international bicycle races to be held at the Paris exposition in 1900.

Harry Elkes, through his manager, has offered to meet Chase, Linton, Huret or Cordang for a purse of not less than \$2,500, stipulating that the race shall take place about Easter and that motor pacing shall be barred since he is not familiar with that sort of assistance. If so large a purse cannot be raised, he is willing to meet any one of the foreigners in this country for a smaller prize.

At the races advertised to be run last night at Madison Square Garden by the National Cycle Racing Association, C. W. Miller and Frank Waller were matched to ride a five-mile paced contest and Joe Downey was to be pitted against Harry Elkes, in mile heats, paced and unpaced, the Boston schoolboy turning professional in the event. Twenty men were entered for the 24-hour race, the list including most of the contestants in the recent six-day contest.

Seven hardy road riders ran a five-mile cross country chase in New York city on New Year's day dressed in sleeveless jerseys and linen trousers reaching only to the knee. Only two of the seven wore stockings, although the temperature was at 14 degrees above zero and a stiff cold wind was drifting snow and small bits of ice. As a consequence the riders suffered intensely and made a New Year's resolution not to repeat their folly. Out of consideration for those who took part their names are suppressed in the hope that it may help them stick to the resolution.

George Banker says he believes that it is but a question of a short time until the new racing association of America will gain recognition, at least in France. He says in a letter to a friend in Pittsburg that at the outset of the trouble of the racing men with the L. A. W. he believed the breakaway a mistake and certain to fail. The unity of purpose among the riders, however, did much to strengthen his opinion of their power, and the recent converting of so many additional amateurs and professionals at the Madison Square Garden races quite sweeps the field and wins the day.

Regarding the present condition of racing affairs in the United States a prominent French racing man writes that the cracks in France are following the fight between the professionals and the L. A. W. with much interest and sympathy. He thinks the matter will resolve itself into a condition in which the professionals will all unite and form an international union of their own and the amateurs will organize a separate association, while the non-racing men will be left in the League or will form a touring club. It may be some time before these changes are effected, as the riders of all countries must work together to that end.

### Crane is a Great Rhymester.

Charles S. Crane, the general passenger agent of the Wabash, is quite a poet, and has written many nice things. Recently he read the poem on the "Music of the Wheels," written by E. E. Coyle, for the Baltimore Morning Herald, which runs as follows:

#### MUSIC OF THE WHEELS.

When you're riding on the railroad  
At a mile-a-minute crack,  
Did you ever note the rhythm  
Of the wheels along the track?  
Is there any great composer  
Of sharps and flats and bars  
Can equal in his cadences  
The music of the cars?

Whether dashing through the meadow,  
Or the tunnel's choking grime,  
You will never hear them falter  
From the measured beat of time;  
Charging wildly 'mongst the mountains,

Or by the river's bank,  
You will always find them playing—  
Click-clickety-click-clank.

Every air that has been written  
Since the days of wicked Cain  
Finds a fit and perfect setting  
In the rhythm of the train;  
From opera to comic song,  
From Patti down to Cline,  
You can hum all sorts of ditties  
While rushing down the line.

After reading the above Mr. Crane got his typewriter in order, and by screwing up the poetical lever ground off the following:

It's too bad to spoil the story  
Told in cadence sentimental,  
But it's not so on the Wabash  
With its famous "Continental."

If you are about to travel  
Please note the following points,  
The Wabash track is perfect,  
And you cannot count the joints.

In its wheels there is no music,  
At a mile-a-minute gait;  
And of course there is no rhythm  
On a track that's up-to-date.

There is no measured beat of time;  
In fact it can't be measured.  
We beat our rivals every time,  
A fact that should be treasured.

## MISCELLANEOUS.

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250 sets Frame Connections.  
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4 Lathes.  
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6 Drill Presses.  
1 Tool Grinder.  
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# THE CYCLE AGE

## AND TRADE REVIEW

VOL. XXII—No. 11.

CHICAGO, JANUARY 12, 1899.

NEW SERIES No. 60.

### TO CONTROL RUBBER SUPPLY TIRE MAKERS NOT AFFECTED

**Difficult Task Which Rubber Manufacturers Have Set Themselves—Reduction in Prices Imminent.**

Though no tire makers will confess to knowledge of the intentions or operations of the recently reported combination among rubber firms, yet it is said to be part of the plan of the combination to control crude rubber prices. The India Rubber World claims to be in possession of information, deemed trustworthy, to the effect that the new organization is meant to include all branches of the trade other than rubber boots and shoes and hard rubber goods. The footwear trade is largely in the hands of the United States Rubber Co., and three of the four American manufacturers of hard rubber formed a consolidation only a few months ago.

No list has yet been given out of the manufacturers who have signed the agreements drawn up by the promoters, but it is stated that the signatures have been obtained of concerns doing a business of \$10,000,000 per year, out of an estimated total annual business, by the companies considered eligible, of \$25,000,000.

#### To Cut Prices 7½ Per Cent.

A cut of 7½ per cent. in prices is promised as soon as the combination takes effect. As for the lines on which it is proposed to conduct the industry, it is suggested that benefits would accrue from so differentiating the work of manufacture as to confine each branch to certain factories, instead of each attempting to produce a variety of goods. Again, with factories in different states, a division of trade could be made on a territorial basis, whereas now every important concern is trying to sell goods in every part of the country. Not the least of the advantages claimed under the new arrangement is that crude rubber may be purchased more economically by the manufacturers working together than is now the case.

#### How Crude Stock Can be Controlled.

While individual concerns, with small capital, could effect little in the way of influencing crude rubber prices, it is claimed that the total production of rubber is so small, and is confined to such narrow geographical limits, that the investment of say \$8,000,000 of capital would make possible its complete control. This would involve co-operation in European markets, of course, since prices of such a commodity cannot be fixed in a single country; but it is held that this will not be an insurmountable difficulty in these days when cabled market reports enable the whole situation to be known in any important center.

In answer to suggestions regarding the ability of small manufacturers who may be left outside this combination becoming strong enough in time to prove formidable competitors, it is claimed that they will be permanently at a disadvantage (1) from the lack of the peculiar economies of production and the superior channels of distribution possessed by the big company, and (2) from their inability to buy rubber on so favorable terms. The proposed control of the crude rubber market is expected to afford a marked relief from the present conditions of high priced material.

If any hope is entertained of keeping the Para rubber production under control on account of the scarcity of labor along the Amazon, it may be suggested that new operators in the field would have open to them the entire coolie labor market of the East Indies. Already in Trinidad, Jamaica, British Guiana, East Africa and Australia coolies, "indentured" for a term of years, are employed on a large scale. People of the same type have been the making of Java, where they have shown their fitness for rubber gathering, and there is every reason to believe that they could be introduced with success into South America.

#### Harry Rouse Resumes Cycle Building.

The machinery of the old Rouse, Hazard & Co. plant in Peoria, Ill., has been sold by the Peoria National bank and Joseph Miller & Sons, to Harry Rouse, who took one half of it and to the Peoria Rubber & Mfg. Co., which took the other half. Harry Rouse, of the old firm of Rouse, Hazard & Co. took possession of the plant last Monday, and will immediately work into complete bicycles the material now in the factory. As soon as this is finished he will remove his machinery down town and engage in a general bicycle business, and the Rubber company will take possession of the Rouse factory and put in the plant for the manufacture of Dur-year motor vehicles.

#### Overproduction in Austria.

A cablegram from Vienna announces rather vaguely that a crisis has begun in the bicycle trade there owing to overproduction.

### CO-OPERATIVE BICYCLE PLANT UNION LABEL TO BE PROMINENT

**International Union of Bicycle Workers Develops a Plan for Making Cheap Machines.**

Out of Toledo comes the report that the International Union of Bicycle Workers intends to enlist capital for the operation of a bicycle factory conducted on the co-operative plan, the product of which will be branded with the union label and will be sold direct to riders—principally those who are in sympathy with labor movements. The story receives confirmation from President Mulholland of the International Union, who asserts that there is an abundance of capital at his command the moment he gives the signal for launching the enterprise.

#### Pronounce the Scheme a Bluff.

By those in Chicago whom the news has reached it is believed that the International Union is far more desirous of implying competition to those who oppose the adoption of the union label than of actually engaging in such competition. In any event, the dangers attending such an enterprise would be so great in the present crowded state of the industry that unusual courage would be required of financiers asked to risk capital in the undertaking. Speaking of the project, Mulholland says:

#### Plan a Long Time Hatching.

"For some time we have felt that we should start a co-operative bicycle plant, for the benefit of our men, as well as for the people in general who ride wheels. To understand the situation, you must remember that some wheels are so poorly constructed that they will scarcely support their own weight, and they are sold for prices at which you could not expect the raw material to be bought.

#### Criticizing Cheap Machines.

"The people want cheap wheels, and they purchase where they can get them cheapest, never stopping to think of how they are made. There are, of course, some good cheap wheels on the market, but how is the public to know if they are put up by skilled mechanics? The only guarantee the public could have would be to demand a wheel with the union label.

"We believe that by starting a factory on the co-operative plan, putting nothing but first-class material into the wheels and selling direct to the purchasers, the enterprise would net big returns. In this country there are three million organized laborers whose patronage would be given to such a plant."

Organized labor will buy its bicycles as it buys its merchandise—where it can get the best value for the money.

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## BRAZING BY IMMERSION

### Elementary Facts and Ideas Pertaining to the Modern Brazing Method—Economy in Fuel

With watch in hand the time consumed in brazing the two head connections of a bicycle frame by the dip-brazing method was found to measure 38 seconds, with variations of less than 5 seconds in two trials. The crank hanger joints required 48 seconds. The time for changing from one joint to another was about 30 seconds; occasionally more. The seat mast cluster and the rear fork ends required about the same time as the head connections. Total for the "four corners" of a bicycle frame, including four changes of

are not yet fully understood and mastered by anybody. Ultimately several distinct styles may prevail, each for its own class of work.

At one point the saving by dip-brazing in comparison with flame brazing is so



Dipping the Bottom Bracket—Front View of Fulton Furnace.

one-half minute each, 4 minutes 42 seconds.

#### The Process in Operation.

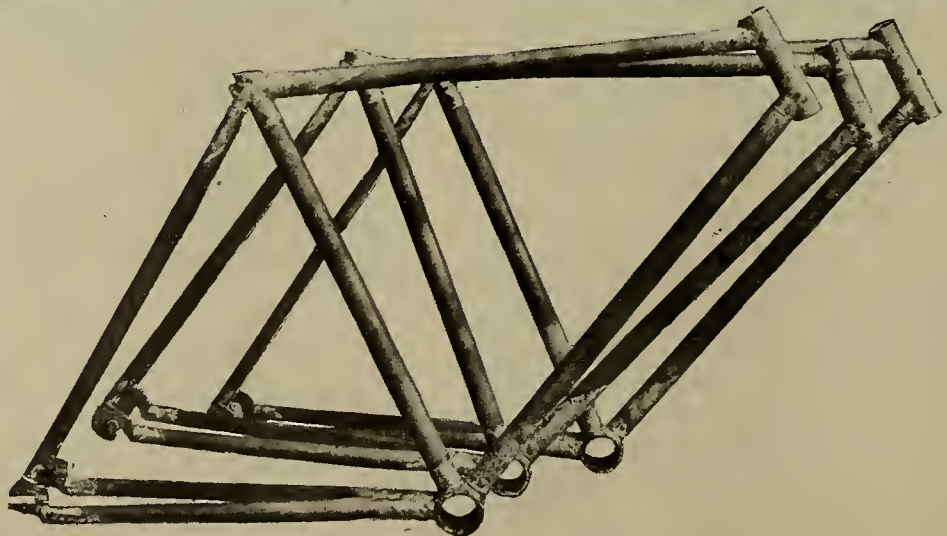
The occasion was a visit to the Fulton Machine Works, of Chicago.

With a working day of 8½ hours, allowing 1½ hours for starting the furnaces and getting ready, this makes 110 frames for a 10-hour working day with one furnace.

By starting the furnace before the brazier arrives and by convenient arrangement of the frames to be brazed, similar or better results may be obtained with a shorter working day; and with shifts of braziers and continual work—as in the busy season—the efficiency may be still further increased, time being taken for replenishing the crucible with spelter as often as required.

The accompanying pictures show an "old style" furnace. The styles change rapidly in new forms of work. Small alterations in the form of crucibles, the direction of draft, the dimensions of the opening between the crucible and the fire brick, etc., mean savings of waste in a hundred and one ways, all of which

pronounced, however, that no retrogression seems possible. This saving comes



Sample Work, Showing How Deeply Tubes are Immersed.

in by the opportunity which heating of spelter in a furnace offers for using hard coal instead of gas and utilizing the

heat economically instead of wasting nearly all of it on empty space. One dollar's worth of hard coal suffices for keeping spelter that is selected in a crucible up to its proper temperature for a working day, while seven or eight dollars' worth of gas must be blown in to the air by the flame-brazing method to heat joints and fuse spelter for a similar amount of work. The difference is due not only to the nature of the fuel used, but much more to the sinful waste of fuel which takes place when joints are required to absorb heat from a rapidly moving current of burning gas mixture,, of which no part remains in contact with the work for more than a small fraction of a second.

#### Temperature of the Spelter.

In dip-brazing furnaces the heat is regulated by the forced draft at will. One illustration, which gives a front view of the Fulton furnace, shows a draft pipe entering on the opposite side and provided with a check within easy reach of the operator. It has been found unnecessary to make frequent changes in the draft, however, and in the new style the regulating is done from the rear of the furnace, which is shown in the second illustration. Stoking and feeding of the fire is also done from the rear, so that the operator when working is not exposed to the heat from the furnace doors. The small box shown at the right hand side of this view contains hard coal; it holds about one and a half bushels, and two such box-fulls are ordinarily sufficient for a day's work.

#### Burning of Steel Impossible.

It is found by practice how strong the draft must be to keep the spelter in the proper condition. When work is not being done, as in the dinner hour, it may be almost entirely shut off, but at other times when heat is being absorbed by the bicycle tubing and lugs, the draft is adjusted to produce a steady accession of heat to balance against that which is taken away in the work. No difficulty is experienced in obtaining uniform results in this respect.

When the spelter has reached the most favorable temperature small bubbles are observed along the edge of the crucible. These bubbles indicate occluded gases which are being expelled from the molten mass. When the heat becomes too great the fact is readily noticed by blue fumes, which indicate that the zinc in the spelter is being burned. If the operator should fail to notice the blue fumes—which is hardly conceivable—another safeguard against too high temperature prevents all possibility of doing bad brazing; for when so much zinc has been burned out as to allow the temperature to rise toward the fusion point of copper, 1,996 degrees Fahrenheit, the spelter

becomes unmanageable. It leaves a thick deposit on the outside of tubing and refuses to flow.

By reason of these safeguards the dip-brazing method is self-regulating and—far from presenting new dangers—offers a guarantee against all burning of steel tubing, which it has never been possible

sible. The spelter must flow into every crevice by the laws of gravitation. It is partly for the purpose of assisting this action that the movements of the operator in dipping are slow and gradual, so

this peculiarity, which has been brought out as an argument against the dipping method, is now by its advocates turned about and used as an argument against joints of such special formation. It is believed that constructors will be obliged to change their designs of joints to conform to the requirements of dip-brazing, but not vice versa.

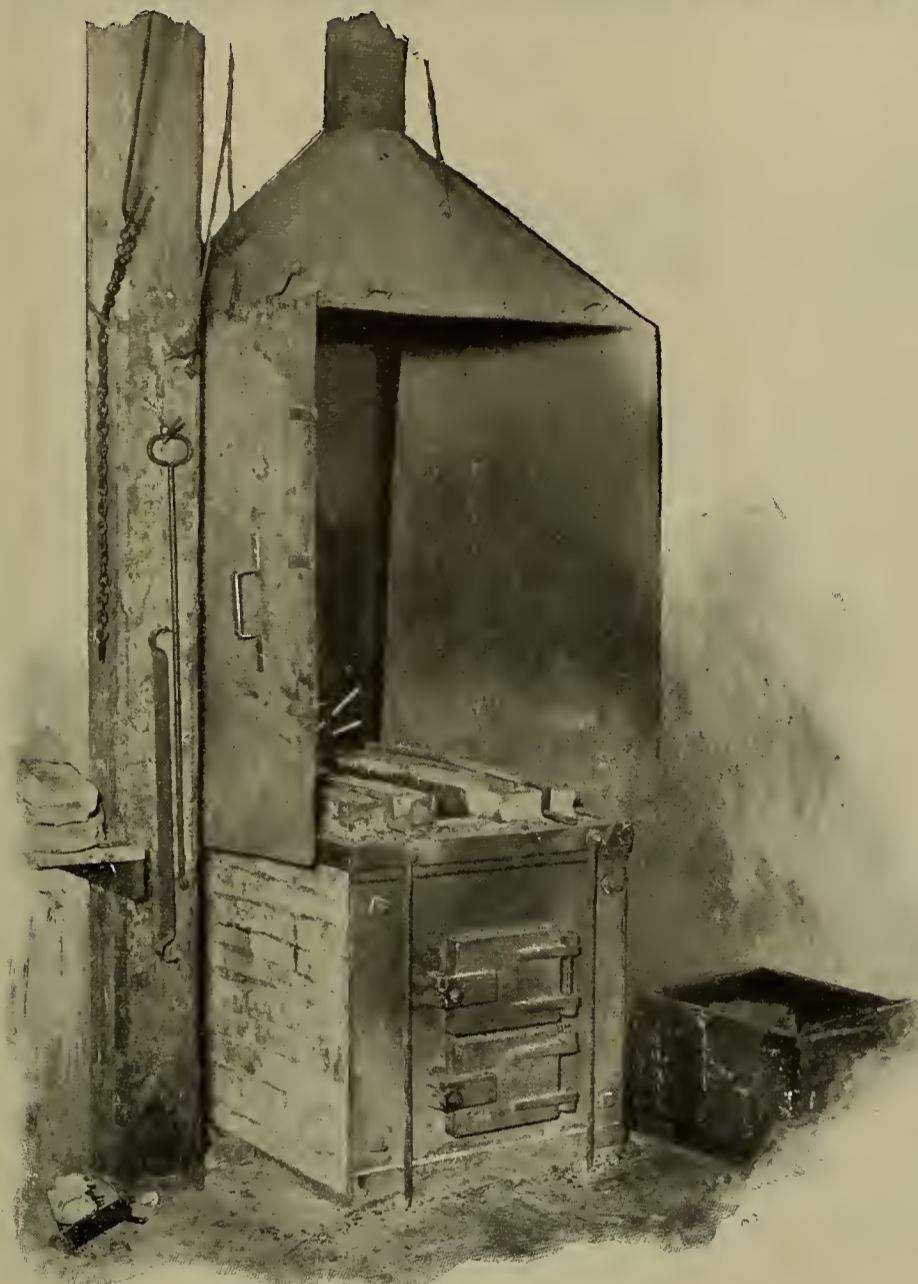
**Depth of Dipping.**

In the illustration showing three frames, the extent to which the tubing is immersed is indicated by the spelter adhering to the tubing. When the spelter becomes low in the crucible ingots of spelter are added and are readily fused. It is not practicable to add pure zinc, and if the contents of the crucible have been watched there is no necessity for it. The depth of dipping is not a very essential feature in the process, and it is found in practice that sufficient spelter may be added in course of the work to keep the depth of the molten metal so nearly uniform that there is no practical difference between the joints brazed during a day's work. As the slushing of the metal against the sides of the crucible tends somewhat to wear away the graphite, of which the crucibles are made, it is not even desirable to keep the depth of the spelter absolutely uniform. The crucibles will last longer if a certain range of variation is allowed.

**Strength of the Joint.**

It has been said that the joints produced by dipping are less substantial than those made by flame-brazing. An amusing incident is mentioned in this connection. A manufacturer who was being initiated in the dipping method took up a joint just finished and cooled, struck the lug open with a cold chisel, placed the tubing in a vise and with a pair of tongs forced a part of the lug to one side, laying the spelter bare, as shown in the last illustration. "Do you call that brazing?" he said, contemptuously, and no argument would convince him that the brazing was perfect just because the spelter separated into two films, one adhering to the lug and the other to the tubing. Probably he expected that the spelter would tear away with it a scale of the steel tubing, as it frequently does when the tubing has been burnt in a gas flame.

The smaller one of the two seat cluster joints, shown in the illustration, was



Rear View of Furnace, Showing Doors and Feed Box.

to obtain by the flame-brazing method.

As soon as sufficient publicity shall have been given to this important point of superiority of dip-brazing, it is to be expected that every bicycle manufacturer who works with the dipping process will be anxious to make the fact known, so that agents and the public may learn that breakages of fork stems and crowns, such as were commonly reported during 1898 and were usually charged to bad brazing and burning of steel tubing, are extremely unlikely to occur with their product.

The same natural laws which prevent burning of the tubing in dip-brazing also insure economy in the filing department, for the spelter when used in its proper condition leaves only a very thin coating on the outline of tubes and one which may be much more readily removed by the combined effect of chemicals and filing, than the hard and heavy lumps which form so readily when the tubing, with the spelter adhering to it, is turned around in a gas flame and allowed to cool irregularly.

**Spelter Penetrates to Every Point.**

The regularity of the temperature, which affects all parts of the joints simultaneously, when dipped, also has the effect of making dip-brazing uniform and reliable. The weight of the molten spelter in which the joint is immersed assists capillary attraction. When the simplest precautions are observed to permit the escape of air, the formation of air pockets in the joints becomes impos-

sible. The spelter must flow into every crevice by the laws of gravitation. It is partly for the purpose of assisting this action that the movements of the operator in dipping are slow and gradual, so

upwardly while the spelter forces its way that all air may have a chance to escape



Results—The piece to the Right was Brazed by Dipping; that on the Left was Brazed by Flame.

into the joint from beneath.

With certain forms of construction it is, on the other hand, difficult or even impossible to make the spelter leave the joints properly, but so great is the economy claimed for the dipping process that

brazed carefully by the flame-brazing method, and it is characteristic that when it was torn open it showed good brazing only at one of the lugs, while no spelter at all had adhered to one side of the other lug.

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Mention The Cycle Age

# THE CYCLE AGE

## AND TRADE REVIEW

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

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### MAKING "THE WHEEL" RIDICULOUS

Quite unexpectedly the Wheel has heard from another superintendent—this time of the proper kidney—on the subject of brazing by immersion. His views are not in consonance with those held by our scatter-brained contemporary, but by as much as they disagree do they accentuate his ability to trim its ignorant pretensions. The editor of the Wheel, driven to despair in defending an untenable position, seizes upon this sarcasm of his correspondent and admiringly proclaims it "interesting"—much in the same manner as he might sniff at a nettle and laud it for a narcissus:

I wish to convince you that the much lauded brazing by immersion looks well on the outside and also that it looks better on the inside.

By this is implied that an effective joint can be obtained by dip brazing, and also that stripping the joint by means of chisel and mallet will afford conclusive proof of the thoroughness with which the parts were once united.

Since the Wheel saw fit to challenge the soundness of the opinions expressed in the Cycle Age concerning dip brazing we herewith parallel its stupid criticism and the essence of what was said in this paper, comparing both with the judgment of an experienced factory worker:

*From the Cycle Age of  
Dec. 15—*

There are now very few American bicycle manufacturers who have not experimented with liquid brazing, and a large number of them have finally adopted the method for a part of the brazing work in their factories. Among all the uncertainties and drawbacks to the method of which some of the experimenters have complained, this one fact stands out preeminent—that several factory men whose judgment on such things it is impossible to set aside as incompetent, pronounce the process of brazing by immersion a success mechanically and satisfactory as an improvement in shop economics. And they continue to employ the process. This one fact is preeminent because it overbalances all indications that point in the opposite direction, just in the same manner as the production of a missing person alive and well, disproves at once all rumors or theories according to which he should be dead.

Under the circumstances the process of liquid brazing may therefore now unhesitatingly be declared a success. The statement may be qualified by saying that it is a success only under the proper conditions and when properly done,

*From the Wheel of  
Dec. 29—*

From employes of several factories it is learned that the process of dipped brazing, to which our Chicago contemporary gave approbation last week, is proving far from satisfactory. It is claimed that unless the parts to be joined fit perfectly, the brass does not flow and the job is poorly done. The employes state that a considerable proportion of the work now going out of the factories in which they are employed is unreliable, and is bound to give trouble later on.

One superintendent, who had used, but is not committed to the process, states that thus far it has proven unsatisfactory, and considerably more expensive than another process he now uses. He showed The Wheel a number of frames which he had cut open, and they were imperfectly brazed. They look all right from the outside, but the brass did not flow throughout the entire joint. This superintendent states that the terrific heat of the molten brass is liable to burn the metal, weakening it at the joints. He also states that the process wastes a very large amount of brass and spelter, which are expensive, and that the expense of filing frames and the time required is much

*From The Wheel of  
Jan 5—*

"I have carefully read your article on dipped brazing in The Wheel of December 29. I wish to say that dipped brazing can be done successfully, and brazing by this process can be done better and at a much lower cost than it can be done by the old way.

"If at any time the brass gets hot enough to burn the metal immersed, then the zinc would at once burn out of the brass, and it is impossible to do any kind of work with the metal in this shape. Brass melts at a much lower temperature than steel, and in order to burn the steel the brass must be heated far more than it ever should be.

"A crucible of correct pattern will last from two to three weeks. These crucibles cost \$7.

"One man and a boy helper can braze 100 complete frames in ten hours. We are saving six cents per wheel on brazing alone, and \$7 a day on fuel. We use just \$1 worth of hard coal a day, and last year our gas bill for the brazing forges was from \$7 to \$8 per day.

"In the filing room we are saving 12 cents per frame as compared with last year's piece prices, and last year a filer ever made over \$2 a day and had to

but that is a limitation that may be applied to everything. \* \* \* Liquid brazing saves work and money for those best versed in the application of the process. No inference is left, then for those who have arrived at a different result but that they are not well versed in the process, or else that the conditions in their factories are very different from those prevailing in the factories where success has been accomplished. \* \* \* Manufacturers who have already made the process a success have no great inducement to publish the details of shop practice by which they have accomplished so much. \* \* \*

greater than even in the old process commonly used. Another great objection is that the crucibles burn out frequently. He has used the process off and on for five weeks and has burned up three crucibles, costing about \$10 each. He says he will experiment a little more, but he is confident the process will never prove satisfactory. He blames those journalists who boomed it before it was thoroughly tested, and claims that the majority of the factories have taken it up because they have been led to believe that it was cheaper and better. He criticised very freely the editorial on the subject which appeared in our contemporary last week.

pay for his files out of that. This year the filers make just about the same amount if not a little more, but we have many filers less than we had in '97, to turn out 100 frames and forks a day.

"I wish to say right here that anyone who undertakes this kind of a job must have some faith in it or else he might as well quit right now. We had just as much bad luck as anyone at the start and were discouraged for a long time, but we never at any time lost faith, and for that reason alone we are doing excellent work with this process, and every day saving a good round sum for the company."—*Extracts from a letter written by G. C. Worthington, Superintendent of Fay Mfg. Co.*

The Wheel emerges from the comparison shorn of some of its cheek and conceit—losses it can readily repair.

Not since the days when another dunce undertook to deter folks from using pneumatic tires has there been witnessed such an impudent attempt to forcibly arrest the progress of the cycle industry as vanity and malice toward the Cycle Age impelled our declining contemporary to essay.

### EXORBITANT EXPRESS RATES

If every bicycle dealer who sells 200 bicycles per annum has an average expense of \$350 for express charges, and every repairman pays an even much larger percentage of his gross income to express companies, it is evident that the retail bicycle trade is interested to the extent of very large aggregate amounts in an equitable system by which the exorbitant rates now paid for express shipment may be reduced one-half or more. The total amount now thrown into the maws of the four large express companies by the cycle trade cannot be much short of one and one-half million dollars annually. A saving of one-half would mean the addition of more than seven hundred thousand dollars to the purchasing capacity of the retail trade. Manufacturers who think that they can afford to stand aside and throw away the chance for such a betterment in the general condition of the trade, and who will forego all effort for bringing it about because they do not pay the charges themselves, have only learned the ABC of commerce. It was through neglect of work for bettering the general condition of the trade along such and similar lines that the National Board of Cycle Manufacturers came to its death.

Among the substitutes for express service which have been proposed, shipment by fast freight is foremost, but it is unfortunately practicable only between large centers of commerce. The majority of the cycle trade, being located in towns of smaller size, cannot take advantage of the work of fast freight associations. They have only Hobson's choice between one or another express company. Their position is further aggravated by the sixty day guarantee which is another of the evils that the National Board failed to abolish and which compels the agent to ship repair parts both ways in a great many cases when one shipment of a part for replacement should be sufficient.

The large majority of the trade has nothing to hope for from fast freight, but must rely for relief upon legislation by which either the express business may be reorganized on a basis consistent with modern business requirements, or urge the United States government to take it into its own hands to organize a parcels post. The concentration of industry jointly with the diffusion of civilized requirements in small towns and rural districts, increases the volume of express service rapidly from year to year, and the regulation of charges for transportation of parcels is therefore gradually growing into a problem of acute national importance. The cycle trade is financially interested in its proper solution more than perhaps any other branch of trade, and its members should therefore receive the movement which has now been started in New York for entering the problem upon the arena of local and national politics with all the attention to which

It is entitled. It may be labeled the Parcel Post movement, or it may become known under another name. Under whichever name it shall appear in politics it is well to remember that it spells hard dollars for the cycle retail trade.

\* \* \* \*

In many parts of the country it is believed that sales of bicycles will not increase in consequence of the reduction in list values. A dealer in West Virginia while voicing this opinion has remarked:

The trade is governed now by the natural laws of supply and demand. I don't think the reduction in price will cause much of a boom in the business. If it had come two years ago when the fever was raging it would have done lots of good. As many people ride nowadays as before, but they are not so anxious to have a new model every year. They ride a machine until it wears out. To tell the truth the bicycle business has got to be just like the buggy business. It is on the same basis and will continue to be steady from now on. There is more money now in repairing bicycles than there is in selling them. There will always be a good business in repairing bicycles.

Demand is so largely a matter of purchasing capacity that one unhesitatingly rejects this forecast of retail trade for the coming year. If it shall be proven that the buying capacity of the mass of people is as great as is cautiously inferred from the general revival in business, then assuredly bicycles will be sold in greater numbers, and their temptingly low prices will contribute powerfully to that end.

\* \* \* \*

If the United States foreign parcels post service was equal to that of Great Britain in scope, weight limit on packages to be transmitted, or rates, makers of cycle parts and sundries would be benefited greatly in their quest for foreign trade. The limited range of our foreign parcels post service is hardly less of a hindrance to the wide distribution of these goods than the provision in the laws of the United States which makes it impossible in many cases to use this service for packages weighing more than one pound. From Great Britain 11-pound packages can be shipped to almost any part of the world and, considering distance, much more cheaply than they can be sent from this country to markets in which each nation has equal postal facilities. To illustrate by the aid of countries to which we make extensive cycle shipments: British Guiana is 1,700 miles from us and 5,200 miles from England, yet on a pair of pedals forwarded to that point, weighing one pound, our postal rates would be 12 cents, while the English charge would be 20 cents, or twice as much, for carrying the package three times as far. Our cycle trade with the Hawaiian Islands is bound to be extensive, and yet with only 2,240 miles separating, as compared with 8,500 miles from England, a saddle packed so as to weigh not more than one pound would, if shipped from this country, cost 12 cents, as against 24 cents from England. A package weighing three pounds can be sent from the United States to Mexico at a postal charge of 36 cents, while from England, 5,000 miles away, the same package will only cost 24 cents.

\* \* \* \*

Shippers of bicycles and parts are in merry mood over the announcement of the intention to press the amendment of the Interstate Commerce Law and if possible secure a uniform classification of freights. There are three freight classification associations to whose edicts the bicycle shippers must bow—Eastern, Western and Southern—and although avowedly they act in harmony with each other, yet the stubborn fact remains that they reserve to themselves the privilege of doing as they see fit. From time to time they alter freight rates in various territories and regard such changes as without the control of the joint interests. It was in conformity to such license that last spring the Southwestern Traffic Association, which exercises control over freight south of St. Louis and Washington, D. C., established a new custom and charged double first-class rates on bicycles. Later, at the solicitation of the National Cycle Board of Trade, the classification was changed to one and a half times first class—the rate in vogue with the other two associations.

\* \* \* \*

Freight classification is determined by three factors—value, weight and bulk, rank being given the importance of each factor in the order named. Bicycles sell at \$50 nowadays. Buggies and vehicles are more expensive. But buggies, which are K. D.

(knocked down) in classification, are given the same rating as bicycles, and yet there is no such thing as K. D. to a bicycle. Chairs, on the other hand, are marked S. U. (set up). They are cheaper than bicycles, and yet the rate is the same as on bicycles. Desks ditto. There is enough conflict among the articles enumerated to prove the need for a thorough revision of freight classifications. The fact that 75 per cent. of bicycle shipments go by express is not an argument for the retention of the present system of discrimination. On the contrary, with the prospect of increased use of freight cars for such shipments there is all the more need for making the charges right. The railroads have firmly held to a belief—founded years ago when the profits of the industry were large—that bicycles can stand a heavier freight assessment than any other article of merchandise, and not content with this assumption, in spite of steadily declining price, they have carried their discriminating practices to all the branches of manufacture which have to do with cycle building and forced them to accept unjust classifications.

\* \* \* \*

Even after drawing upon the prominent tire markets for denials concerning their alleged participancy in the formation of a rubber trust, one is not at liberty to infer that its operations, provided it is formed, will not affect the bicycle industry. It is part of the plan to control the world's crude rubber supply. There are, however, certain difficulties in the way of accomplishing this part of the programme which, to use the language of the India Rubber World, would not be easily overcome by a single company. While the growth of rubber is confined to certain countries, the amount of territory involved is enormous. The area known to produce Para rubber is reported at more than 1,000,000 square miles, of which probably not more than one-fourth has ever been worked. Furthermore, the older districts never become "worked out," but constantly increase their production. These forests are reached by means of thousands of miles of navigable rivers, on which hundreds of steam vessels ply, representing an investment of millions of capital. The proposition to monopolize the rubber supply looks rather to controlling the market at Para, as operators in wheat deal with accumulations of stocks rather than with individual farmers. But a company which should gain control of all the rubber now existing, and even of all the producers now at work, in new fields, who would enter the business in such numbers that any attempt to control all of them would call for constant additions to the capital of the trust.

\* \* \* \*

None of the manufacturing firms which lately received letters from The Cycle Age asking for opinions on the show question will dare to taint their honor by avowing that the printed replies were "faked." For The Cycle Age has the originals in its possession.—*The Cycle Age*.

That doesn't constitute a denial that the anti-show letters run in the Chicago paper were written last summer or were addressed to the Board of Trade's secretary. The Cycle Age sneaks out of a direct answer. Let us ask what right the Cycle Age has to hold letters not addressed to itself.—*The Cycling Gazette*.

By the right arising out of this fact: The letters in question were addressed to the Cycle Age.





# Bicycle Time

This is the time of year when people begin to talk Bicycle. Are you going to buy one? If so call on our local agent in your locality and examine the

## CRESCENTS

Many improvements shown in the '99 models that ARE improvements--not mere CHANGES.

Our unequalled factory facilities and enormous output enable us to offer Crescents at the following list prices :

JUVENILE (24-inch wheels)	- - -	\$25.
CHAIN MODELS,	- - -	\$35.
BEVEL GEAR CHAINLESS MODELS,	- - -	\$60.

...CHICAGO—WESTERN WHEEL WORKS, Makers—NEW YORK

NEW TESTIMONIALS EACH WEEK.

# MILWAUKEE TIRES

PUNCTURE PROOF

Pneumatic  
Single Tube

Resilient  
Easy Riding



SHEBOYGAN, WIS., Dec. 11, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF  
TIRE Co., Milwaukee, Wis.

Gentlemen—I would like to say in regard to your Patent Puncture-Proof Tire, that they are everything they are represented to be, and have given me entire satisfaction.

Previous to getting your tire I had ridden five different sets in two months. Your tire has stood all the tests in rough handling and riding. They are a soft, easy riding tire, and I will ride no other but the Milwaukee Patent Puncture-Proof Tire.

Yours truly,  
(Signed) ARTHUR F. STEHN.

MANISTIQUE, MICH., Dec. 5, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co.,  
Milwaukee, Wis.

Gentlemen—Replying to your favor of 19th ult., will say, that I have ridden one of your tires 1128 miles on the rear wheel of my bicycle without a single puncture, the same being ridden over streets where some miscreants had put pounded glass and carpet tacks, and others were constantly being annoyed with punctures and bad cuts. Hence, will simply say that it has given perfect satisfaction in every respect and I would recommend them to all riders. Yours respectfully,

(Signed) A. VAN HARTER.

HUNTINGTON, W. VA., Nov. 28, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF  
TIRE Co., Milwaukee, Wis.

Gentlemen—I have been riding your tire since the first of September and judging from the satisfaction it has given me, I can truthfully say, "I regard it as the BEST TIRE on the market."

My vocation is such as to keep me on my wheel a good portion of each day and in all kinds of weather, and in your puncture-proof tire I have found such an article as to meet fully the demands of a constant rider and all conditions of roads.

Have ridden many other makes of tires, but now cheerfully recommend yours as the best which has thus far come under my observation.

Very truly yours,  
(Signed) J. C. LE SAGE,  
Carrier No. 2.

L. J. FLOTOW, Contractor and Builder.

OCONOMOWOC, WIS., Dec. 6, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.

Gentlemen. I have used your puncture-proof tires on my wheel for about 8 months. I do not know how many miles I have traveled on them, but with a view of testing them to my own satisfaction, used them recklessly, but find them unphased, and consider them as good to-day as when I commenced to use them. Respectfully,

(Signed) L. J. FLOTOW.

Representatives Wanted. Write for Prices and Other Information.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.

## FEAR AMERICAN COMPETITION

### FRENCH INDUSTRIES IN DANGER

**Bicycle Makers Try to Save Themselves With American Machinery—Our Motor Vehicles Best.**

After having been denied admittance to the Paris cycle show the French firm which represents several of the leading American bicycle manufacturing companies appealed to the president of the show, but he upheld the former decision. The American agents then decided to open an exhibit in their own store, and two French houses offered the use of their rooms for displays. These offers were accepted and the thirty-nine different models of American machines, representing five different makes, were put on exhibition. These displays were free. If a fair comparison can be made in such a case the private exhibition was better attended than the national show, especially by agents coming from all parts of Europe, who examined the American goods critically and placed many good orders.

#### Customers Demand American Goods.

There was much discussion in the daily press regarding the Franco-American incident, and the comment was not by any means unanimously in favor of the Frenchmen. One paper observed that it was much to be regretted that "such a good opportunity was given the Americans to show their goods." The discussion had also given too good an opportunity to many dealers in European countries to voice their opinion of American made machines. One prominent Belgian dealer stated in print that during the many years he had been in the cycle trade he had handled French, German, English, Austrian, Belgian and American bicycles and a line of bicycles made by himself, but now he sells none but American made bicycles, as his customers prefer them because they are stronger, better made and cause less annoyance than any of the others. Another big dealer in Berlin wrote that it is almost impossible for him to get enough American bicycles to supply the demand, and that unless the government takes serious steps towards increasing the duties the Americans will, inside of two years, be the masters of the bicycle market in Germany and have killed the competition of the home makers.

#### Using American Machinery and Material.

The same complaint is made by the French makers. One of the latter says: "We do not pretend to make the best bicycles in the world, but we tell our customers that what constitutes the quality of the machine is the science of the workman and the material employed; that we make use of the best machinery obtainable, and if there is any that we have not we will send for it. We are using machinery from ten firms in the United States and last year bought \$20,000 worth of American material, and are willing to get more if there is any of good quality which we have not. Then we will see if we cannot produce as good bicycles as the Americans make."

#### Automobile Trade Threatened.

A Paris daily paper, after pointing out the supremacy of our bicycles in the markets of Europe, asks how it will be with automobiles. "We have received news from our countrymen in Boston, New York and Chicago, saying that the automobiles seen there were much better, finer and less clumsy than any French automobiles and that the Americans were well prepared to compete in every respect with French or European motor vehicles. It is to be hoped that some measures will be taken to prevent the American makers

from dominating the French trade in automobiles as they have had the opportunity to do with their bicycles. Even if we do not make these vehicles as handsome and neat, it should not be an excuse for letting our own industry die out."

### CYCLE ENGINEERS' INSTITUTE

**In England the Cycle Engineers have Finally Agreed Upon the Qualifications for Members.**

The preliminary work of forming the Cycle Engineers' Institute in England is at an end. Candidates for admission as active members must "be persons not under twenty-five years of age, who, having occupied for at least four years a responsible position in connection with the science or practice of cycle engineering, or having done service which may be deemed equivalent, and being at the time of their application actually engaged in the science or practice of cycle engineering, may be considered qualified for election."

Candidates for admission as associate members must possess practically the same qualifications, except that the clause as to having occupied for four years a responsible position is omitted, and "having been engaged in such work as is connected with the science or practice of cycle engineering" is substituted. They may afterwards be transferred to the class of members.

Graduates are defined as "persons not under eighteen years of age, who are, or have been, pupils of, or who are proposed by corporate members;" while candidates for admission as associates "must be persons not under twenty-one years of age, who, from their position in connection with the science or practice of cycle engineering, may be considered eligible."

There is another clause which provides that "candidates for admission as members, associate members, or graduates may be called upon to prove by examination their knowledge of the principles of cycle engineering," but this clause will only be enforced in exceptional cases.

### HOLIDAY SIDE LINE TRADE

**Buffalo Cycle Dealers Pleased with Christmas Sale of Athletic and Photographic Goods.**

The value of a good side line in a cycle store was most thoroughly demonstrated during the holiday season in Buffalo, where every establishment with a side stock did a very gratifying business. A heavy trade was done in athletic and amateur photographic goods, particularly in the latter, much to the disgust of the exclusive photographic supply people. A very satisfactory business was also done in the bicycle trade, more machines having been sold than ever before at Christmas time, which is looked upon as a good omen.

Speaking on the question of side lines, a bicycle dealer said: "Sell a person a camera and he is sure to come back to your store for supplies. We give our customers the privilege of our dark room, and where it is desired we do the printing and developing for them, making a charge to cover materials used. We catch those that do their own work and those that do not, and in this way scores of young people visit our store daily. They are all wheelmen and wheelwomen, and the chances are even that when the riding season approaches we will be able to interest them in our bicycles. It is a business that is growing rapidly. It knows no 'dull periods' and yields a good profit."

The plant of the McKaig-Dorntge drop forging company of Buffalo was destroyed by fire January 2, at a loss of about \$25,000, which is partially covered by insurance.

## BUFFALO'S LARGE BLACKLIST

### SECOND HAND STOCK COMMON

**Fifteen Hundred "Bad Pay" Customers—Cause Dealers Heavy Loses—Machines Misrepresented.**

Buffalo, Jan. 9.—The names of more than 1,500 persons of this city appear on lists that have been submitted to the local board of trade by dealers, to be listed in the record of bad accounts that is made up yearly and furnished to those of the trade that hold membership for their guidance in selling on the credit system.

Concerns that sold on the long-time-payment plan and those that handled cheap grades are the heaviest losers, more than two-thirds of those whose names appear on the list being customers of these establishments.

Many of the persons whose names grace this document, it is said, bought under misrepresentation. Inferior grades of bicycles were sold them at high grade prices and when they discovered the trick they discontinued their payments and the machines were either returned voluntarily to the seller or the buyers suffered them to be taken from them.

#### Dealers Forget the List.

With some hundreds of others on the list it has been the custom to secure a mount on the long-time-payment contract and after paying \$10 or \$15, which under this plan would be about the amount paid at the close of the season, refuse to make further payments and the dealer would be forced to take back the machine which would then be second hand and which had to be sold at a loss. These people appear on the list each year and it would seem that dealers would profit by the experience of others, but in the eagerness of the average dealer to make a sale the "slow pay" or "dead beat" characters on the list are overlooked.

As a result of these conditions there are many second hand bicycles going into stock on which much loss will be sustained.

#### Rex Cycle Co. in Sheriff's Hands.

The factory and stock of the Rex Cycle company of Chicago, which manufactured three-wheeled anti-vibration bicycles at Seventy-second and Wallace streets, was taken possession of by the sheriff last Saturday morning on an attachment writ for \$27,456.67. The claim is for money advanced on notes and the assets of the company. The retail store at 280 Wabash avenue was vacated about a month ago.

#### Spaulding Screw Plant in Operation.

The Spaulding Machine Screw plant of Buffalo is being operated by Mr. Keim, who recently bid it in at foreclosure sale. It is not known whether he will operate it permanently or not. A large number of orders remained unfilled and with those received since the sale there is now enough work to keep the plant busy for some time.

#### Will Purchase a Going Business.

Mr. Samuel Snell is desirous of purchasing a going business of moderate size. He would not object to buying an interest in a concern whose directors appreciate the value of an experience in the cycle trade such as he possesses. Any firm desirous of communicating with Mr. Snell is at liberty to address him at Toledo.

The attendance at the Paris cycle show, which closed December 26, was almost 70,000, the greatest daily attendance having been 22,000, admitted on Wednesday, December 18.

# THE CHICAGO CYCLE SHOW

## Sundries and Accessories More Fully Represented than Bicycles—The Exhibition in Detail

Last Saturday evening the Chicago cycle show, promoted and managed by N. H. Van Sicklen, was opened to visitors in the Keith building on Wabash avenue. It occupies two floors and comprises besides bicycles, cycle sundries and accessories, also motor vehicles.

A portion of the space is set aside where the exhibitors of the motor vehicles may drive up and down, steering their way adroitly around pillars and other obstacles. The same space is utilized by riders of the Giraffe bicycle, carrying an advertisement, and other bicycle riders who are showing special machines such as one of the Cantilever pattern and one geared to 324, and by anybody who desires to try other exhibits, especially saddles, by actual riding. This department absorbs much of the public's attention, but it is stated by many exhibitors that the show is also giving satisfactory results from a trade standpoint.

### Local Tone Apparent.

In general effect it is in no way to be compared with the National shows of former years.

The limited space alone effectually prevents any general impression of splendor and magnificent proportions. The absence of the majority of cycle manufacturers who are not identified with Chicago, imparts a distinctly local character to the exhibition. It is a local Chicago show, where, however, many wholesale dealers in sundries find it convenient to congregate to compete for the trade of dealers. The net results of the show, considered as a trading ground, cannot yet be estimated.

The public's attendance has been small in the daytime, but sufficient to fill the space comfortably in the evenings. No great enthusiasm has been manifested by the visitors, but the mere fact that several thousand Chicago people have proved willing to pay an admission to see cycles and cycle accessories in the month of January, appears to have inspired the trade in Chicago with more hopes for a brisk spring-retail trade than were entertained before the show was opened.

The early consummation of wholesale deals has been one of the chief topics of conversation among the exhibitors. By comparison of notes it seems to have been found that nearly all manufacturers had disposed of an unusually large percentage of their products before January 1.

From the following brief account of the show, the trade at large will be enabled to form an estimate of its general character, and of the scope of the business of each exhibitor. In several instances it was found impossible to make the list absolutely complete, nobody being present at the stand when The Cycle Age reporter called; but the few omissions which are due to this cause, are of small significance for forming a generally correct idea of the character of the exhibition as a whole.

### American Chainless Wheel Co., Chicago.

Stand 155.—The exhibitor is located at 53 Dearborn street, Chicago, and shows an anti-shock bicycle with one 28-inch driving wheel, a 16-inch trailing wheel and a 20-inch steering wheel. The weight of it is to be reduced to about 22 lbs. The model shown weighs 32 lbs. It

is similar to the Rex bicycle in principle but shorter.

### Acme Mfg. Co., Reading, Pa.

Stands 7 and 8.—Exhibits: Stormer and Pennant bicycles and Mars, a \$25 model, and a double diamond tandem convertible to combination. Several points of equipment which were formerly used on Stormers only are now also features of the Pennants.

Model.	Style.	Retail Price.	Wt., lbs.
Stormer men's 25.....	Chain	\$40	24
Stormer ladies' 26.....	Chain	40	25½
Pennant men's 21.....	Chain	35	26
Pennant ladies' 22.....	Chain	35	26½
Mars. 27.....	Chain	25	26
Mars 28.....	Chain	25	27
Stormer juvenile 1 and 2.....		20	..
Stormer juvenile 3 and 4.....		25	..
Stormer tandem.....	Combination	60	48

### American Electric Vehicle Co., Indianapolis.

Stand 62.—The vehicles manufactured by this firm are driven by storage batteries and are mainly of the light road wagon pattern mounted on bicycle pattern wheels.

Model.	Style.	Retail Price.	Wt., lbs.
Runabout .....	Electric	\$1,000	900

### C. K. Anderson, Chicago.

Stand 121.—Exhibit: E-Klips toe clips, Chalfant saddle clamps, Collin's child's seat, mother of pearl grips, Ventilated Grip Co.'s sponge rubber, flexible Perfection and Relief grips in several styles and coverings, Frederick's adjustable handle bar, Dexter parcel and camera carriers, Red Cross cements, enamels, supplies, ovens, vulcanizers and brazers, Shirley's detachable dress guards, Lobdell maple single piece rims and guards, and Climax pumps.

### Ariel Cycle Mfg. Co., Goshen, Ind.

Stand 121.—Several models of men's and ladies' Ariels all having flush joints and nicked arch crowns are exhibited. The hanger parts hubs, etc., are of home manufacture. The company also make a pair of machines fitted with the Sager roller gear.

Model.	Style.	Retail Price.	Wt., lbs.
Men's 50 .....	30 in. wheels	\$65	25½
Racer 51 .....	Chain	60	21½
Men's 52 .....	Chain	50	24½
Ladies' 53 .....	Chain	50	24½
Men's 54 .....	Chain	40	25
Ladies' 55 .....	Chain	40	25½
Tandem 56 .....	Double diamond	75	46
Tandem 57 .....	Combination	75	48
Men's 58 .....	Sager Chainless	75	26½
Ladies' 59 .....	Sager Chainless	75	26½

### Eugene Arnstein, Chicago.

Stand 5.—This firm exhibits in a general way a representative collection of its large sundry line, which is recognized as one of the most complete from which the retail dealer may draw his supplies. The firm expects no special results from the show, but is represented merely to avoid invidious comparisons. Location of exhibitor, 86 and 88 West Lake street, Chicago.

### Artemis Plating Works, Chicago.

Stand 70.—Exhibits: Many styles of plain, ram's horn and adjustable bars, seat posts and Artemis hubs, and rat trap and combination Runaway pedals. Bar stems are shown with and without expanders.

### Badger Brass Mfg. Co., Kenosha.

Stand 73.—The well known Solar lamp exhibited here, while not so small and light as some of the more recent acetylene lamps placed on the market, merits the

distinction of being very reliable and safe in its operation and of burning for a long time without recharge. The two styles of carriage lamps also exhibited are in operative principle but enlarged patterns of the cycle lamp.

Model.	Style.	Retail Price.	Wt., oz.
Solar cycle lamp.....	Acetylene	\$3.50	31
Solar coach lamp....	Acetylene	15.00	pair.
Solar dashb'd lamp..	Acetylene	9.00	pair.

### Beckley-Ralston Co., Chicago.

Stand 41.—Exhibits: D. & J. and Fauber hangers, Thompson frame sets and fittings, Crosby & Mayer's fittings, Bridgeport and Baldwin chains, Gordon and Brooks' saddles, Solar, Pony and Brilliant acetylene lamps, 20th Century gas and oil lamps, Excelsior spokes, Claus handle bars, rigid handle bars, Star and Record pedals, W. & E. hubs and expanders, Smith hubs Diamond tires and Shelby steel tubing.

### David Bradley Mfg. Co., Chicago.

Stand 63.—The line of bicycles displayed has as its leader the well known truss frame America. The company is acting along the same line as are many other makers in that it builds several cheaper priced patterns so that agents handling the America need not buy their lower priced machines from other houses. A 30-inch wheeler is also shown.

Model.	Style.	Retail Price.	Wt., lbs.
America men's 27....	Truss frame	\$50	24
America ladies' 28....	Truss frame	50	25
Oriole men's 29 .....	Chain	35	24
Oriole ladies' 30 .....	Chain	35	25
Bradley men's 31.....	Chain	40	24
Bradley ladies' 32.....	Chain	40	25
Bradley special.....	30 in. wheels	45	24
Tandem 25.....	Double diamond	100	45
Tandem 26.....	Combination	100	48

### A. D. Brewster, Chicago.

Stand 137.—This firm handles Lloyd's two-piece hanger fittings and makes a specialty of frame sets ready for assembling. He also carries the following finished bicycles:

Model.	Style.	Retail Price.	Wt., lbs.
Men's and ladies....	30 in. wheels	\$40	25

### Brown-Lewis Cycle Co., Chicago.

Stands 33 and 40.—This company has acquired control of the Marion, Ind., bicycle factory where Halladay bicycles were made. This name will be continued by Brown-Lewis company. They also make Syrian bicycles and have the Western agency for Keating bicycles, which are recognized as one of the most popular in the East among high-grade machines. Two models of Windsor bicycles of Charles H. Sieg's manufacture are also marketed by them as during the past year.

Model.	Style.	Retail Price.	Wt., lbs.
Syrian special.....	30 in. wheels	\$45	24
Hallady men's.....	Chain	40	..
Hallady ladies'.....	Chain	40	..
Syrian men's and ladies....	Chain	40	..
Windsor men's and ladies..	Chain	45	..
Winfield A (2).....	28 & 30 in. wheels	35	..
Winfield B (2).....		30	..
Winfield special.....		22.50	..
Keating special.....	30 in. wheels	75	21
Keating men's 90.....	Chain	50	22
Keating ladies' 91.....	Chain	50	22
Keating men's 80.....	Chain	40	22
Keating ladies' 81.....	Chain	40	20
Mattabasett (2) .....	Chain	35	25

### W. J. Buckley & Co., New York.

Stand 149.—W. J. Buckley & Co. who hold the Electro company's western agency make an attractive sale exhibit entirely devoted to demonstrate the virtues of the well-known, small-sized Electro acetylene lamp.

Model.	Style.	Retail Price.	Wt., oz.
Electra lamp .....	Acetylene	\$3.50	14

### Bullis Ball Gear Co., Rochester.

Stand 154.—The company exhibits the Bullis ball-roller gear, which was recently described in this paper, and also Duckworth chains, and C. & T. one-piece hang-

ers, C. & T. expanders and C. & T. seat post clusters.

Model.	Style.	Retail Price.	Wt., lbs.
Spalding roadster..	Bullis Ball Gear.		
O. K. men's .....	Chain	\$40	24
O. K. ladies' .....	Chain	40	26
O. K. men's.....	30 in. rear, 28 in. front	50	24
O. K. ladies.....	30 in. rear, 28 in. front	50	26
O. K. men's .....	30 in. wheels	40	26

**Cantilever Cycle Works, Chicago.**

Stand 156.—The exhibitors who are located at 30 E. Washington street, Chicago, have the sole U. S. agency for the Pedersen Cantilever bicycle, somewhat modified, which is being built to order for \$75 at 937 Western avenue. The capacity of the factory will depend upon orders. The handlebar in the new model is adjustable. The makers will use pedals, hubs and hangers of substantial construction, and the bicycle will weigh complete 17 to 18 lbs.

Model.	Style.	Retail Price.	Wt., lbs.
Men's roadster....	Cantilever frame	\$75	17
Men's roadster....	Cantilever frame	75	18
Men's roadster....	Cantilever frame	75	19
Ladies' roadster..	Cantilever frame	75	15½

**Carlisle Mfg. Co., Chicago.**

Stand 142.—The Carlisle company continues to make a specialty of racing machines fitted with 30-inch rear and 28-inch front wheel, among their other models. They are building up a considerable trade in completely equipped juvenile machines and exhibit "the smallest bicycle in the show."

Model.	Style.	Retail Price.	Wt., lbs.
Carlisle men's .....	Tandem	\$80	44
Carlisle men's .....	Chain	50	22½
Carlisle men's .....	30 in. wheels	50	23
El Mahdi men's .....	Chain	40	23
El Mahdi ladies' .....	Chain	50	22½
Dart men's .....	Chain	30	23
Dart ladies' .....	Chain	30	23½
Carlisle racer.....	Chain	65	19

**Chicago Handle Bar Co., Chicago.**

Stand 34.—The principal novelty of interest to the trade is an addition to the company's large variety of bars representing its own construction in the form of the well known Ideal pattern which the company is now prepared to manufacture under Pope license.

**H. W. Coolidge & Co., Chicago.**

Stand 52.—The exhibiting firm is western representative of Kokomo Rubber Co., who make Defender Special, Clover-Leaf and Oxford tires, the Newark Cycle Specialty Co. and the Frank E. Bundy Lamp Co. The exhibitor's location is 135-137 East Lake street, Chicago. Further details of the lines carried by this firm will be given in a subsequent issue of this paper.

Model.	Style.	Retail Price.	Wt., lbs.
Defender special .....	Road	\$7.50	4
Clover Leaf .....	Road	9.00	3¾
Oxford (unguaranteed) .....	Road	5.00	4
Defender .....	Cactus	8.00	4¼
Defender .....	Tandem	8.50	4½
Clover Leaf .....	Tandem	11.00	4
Clover Leaf .....	Racer	9.00	3½

Model.	Style.	Retail Price.	Wt., oz.
Bundy lamp .....	Gas	\$3.50	20

**Cushman & Denison, New York.**

Stand 47.—The leading oiler in the exhibit is the "Perfect." which is in the form of a small round cylinder when closed and is fitted with an oil stop arrangement so that it is impossible for the oil to leak out into the tool bag or rider's pocket.

Model.	Retail price.
Perfect oilers .....	\$.25
Star oilers .....	.10
Leader oilers .....	.10
Gem oilers .....	.05

**G. W. Cole & Co., New York.**

Stand 49—Exhibit: Cole's well-known "3-in-one" cycle oil, puncture healing fluid, chain lubricant, and such cycle equipments and sundries as toe clips,

baby seats, luggage carriers, nipple wrenches and spring seat posts. All articles are of Cole manufacture.

**Cutting & Kaestner, Chicago.**

Stand 165.—Saddles and toolbags form the exhibit. The firm is dealing partly through wholesalers and partly through bicycle manufacturers. Lately the company has also built up a considerable export trade.

Model.	Style.	Retail Price.	Wt., oz.
Cutting A.....	Racing	\$2.50	16
Cutting B.....	Racing	2.75	17
Cutting C.....	Felt padded	3.00	17½
Cutting D.....	Felt padded	3.25	18
Cutting E.....	Felt padded	2.00	16
Cutting F.....	Felt padded	2.25	17
Cutting G.....	Leather top	1.50	15
Cutting H.....	Wood base	1.75	16
Cutting I.....	Felt padded	2.00	16
Cutting J.....	Felt padded	2.25	16
Cutting P.....	Wood base, padded	3.00	17
Cutting R.....	Wood base, padded	3.25	18
Cutting L.....	Pneumatic	5.00	15
Cutting 2.....	Pneumatic	5.00	15
Cutting 3 .....	Pneumatic	7.00	16
Nine other patterns..	Steel base	\$1-\$2.25	15-18

**Edmonds & Wetzel, Chicago.**

Stand 138.—This firm shows the Perpetual Pedal, which consists of only four parts. The bearings are similar to hub bearings at both ends of the spindle, spin perfectly and are well adapted to resist wear. The company is located at 115 Monroe street, Chicago. A description of their pedal will be found in a subsequent issue of this paper.

Model.	Style.	Retail Price.	Wt., oz.
Men's .....	Rat-trap	\$3.00	12
Ladies' .....	Combination	3.10	14

**Excelsior Supply Co., Chicago.**

Stands 17 and 25.—Exhibits: Everything for building bicycles. Having built up a very substantial trade with dealers and builders who operate on a large scale, the Excelsior company has found the show a good opportunity for proving to the trade that they have acquired exceptional facilities for reaching a large class of trade, whom jobbers usually fail to secure. Thus Thompson fittings, Shelby tubing, Gilliam saddles, Aurora fittings, etc., are found represented in their exhibit, notwithstanding other representation of the same lines.

**Fanning Cycle Mfg. Co., Chicago.**

Stand 23.—Exhibits: Fanning bicycles. The leading color in frame and equipment is cardinal red. Among construction details a new two-piece hanger with hollow axle and a simple form of fastening is noticeable. The "Trilby" sprocket design is used throughout and is patented. A new system for securing cups in hanger and hubs is employed.

Model.	Style.	Retail Price.	Wt., lbs.
Men's L.....	Chain	\$40	24
Ladies M.....	Chain	40	25
Men's J.....	Chain	35	24
Ladies K.....	Chain	35	25
Suburban men's.....	Chain	30	24
Suburban ladies'.....	Chain	30	25
Roadster.....	30 in. wheels	50	25
Racer .....	Chain	50	21

**W. H. Fauber, Chicago.**

Stands 38 and 45.—The exhibit of the Fauber one-piece hanger is sufficiently imposing to leave a lasting impression on everyone who sees it, representing the well-known patented Star design of sprocket together with the hanger in colossal size and a new-clover-leaf design of sprocket carried by a statuary figure. The whole forms a rotating monument of one-piece hanger success. The application of one-piece hangers to multiple machines is shown in another part of the exhibit.

**Fischer Equipment Co., Chicago.**

Stands 55, 56 and 57.—The exhibit of Woods' Motor Vehicles comprise an electric hansom, an electric Stanhope and an electric Runabout, all equipped in this company's excellent style. On the second floor of the show building an opportunity

is given visitors to ride in another carriage of this manufacture and ascertain how much superior they are to horse-drawn vehicles in regard to easy management, steering and stopping.

Model.	Style.	Retail Price.	Wt., lbs.
Hansom .....	Electric	\$3,050	2,600
Stanhope .....	Electric	1,625	1,250
Road wagon.....	Electric	750	1,100

**Fowler Cycle Works, Chicago.**

Stands 1, 2, 9 and 10.—Frank Fowler's large exhibit is a bright-colored spot in the show. Sunbeam spokes, Thompson diamond forks, red enamel, good nickeling profusely employed, and effective decoration and sale tickets combine to attract the eye. It is said that Mr. Fowler will very soon have his entire product for next season ready at the factory and will then commence to astonish the world by pushing the sale department.

Model.	Style.	Retail Price.	Wt., lbs.
Sunbeam men's .....	Chain	\$41.50	25
Sunbeam ladies' .....	Chain	43.00	25
Fowler men's 8 .....	Chain	33.50	25
Fowler ladies' 8 .....	Chain	35.00	25
Fowler men's 7 .....	Chain	28.00	25
Fowler ladies' 7 .....	Chain	28.00	25

**Fulton Machine Works, Chicago.**

Stand 54.—The exhibit comprises a full line of Thistle bicycles handsomely finished in dark enamels. The machines have the same tasty, rakish lines and general appearance which have made Thistle cycles attractive in the past. Models bearing the nameplate title Fulton complete the exhibit.

Model.	Style.	Retail Price.	Wt., lbs.
Thistle racer .....	Chain	\$50	20
Thistle ladies' .....	Chain	50	24
Fulton Men's (2) .....	Chain	40	23
Fulton ladies' .....	Chain	40	24

**B. F. Goodrich Co., Akron.**

Stand 48.—The Goodrich company exhibit a full complement of the tires of their manufacture as scheduled below. They are confident of reaping the benefit of a policy which refused to mix rubber with foreign substances to such an extent that repair of tires became impracticable. As a result some of the Goodrich tires are this year specified even for cheap bicycles.

Model.	Style.	Retail Price.
Palmer .....	Quad	\$16.00
Palmer .....	Tandem	15.00
Palmer .....	Plank road	15.00
Palmer .....	Road	12.00
Palmer .....	Light racer	12.00
Palmer .....	Mexican	15.00
Goodrich .....	Road	10.00
Goodrich .....	Semi-road	10.00
Goodrich .....	Tandem	15.00
Goodrich (999) .....	Quad	14.00
Goodrich .....	Triplet	14.00
Goodrich .....	Tandem	14.00
Goodrich .....	Road	9.00
G. & J. (detachable).....	Heavy tread	11.00
G. & J. (detachable).....	Tandem	11.50
G. & J. (detachable).....	Road	10.00
Goodrich (M. & W.).....	Road	9.00
Buckeye (detachable).....	Sulky	10.00
Bailey (non-slipping).....	Road	10.00

**Goodyear Rubber Co., Akron.**

Stand 148.—The exhibit is in charge of A. T. Kastler, Chicago, representative of the company and E. J. Welch who takes care of the company's interests west of Pittsburg. Aside from the tires the Straus curved plug which conforms naturally to the inner curve of tires is of interest in the exhibit. A demonstration is made of a vulcanized repair of the company's cheapest tire.

Model.	Style.	Retail Price.	Wt., lbs.
Ajax .....	Corrugated	\$10.00	4
Goodyear light road.....	Smooth	10.00	3¼
Pathfinder .....	Corrugated	8.00	3½
Climax .....	Corrugated	6.00	3¾
Tip-Top .....	Unguaranteed	5.00	3¾
Strauss pedal rubber.....		.35	

**Graham Cycle Co., Chicago.**

Stand 163.—This company has until lately been known only locally, occupying a prominent position on the West Side of Chicago. The company is now establish-

ing agencies throughout the western states and is soliciting business on the merit of its construction.

Model.	Style.	Retail Price.	Wt., lbs.
Graham C men's.....	Chain	\$50	22
Graham D ladies.....	Chain	50	24
Graham mens.....	Tandem	75	35
Graham 1.....	30 in. wheels	60	26

Hartford Rubber Works Co., Hartford.

Stand 6.—U. M. Penrose, manager of the Chicago branch, is in charge of the company's exhibit, which is shown and explained with chief reference to the reputation for high-class production previously earned by the company. A special vulcanizer is part of the exhibit.

Model.	Style.	Retail Price.	Wt., lbs.
Hartford 70 .....	Road	\$8	4
Hartford 80 .....	Light road	10	4
Hartford 75 .....	Racing	10	2
Hartford 77 .....	Regular road	10	4
Hartford 77 H.....	Tandem	10	4½
Hartford juvenile .....			

Hine-Wyatt Mfg. Co., Chicago.

Stand 146.—The acetylene gas lamps here exhibited have as their main feature the water regulation which is controlled by the pressure of the gas in the generating chamber and is therefore automatic. The lamp may be turned out and set away and then relit without any surplus gas having escaped.

Model.	Style.	Retail Price.	Wt. lbs.
Octagon lamp .....	Self-reg. gas	\$4.00	1 lb.
Octagon lamp.....	Self-reg. gas	2.50	14 oz.

Independent Supply Co., Chicago.

Stand 69—This firm, which jobs cycle supplies and fittings of all kinds, has in its exhibit a display of Independent expanders, Claus adjustable bars, Crosby & Mayer's frame sets and fittings, Fauber, D. & J. and Lloyd hangers, Standard electrically welded seat posts, New Departure bells, Baldwin chains, Standard and Independent saddles, Smith and Stockton hubs, Record, Velox and Bennet pedals and the Whitely exerciser.

Iven-Brandenburg Co., Chicago.

Stands 12, 13, 14 and 15.—This firm exhibits the Sager Gear Co.'s chainless bicycle gear as incorporated in Orient chainless machines, Aurora Automatic Machine Co.'s fittings, Brandenburg pedals, Tucker wood rims, the Morse-Keefer company's spokes, Lefever Arms Co. chains, Sager saddles, the Hertel motor carriage made by the Oakman Motor Vehicle Co. of Greenfield, Mass., with Chicago office at 131 Lake street. Location of exhibitor, Chicago and New York.

Model.	Style.	Retail Price.	Wt., oz.
Sager men's 1 .....	Semi-flexible	\$3.00	18
Sager ladies' 2 .....	Flexible	3.30	19
Sager men's 4 .....	Flexible	3.30	20
Sager men's 11 .....	Hair padded	2.20	18
Sager men's 12 .....	Hair padded loop spring	2.40	19
Sager ladies' 14 .....	Hair padded loop spring	2.50	22
Sager ladies' 15 .....	Hair padded coil spring	2.50	24
Sager men's 34 .....	Hard top	2.70	15
Sager men's 33 .....	Padded	2.80	16

Jenkins Cycle Co., Chicago.

Stand 36.—As familiar to Chicago riders as the distinguished general from whom they derive their name, the royal blue Napoleon bicycles at this exhibit are shown as representatives of conservative highgrade cycle building. The Josephine ladies' models are exhibited in two patterns.

Model.	Style.	Retail Price.	Wt., lbs.
Napoleon .....	Chain	\$50	24
Josephine .....	Chain	50	25
Napoleon A.....	Chain	40	23
Josephine A.....	Chain	40	25
Napoleon B.....	Chain	30	..

Judd Leland & Stevens Mfg. Co.

Stand 137—In this exhibit are fourteen styles of foot pumps, one hand pump, and a power pump and tank for repair men who desire to inflate tires from a

tank of compressed air. Pump leathers for all sorts of air pumps are also shown. The exhibitors' location is Clifton Springs, N. Y.

Kells Mfg. Co., Cleveland.

Stand 11.—Exhibits: Kelly handlebars and Kells saddles. C. E. Weaver is in charge. The best display of Kelly bars is not at this stand, but on the numerous bicycles at the show to which they are fitted.

Model.	Style.	Retail Price.
Mens' 60.....	Anatomical	\$2.00
Ladies' 70.....	Anatomical	2.00
Mens' 10.....	Wood tree, hard top	2.50
Mens' 11.....	Wood tree, padded	2.50
Ladies' 12.....	Wood tree, padded	2.50
Racer 13.....	Small tree, hard top	2.00
Racer 14.....	Small tree, padded	2.00

Kirk Mfg. Co., Toledo.

Stand 37.—In the Yale bicycles exhibited is incorporated a new construction of two-piece hanger in which the modern principle of locking the free crank by means of the sprocket wheel is employed. By a clever special device perfect registry between the holes on the sprocket ring and those in the crank flange or spider is secured. The company's special bracket construction makes a very substantial flush connection with the frame tubes possible.

Model.	Style.	Retail Price.	Wt., lbs.
Yale men's and ladies.....	Chain	\$50	24
Yale racer (to order).....	Chain	60	21
Yale special .....	30 in. wheels	60	26
Yale men's and ladies.....	Chain	35	24

C. H. Larson, Chicago.

Stands 3 and 4.—Exhibits: Sterling bicycles, which are represented locally with reference to the retail trade, and Trinity bicycles, wholesale and retail. Trinitys are before the visitors to the show as a line in which modern design, such as three-crown construction and direct, unbent spokes, is maintained in all patterns down to the price of \$35. Location of exhibitor, 119 Dearborn street, Chicago.

Trinity Models.	Style.	Retail Price.	Wt., lbs.
Men's G.....	Chain	\$65	23
Ladies' H .....	Chain	65	24
Racer I.....	Chain	65	21
Men's J.....	Chain	50	24
Ladies' K.....	Chain	50	25
Men's L.....	Chain	35	24
Ladies' M.....	Chain	35	25
Tandem.....	Double diamond	100	40

Sterling Models.	Style.	Retail Price.	Wt., lbs.
Roadster C.....	Chainless	\$75	..
Ladies' .....	Chainless	75	..
Racer 90.....	Chain	65	20
Roadster 52.....	Chain	50	22½
Ladies' Diamond 42 .....	Chain	50	22
Ladies' 82.....	Chain	50	23
Tandem 16.....	Convertible	85	40
Tandem 26.....	Double diamond	75	38

H. A. Lozier & Co., Toledo.

Stand 16.—Aside from the models exhibited the chief feature of the stand is an ingenious arrangement with billiard balls for illustrating the advantages of the Burwell ball separating device which is used in the hubs and hangers of Cleveland bicycles. The demonstration never fails to convince on-lookers of the merit of a ball-bearing system, by which the revolving of each ball in a bearing is prevented from antagonizing the revolving of the adjacent balls. The company will shortly place a Cleveland pattern fitted with Sager gear in the market.

Model.	Style.	Retail Price.	Wt., lbs.
Men's 61.....	Chain	50	24
Ladies 62.....	Chain	50	25
Men's 66.....	Chain	75	24
Ladies' 67.....	Chain	75	25
Men's 69.....	30 in. wheels	75	27
Men's 64.....	Chain	75	21
Ladies' 65.....	Chain	75	21
Racer 68.....	Chain	75	19

Liberty Cycle Co., Bridgeport.

Stand 53.—In a mechanical way the five bearing tooth sprocket which is fitted to all Liberty cycles and the special sharp cornered semi-arch fork crowns are the

most notable features of the models exhibited. There are no medium grade machines in the line.

Model.	Style.	Retail Price.	Wt., lbs.
Liberty men's (61).....	Chain	\$50	23½
Liberty tandem.....	Double diamond	75	44
Liberty racer.....	Chain	60	21½
Liberty ladies'.....	Chain	50	24½

Manson Cycle Co., Chicago.

Stand 64.—The 3-crown frame which has been a feature of Manson bicycles since their introduction in the market is a prominent feature of this exhibit. Lower priced patterns without the 3-crown construction are displayed and also a three-wheeled cycle ambulance. Forgings and sheet metal fittings are used in the makeup of the frames.

Model.	Style.	Retail Price.	Wt., lbs.
3 Crown racer.....	Chain	\$60	20
3 Crown ladies'.....	Chain	50	25
2 Crown roadster.....	Chain	40	24½
2 Crown ladies'.....	Chain	40	25
Model 31 (2).....	Chain	30	23

March-Davis Cycle Mfg. Co., Chicago.

Stand 21.—Exhibits: March-Davis and Admiral bicycles, which are manufactured principally for the jobbing trade, with the equipment which may be demanded on each case. They show an interesting forging for a one-piece hanger mechanism.

Model.	Style.	Retail Price.	Wt., lbs.
March-Davis, men's and ladies .....	Chain	\$40	23½-24½
Admiral men's and ladies.....	Chain	30	23½

Mead Cycle Co., Chicago.

Stand 72.—Exhibit bicycles at low prices. The company has just purchased the factory and stock formerly known as the Iroquois Cycle Works and will turn out Iroquois bicycles of the construction generally known to the trade.

Model.	Style.	Retail Price.	Wt., lbs.
Stearns special .....	Chain	\$60	21
Iroquois .....	Chain	50	26
Sentinel special .....	Chain	40	25
Sentinel A .....	Chain	35	22
Albatross A .....	Chain	30	24
Albatross B .....		25	24
Albatross .....	30-in. wheels	40	27
Tuscon .....		20	25
Dayton road racer 32 .....	Chain	75	22
Dayton racer 33 .....	Chain	75	20
Dayton ladies' 31 .....	Chain	75	24
Dayton men's 35 .....	Chain	50	24
Dayton ladies' 36 .....	Chain	50	22
Victor men's 43 .....	Chain	50	23½

A. D. Meiselbach, No. Milwaukeee.

Stands 27, 28 and 29.—The exhibit comprises a large number of sizes of Earl models in grades A and B. They are all fitted with Kundtz rims. This and a new hanger for grade A are about the only new points in construction. The details of fittings and manufacturing methods are laid open for all visitors in so far as possible.

Model.	Style.
Earl men's A.....	Flush joint.
Earl ladies' A.....	Flush joint.
Earl Men's B.....	Outside joint.
Earl ladies' B.....	Outside joint.
Earl boys'.....	20 in. wheels.
Earl girls'.....	20 in. wheels.
Earl boys'.....	24 in. wheels.
Earl girls'.....	24 in. wheels.

Montgomery Ward & Co., Chicago.

Stands 122, 123, 124—Exhibits an assortment of guns, ammunition and sportsmen's goods.

Monarch Cycle Mfg. Co., Chicago.

Stand 46.—The only notable new features in the construction of the Monarchs exhibited are the handle bar expander and the seat cluster and rear fork construction whereby the appearance is made neater than heretofore. The new double diamond tandem may be readily changed from double to single steering and presents as neat an appearance when the steering connections are removed as when they are in place.

Model.	Style.	Retail Price.	Wt., lbs.
Monarch ladies' 67 .....	Chain	\$50	25
Monarch men's 68 .....	Chain	50	25
Cooper Special .....	Chain	60	19-21

Model.	Style.	Retail Price.	Wt., lbs.
Men's tandem	Chain	75	43
Defiance ladies' 63	Chain	35	25
Defiance men's 64	Chain	35	25
King	Chain	..	25
Queen	Chain	..	25

**M. H. Naber & Co.**

Stand 128.—The exhibitor has commenced the manufacture of saddles in which the spring is arranged in a new and seemingly very appropriate manner, the details of which cannot be published at present, foreign patents being pending. The maker is located at 56 Fifth avenue, Chicago.

Model.	Style.	Retail Price.	Wt., oz.
Large men's	.....Torsion Spring Support	\$3.00	18
Small men's	.....Torsion Spring Support	3.00	16
Ladies	.....Torsion Spring Support	3.50	16

**National Cement & Rubber Co., Rochester.**

Stand 65.—In the exhibit are two patterns of High Pressure brazers, a double walled enameling oven, steam vulcanizers, and a full line of the firm's rubber and wood rim cements.

**O. P. Nelson, Chicago.**

Stand 157.—The exhibitor who is known as the winner of the Chicago road race in 1896 shows a number of \$50 bicycles of his own manufacture and a quadruplet.

Model.	Style.	Retail Price.	Wt., lbs.
Nelson Special	.....30 in. wheels	\$55	24
Nelson Special	.....Chain	50	22
Nelson ladies'	.....Chain	50	23
Tandem	.....	80	40
Quad	.....	175	90

**Newark Cycle Specialty Co., Newark.**

In the saddles shown in this exhibit no especial attempt at novelty in design has been made, it being the plan of the company to furnish two popular patterns of saddles in substantial form at moderate figures.

Model.	Style.	Retail Price.	Wt., oz.
Oaks	.....Brooks pattern	\$2.00	18
Newark special	.....Padded	1.50	16

**Otis Bicycle Co., Chicago.**

Stand 26.—Exhibits: Otis bicycles in three grades. Thirty-inch wheels are a prominent feature in the highest price, the \$50 model, for men and women. The hubs in these patterns are of Tazewell manufacture, in which the ball travel is reduced to the least possible, thereby reducing friction. The hanger is the Ewald pattern, with eccentric chain adjustment.

Model.	Style.	Retail Price.	Wt., lbs.
Men's special	.....30 in. wheels	\$50.00	25
Ladies' special	.....30 in. wheels	50.00	25
Men's A	.....Chain	35.00	23
Ladies A	.....Chain	35.00	24
Leader men's	.....Chain	27.50	23
Leader ladies'	.....Chain	27.50	24

**Overman Wheel Co., Chicopee Falls.**

Stand 43.—Exhibits: Victor bicycles. These are made with all parts interchangeable when possible. Only one grade is produced, and a great economy is thereby effected. Nuts, washers, axles, etc., from the diamond frame model may be used for the drop frame model or for a diamond frame of different size. Every effort is made to save by economical shop practice what is expended in high-class material. In these words the company's whole policy is expressed.

Model.	Style.	Retail Price.	Wt., lbs.
Victor men's (43)	.....Chain	\$50	23½
Victoria ladies' (44)	.....Chain	50	25

**Pauli Mfg. Co., Chicago.**

Stand 164.—The exhibit is the Pauli Bright Light acetylene lamp, which is so constructed that the water has but one fixed ratio of feed, so far as any action of the rider is concerned. He cannot increase or diminish the flow, but the gas pressure regulates the flow automatically through back pressure operating by means of an air pocket and water lock.

A complete description of this feature will be found in a subsequent issue of this paper.

Model.	Style.	Retail Price.	Wt., oz.
Pauli lamp	.....Acetylene	\$3.50	21

**Park City Mfg. Co., Chicago.**

Stand 135.—The exhibit is composed of the company's D. & J. two-piece crank hangers in which the parts divide at the right end of the axle. Hangers for single machines and for multiplerts are also shown, the display including groups of hangers built into the lower parts of multipler frames.

**K. Peterson and F. A. Hastings & Co., Chicago.**

Stand 22.—Mr. Peterson exhibits Baldwin chains, P. & F. saddles, Kirkpatrick saddles and Worcester Ferrule & Mfg. Co.'s fittings, Columbia Mfg. Co.'s lap-brazed tubing. The Hastings Co. exhibits goods made by Stockton Mfg. Co., Louis Rastetter & Son, the line carried by Hermann Boker & Co., and the grips made by Grand Rapids Grip company. The two exhibiting firms are popularizing these lines with wholesale dealers. Location of exhibitors, 159 Lake street, Chicago.

**Plew Saddle Co., Chicago.**

Stand 71.—The Plew soft-nosed saddle is still the principal article made and marketed by this firm. But around this nucleus a considerable sundries business has been built up comprising, as shown by the exhibit, Duthie chains, Excelsior balls, Eli and Elyria pedals, Indiana chains, India tires, Collmer hubs, Behse wood guards, Perfection chain guards, and Robinson grip fasteners.

Model.	Style.	Retail Price.	Wt., oz.
Plew men's	.....Pneumatic pommel	\$2.50	16
Plew ladies'	.....Pneumatic pommel	2.50	16

**Pope Mfg. Co., Hartford.**

Stands 30, 31 and 32.—The Chicago branch, which is now also distributing center for supplying agents throughout a large western territory, makes a representative exhibit of all the company's models, among which the bevel-gear chainless attracts most attention. The New Departure brake which is optional on nearly all the patterns also arouses the interest of agents.

Model.	Style.	Retail Price.	Wt., lbs.
Columbia men's 50	.....Chainless	\$75	26½
Columbia ladies' 51	.....Chainless	75	26½
Columbia men's 57	.....Chain	50	23½
Columbia ladies' 58	.....Chain	50	24
Columbia racer 49	.....Chain	40	22
Columbia men's 61	.....30 in. wheels	60	24
Hartford men's 19	.....Chain	36	24
Hartford ladies' 20	.....Chain	35	25
Vedette men's 21	.....Chain	25	25
Vedette ladies' 22	.....Chain	26	26
Columbia tandem 47	.....	75	..
.....Double Diamond		75	..
Columbia tandem 48	.....Combination	75	..

**W. W. Rathbun, Chicago.**

Stand 120.—The flexible rim wheel called The Rathbun is fitted to a bicycle at this stand. It consists of a very rigid inner wheel built on the suspension principle. Surrounding this concentrically at a distance of about one inch is a flexible rim held by sliding bolts in such manner that it can be pressed toward the inner rigid rim at any one point, but cannot be pulled away from it at any point. Consequently, the outer flexible rim yields and flattens at the point of ground contact, giving an elastic support to the rider. The device is intended to supplant the pneumatic tire.

Model.	Style.	Retail Price.	Wt.
Men's	.....Flexible rims	\$100.00	24 lbs.
Ladies'	.....Flexible rims	100.00	25 lbs.
Absorbent grip	.....	.50	
Equalizing saddle	.....	3.50	16 oz.

**W. R. Rollins Mfg. Co., Harvard Ill.**

Stands 161 and 162.—This company is interesting dealers on very cheap propositions, cash-in hand being a sine qua non. Three crown frames, stripped of

tires, saddles, toolbags and pedals are offered at prices which scandalize that part of the public who do not stop to figure and bicycles of ordinary frame construction at 33 percent less. The company is subsidized by the town where it is located.

**Sanford & Pollock, Chicago.**

Stand 153.—The leading article shown is the Solitaire acetylene lamp, which burns four hours, and weighs but 8 ounces. Webb Double Grip adjustable handle bars, Webb expanders, Flexa repair kits, and a line of New Brunswick tires are also exhibited.

**Schumacher Acetylite Lamp Co., Chicago.**

Stand 60. Positive water regulation, long period of burning without recharging the carbide chamber, non-disturbance of flame by jars and light weight are features of the lamp shown in this exhibit.

Model.	Style.	Retail Price.	Wt., oz.
Acetylite lamp	.....Gas	\$3.75	14½

**Snell Cycle Fittings Co., Toledo.**

Stands 35 and 42.—Forged connections and sprockets and a highly attractive finish and design are among the features which make agents linger at the Snell stand.

Model.	Style.	Wt., lbs.
Snell special 36	.....Chain	23½
Snell special 38	.....30 in. wheels	24½
Snell ladies' 37	.....Chain	23½
Snell men's 34	.....Chain	24
Snell ladies' 35	.....Chain	24
Ensign men's 32	.....Chain	24
Ensign ladies' 33	.....Chain	24

**Snow Wire Works, Rochester.**

Stand 147.—The company controls the manufacture of all wall and floor stands in which the main feature is a pair of parallel wires for supporting the bicycle wheel. The entire business interests and rights for the manufacture of the "Security" holder were recently purchased from the Jewell-Wescott Co.

Model.	Retail price.
Repair stand	.....\$5.00
Cycle holder	.....per doz. 5.50
Rack	.....2.50
Mud guards	......50
Carrier basket	.....1.25

**A. G. Spalding & Bros., Chicago.**

Stand 18.—Exhibits: Spalding bicycles, Christy saddles and a punching bag arrangement. Special attention is given the Spalding bevel gear chainless with the central position in the crank hanger of the main driving gear. A new style of Christy saddle is adjustable as to width.

Model.	Style.	Retail Price.	Wt., lbs.
Men's 21	.....Chainless	\$75	26
Ladies 22	.....Chainless	75	27
Men's 19	.....Chain	50	22
Ladies' 18	.....Chain	50	23
Racer	.....Chain	60	19

Model.	Style.	Retail Price.
Christy saddle	.....Several pattern springs	\$2
Christy saddle	.....Adjustable	3
Christy saddle	.....Racer	2

**George G. Spencer, Chicago.**

Stand 60.—The exhibit comprises the line of plain handle bars in round and octagon tubing, and the adjustable bar made by the exhibitor. Some of the patterns shown are finished in fancy effects. Exhibitor's location is 165 Jackson street, Chicago.

**Star Mfg. Co., Carpentersville, Ill.**

Stand 165.—In this exhibit is shown the "Best" wrench intended for the use of cyclists. It is a combination tool comprising a light wrench, screw driver, nipple grip, caliper rule and alligator wrench. It is not designed for repair shop use. A light bench and adjustable alligator wrench is also shown.

**Chas. E. Sterner & Co., Chicago.**

Stand 136.—Janesville spokes, Merri-man rim washers, Greencastle rims, Ellis chain adjusters and oil cans, Noonan repairers' tools, form the principal sun-

THESE ARE THE ONLY TOOLS YOU'LL NEED.



TRADE MARK



THESE ARE THE ONLY TOOLS YOU'LL NEED.



54

MANUFACTURERS ARE FURNISHING

# Dunlop Detachable Tires

On their wheels AT NO EXTRA COST, either wholesale or retail. Agents should see that the manufacturers whom they represent are among this number. Write us about it.

1899 IS GOING TO BE A DUNLOP YEAR.

## The American Dunlop Tire Company

134 Lake Street, Chicago.

Belleville, (North Newark) N. J.

36-38 Lombard St., Toronto.

THESE ARE THE ONLY TOOLS YOU'LL NEED.



TRADE MARK



THESE ARE THE ONLY TOOLS YOU'LL NEED.

# THE STERLING

"BUILT LIKE A WATCH"



The well known STERLING QUALITY that won these Handsome Medals will be ABSOLUTELY MAINTAINED in our 1899 Models.

A Sterling Agency has Intrinsic Value. Correspondence Invited.

## STERLING CYCLE WORKS, KENOSHA, WIS.

dries articles handled and exhibited by this firm, which also does a nickel-plating business and handles the following bicycle models:

Model.	Style.	Retail Price.	Wt., lbs.
Export men's and ladies..	Chain	\$35	25
Export men's and ladies..	Chain	25	24
Export men's and ladies..	Chain	20	24

Swanson & Ashbaugh, Chicago.

Stand 61—This company does enameling and nickeling for the trade, and makes a specialty of contract work for factories. It has on exhibition samples of tubing enameled and nickeled in various colors and effects.

Truscott Boat Mfg. Co., St. Joseph.

Stands 58 and 59.—This stand contains a gasoline motor launch made at St. Joseph, Mich. The exhibitor finds that cycle shows offer very good opportunities for getting orders for his line of goods. The launch exhibited is priced at \$300.

Tugwell Mfg. Co., Chicago.

Stand 138.—The exhibitors make exclusively the Tugwell hubs, in which the cones revolve with the hub shell, while the cups are secured on the axle. This reversal of the usual relative position of the bearing members reduces the travel of the bearing balls and thereby the friction.

Model.	Style.	Retail Price.	Wt., oz.
T. M. C. high grade....	Cone revolving	\$5.00	26
Racer .....	Locked cone	4.00	20
T. B. ....		2.50	26

U. S. Battery Co. New York.

Stand 145.—At this exhibit are the only electric lamps in the show. The brilliancy of the light thrown by the lamps is demonstrated to visitors through the medium of a darkened canopy.

Model.	Style.	Retail Price.	Wt., oz.
U. S. lamps .....	Electric	\$3.75	18

Veeder Mfg. Co., Hartford.

Stand 50.—In the rapid development of its cyclometer business the Veeder company has now arrived to the point of establishing a western distributing center for the shipping of its goods. T. H. Cranston & Co., 60 Wabash Ave., Chicago, have been appointed such western representative. The company's new trip cyclometer is attracting attention as an important novelty in their line.

Model.	Style.	Retail Price.	Wt., oz.
Veeder cyclometers ..	10,000 mile and repeat	\$1	1
Veeder cyclometers.....	Trip	2	2

Velox Machine Works, Chicago.

Stand 61. Easy and accurate adjustment coupled with the fact that the pin may be removed from the pedal body and replaced without disturbing the adjustment of the bearings are notable features in Velox pedal construction. Other points which enable the makers to ask the seemingly high price placed on their goods are quality of material, light weight, handsome design and finish and accurate workmanship.

Model.	Style.	Retail Price.	Wt., oz.
Velox 3 patterns.....	Rat trap	\$4.00	13
Velox 10 patterns .....	Racer	5.00	12
Velox 5 patterns .....	Rubber	4.50	15½

Von Lengerke & Antoine, Chicago.

Stands 19 and 20.—Exhibits: Crescents, of Western Wheel Works manufacture. The exhibit is for Chicago retail purposes, and is in charge of R. S. Chase. A diamond frame fitted with mudguard and intended for women riders indicates the manufacturers' idea of the tendency among female cyclists. The Crescent chainless is a prominent part of the exhibit.

Model.	Style.	Retail Price.	Wt., lbs.
Crescent men's 17.....	Chainless	60	25½
Crescent ladies' 18....	Chainless	60	26
Crescent men's 15.....	Chain	35	25½

Crescent ladies' 16.....	Chain	35	25½
Crescent boys' 3.....	24 in. wheels	25	21
Crescent girls' 6 .....	24 in. wheels	25	22

Vim Bicycle Co., Chicago.

Stand 165.—Exhibit: A large line of medium and low priced machines in men's and women's patterns. The cycles shown are built on present popular lines and from standard styles of fittings.

Model.	Style.	Retail Price.	Wt., lbs.
Vim men's 30.....	Chain	\$35	22
Vim women's 31.....	Chain	35	23
Vim Men's 10.....	Chain	35	22
Vim women's 11.....	Chain	35	23
Vim men's C.....	Chain	35	22
Vim women's A.....	Chain	35	23
Vim men's E.....	30 in. wheels	35	22
Vim men's B.....	Chain	25	22½
Vim women's D.....	Chain	26	23½

F. S. Waters Mfg. Co., Chicago.

Stand 57.—The company is making an attractive display of bicycles finished in white and of patterns equipped with 30-inch wheels or 30-inch rear wheel and 28-inch front wheel.

Model.	Style.	Retail Price.	Wt., lbs.
White scarcher (2) .....	Chain	\$40	24
White scorchers....	28 in. front, 30 in. rear	36	23½
Aztec .....	Chain	28	23½
Autocrat .....	Chain	23	23½

Western Camera Mfg. Co., Chicago.

Stand 139.—The exhibit comprises twelve patterns of Cyclone cameras, all adapted for use by cyclists. The prices on these cameras range from \$3.50 to \$50.

Wheeler Saddle Co., Detroit.

Stand 24.—The exhibit shows a great variety of finish, but the line of the Wheeler company, as marketed, includes only four styles, the Wheeler Extra, women's and men's, the Corktop racing saddle, and the Special semi-racer. These are all finished in tan or black, except that a special finish in Scotch plaid, is obtainable at an additional price. The company aims to produce a line which will cover all needs of the bicycle manufacturer without incumbering him with a needless variety of stock. T. J. Beauvion and F. S. Wheeler are in charge of the exhibit.

Model.	Style.	Retail Price.	Wt., oz.
Men's extra.....	Hair padded	\$1.40	22
Women's extra.....	Hair padded	1.50	24
Men's special.....	Wool felt padded	1.40	21
Men's cork top racer, Cork pad'd		1.40	20

F. C. Wilson, Chicago.

Stand 129—Exhibits a complete acetylene gas generating machine for lighting dwellings. The machine shown, called the Acetogen, is listed at \$90, and is guaranteed to supply twenty burners with dry gas constantly. The machine is in operation at the stand.

Allen Winch, Chicago.

Stand 129—Exhibits: Dazzle acetylene lamps, built in the form of combined house and cycle lamps. The water reservoir being below the combustion chamber, the latter can be removed, and an ordinary lamp shade substituted. There is no danger of the lamp tipping over when being used on a table. Exhibitor's address is P. O. box 1209, Chicago.

Rules for Calcium Carbide Trade.

With a view to preventing possible explosions of acetylene gas at fires as a result of water from the fire hoses coming in contact with calcium carbide, the fire commissioners of New York have formulated rules governing the storage and sale of the carbide. These regulations require that all calcium carbide in transit through the city and in storage must be in hermetically sealed iron receptacles and marked plainly "Calcium Carbide. Dangerous if not kept dry." No single package must exceed 100 pounds. Not more than 20 pounds, either in bulk or in cart-ridges, can be stored or kept in any building used for a dwelling or mercantile pur-

pose, and this amount can only be kept on a permit obtained from the fire department, which will provide that quantities in cases of two pounds shall be in tight metal packages and kept elevated at least six inches from the floor in a fireproof safe above the street grade. The manufacture, transportation, storage, selling or use of liquefied acetylene is absolutely prohibited within the city limits. Provision is made for the storage of calcium in sealed receptacles in quantities not exceeding 100 pounds in isolated buildings of fireproof construction. The storage must also be with a permit from the fire department, and the entire quantity stored must not exceed 500 pounds in the aggregate.

AMERICAN AND ENGLISH EXPORTS

Shipments from New York to Northern Europe Continue Heavy—English Machines Go to Australia.

Exports of bicycles and bicycle materials from the port of New York for the week ending January 3 are recorded as follows:

	Bicycles.	Materials.
France ..	\$ 9,526	\$ 6,945
Germany ..	8,067	7,015
Denmark ..	2,108	5,171
Sweden ..	1,170	5,886
England ..	827	2,924
Italy ....	200	4,081
Canada ..		4,915
British East Indies.....	1,920	
British West Indies.....	1,229	140
Dutch East Indies.....	1,275	
Belgium .....		945
Africa .....	828	4
Mexico .....	663	25
Brazil ..	515	110
Ecuador .....	500	
Holland .....	220	256
Egypt ..	350	
Dutch Guiana .....	344	
Austria .....	64	170
Ireland .....	97	
Dutch West Indies .....	70	
Hayti .....		18
Totals .....	\$29,973	\$33,605

The values of the exports of bicycles and materials from Great Britain for the week ending December 24 are recorded as follows:

Adelaide .....	\$ 1,447
Bombay ..	3,067
Bordeaux ..	121
Boulogne ..	242
Calcutta ..	342
Colombo ..	97
Durban .....	871
Flushing ..	750
Hong Kong ..	242
Jamaica .....	58
Kurrachee ..	111
Lyttelton ..	237
Melbourne ..	6,079
Port Elizabeth ..	2,710
Rotterdam ..	910
Shanghai ..	242
Singapore ..	726
Sydney .....	82
Wellington ..	358
Yokohama ..	68
Total .....	\$18,740

Syracuse Board of Trade Election.

At the annual meeting of the Syracuse Cycle Board of Trade the following were elected members of the board of directors: H. E. Maslin, A. R. Peck, W. H. Olmsted, William Spalding, J. W. Gould, A. R. Dickinson, D. McCarthy, W. D. Andrews, J. C. Bowe, Charles W. Wood and William P. Butler. The officers named were: President, H. E. Maslin; vice-president, William Spalding; secretary, W. D. Andrews; treasurer, W. H. Olmsted.

Must Cancel Stamps With Date of Use.

Washington, Jan. 9.—It has been discovered that old documentary and adhesive internal revenue stamps were being reused, and the commissioner of internal revenue has therefore issued a regulation which requires all such stamps to be canceled with the day of the month as well as the initials of the user, and the month and year.



# COMMERCE IN FOREIGN MARKETS

**ENGLISH TRADE IS HARD HIT**

Queer impressions of the American cycle industry find lodgment in the nodules of the people who at this moment are busy in the endeavor to persuade the English trade that it is suffering more from overproduction than overcapitalization of manufacturing concerns. So bitter has been the disappointment of the past year that the Britons are ready to swallow any statement which is intended to distract their attention from the ruin that threatens. One of the American-hating trade papers spreads this surprising bit of information before its readers:

There was no promoting boom in the States and the majority of the factories were worked on very moderate capital. Still disaster came, and earlier than it came to England, and much direr. Scarcely half a dozen of the concerns have shown any kind of a return and the number of failures has been enormous. The tire trade is even worse, not a firm having come within many figures of the earnings of the leading English companies. We need scarcely point out that in America there are no monopolies, so to speak, and every gaspipe makes his hose-pipe tire as well—or as badly—as he likes.

Overproduction has been the bane and suicidal price-cutting has followed. Most of the companies had but small capital; hence few of them weathered the storm. America, with its smart business style, is not slow in seeking relief for the pressure and indefatigable efforts are being made to open up new markets. England, in a similar condition, is losing hold in the foreign markets and is beaten almost on her own ground.

The accompanying table shows how badly some of the English cycle making companies fared last year in comparison with 1897:

	Net profit. 1897.	Net profit. 1898.
Coventry Cross .....	\$ 58,765	\$ 9,190
Centaur .....	101,305	91,295
Humber .....	313,800	100,715
Premier .....	390,665	248,650
Singer .....	380,590	135,265
Swift .....	317,850	169,725
Triumph .....	114,040	70,300
Townsend .....	61,490	9,155
Progress .....	34,585	14,290
Raglan .....	173,430	77,605
Rudge-Whitworth .....	241,330	105,115
J. K. Starley .....	109,725	63,945
Riley .....	54,160	23,210

**MEXICAN TRADE CONDITIONS**

Though our bicycle trade with Mexico is not to be sneezed at, yet it will be some time before it grows to very large proportions.

The rich Mexicans are ready buyers of our goods.

Our exporters are not paying the same attention to the commercial customs of the republic that is given by manufacturers of other nations, principally England, France and Germany. The business conditions of Mexico are noteworthy, and it will be of much pecuniary benefit to our exporters to study them. In the first place, there are very few concerns doing business there that have not ample capital to carry out all contracts into which they may enter. Failures are very rare indeed, and when they do occur are carefully investigated by the authorities in the interests of creditors, and any attempts to defraud are severely punished. Book entries are regarded as sacred; all books kept by business houses are known and small stamp taxes paid on them, and thus a sort of surveillance is kept over them by government authorities. All this tends to keep up a high standard of commercial credit; and, now that the commercial agency of R. G. Dun & Co. has extended its operations to the republic, exact knowledge of the standing of the business houses may be obtained.

As the terms of American sellers are often very rigid, it is hard to reach an agreement, and much trade which by the

exercise of a little tact and judgment could be handled by American merchants goes elsewhere. For instance, terms usually offered by European merchants are four to six months' time, whereas American houses often require that the total amount of their invoices be placed in some bank in the United States, before the goods are shipped. Mexican buyers are desirous of dealing with the United States and would do so more extensively than at present, if trading facilities were offered them.

A few words as to the value of contracts in Mexico. Once an absolute understanding is had between buyer and seller, and the agreement reduced to writing, there is seldom any controversy, as a contract or a preliminary contract is regarded as binding, even though the only legal forms required in a preliminary contract are the affixing of a 50-cent stamp and the depositing of it with a notary public to be reduced to a public deed, when one of the interested parties requires it.

**THE KLONDIKE OF EUROPE**

Sweden has made more progress during the past two years than probably any other country in Europe. That great expanse of timber and iron land in the northern part of Sweden that formerly was the home of the Laplander and his reindeers is just being opened up to civilization. It has in times past been thought to be a worthless stretch of territory, but exploration has brought to light some of the finest mineral land in the world. Great things are in store for Sweden during the coming years, and her wants are to be many and varied. Our makers can find an outlet for almost any product that a new country is liable to require. It is a land that is going to be the Klondike of Europe.

A great mistake our exporters make is in not having the goods properly packed before shipping. Many articles, such as machinery and bicycles, fail to find a ready sale on account of their poor appearance on arrival. Many orders are placed from samples, and, to the disappointment of the buyer, the merchandise is frequently some grades below the sample which brought the order. A merchant who has been disappointed in this manner is loath to venture a second time.

Sweden has to a great extent been overlooked by our makers. In a great measure, the American goods are forwarded through German and English houses, thus making the importations expensive.

**OUR CYCLE TRADE IN ARGENTINA**

American bicycles dominate the Argentine market, and one make alone has a yearly sale amounting to about 2,000 machines. This trade has been gained by being content with small profits at first; indeed, it is not thought there was any profit at all on the early American business in the republic. American makers must remember that a good finish and nice appearance are absolutely indispensable—in many cases everything—even in the cheaper lines of goods, and it is in this direction that the largest demand arises. Too great care cannot be given on every and any detail which may be asked for, no matter how unimportant it may seem to the manufacturer. The Argentine Republic is one of the natural markets for United States exporters, and it will be their own fault if they let the trade slip away from them permanently.

**CHEAP BICYCLES IN ENGLAND**

English agents are regarding the manufacture of cheap bicycles with alarm. The makers, too, are nervous with apprehension. A little more than a year ago a prominent firm set the ball rolling in the direction of cheap prices, and as this particular firm reaped much advertisement from its action it was successful in obtaining an enormous amount of the patronage of buyers in 1898, with the result that at the end of the year a big profit had been made and the handsomest balance sheet of the season presented to gratified shareholders. The example set by the Rudge-Whitworth company has induced the majority of the leaders of the cycle industry to reduce their prices. Many have done it reluctantly, others with avidity. What the result will be the balance sheets of next year alone will tell. Anyway, it goes without saying that the move has been viewed with considerable alarm by a most important body of men—the British cycle agents.

The consensus of opinion seems to be that unless an enormous trade is done during 1899 the agents will suffer considerably, as the altered condition of things renders the profit on each bicycle so small as to scarcely pay depot expenses. Many agents, and prominent agents, too, announce that they will drop agencies for prominent makes, or even if they do not drop them will not stock considerably, but will push a local cheap bicycle made up of parts.

**BRIGHT PROSPECTS IN SOUTH AFRICA**

The outlook for trade in South Africa next year favors our manufacturers. The advantageous freight rates between New York and South African ports are to a great extent responsible for the growing trade anticipated. Though British manufacturers still lead in the South African trade, the persistent efforts which the Americans are making, combined with the favoritism shown for their wares, it is thought will do much towards securing a still larger share of the business. The British manufacturers have the advantage, however, in their credit system, which is in many ways similar to that employed at home. The eagerness of American manufacturers to transact business in South Africa for cash is a decided drawback. There is a credit system in South Africa which, when properly understood, leads experienced manufacturers to conclude that selling goods there is not attended with any greater risk than selling the home trade. In this particular branch of the business is where a well posted representative is most useful to the manufacturers.

Canada is coming to the front as an exporter to South Africa, not only through Dominion ports but direct from New York. The establishment in Cape Town of what is hoped to be a permanent exhibit of Canadian products shows how deep is the interest in that market. In this exhibition are found samples of Canadian bicycles.

**American Sundries in Demand.**

American handlebars, the neat and better class of American accessories, etc., are meeting with favorable recognition, and are being extensively copied in England. If the present rate of progress keeps up British dealers will soon use nothing but American wrenches, bells, lamps, oil cans, etc.

Barbadoes has roads of white coral.

## FAST FREIGHT SUITS DEALERS

### Retail Cycle Trade in Open Rebellion Against Extortionate Charges of Express Companies

There is no abatement in the interest being taken by dealers in the movement to compel the express companies to reduce their extortionate charges. Further contributions to the Cycle Age upon this highly important subject are herewith presented, and among them will be noticed a marked disinclination on the part of many firms favorably located for the substitution of fast freight for express, to swing their business away from the express companies:

#### Concerted Aggressive Movement Necessary.

Your recent article on "Exorbitant Express Rates" is of more than passing interest, now that the action of the express companies toward the war stamp has created such merited disfavor. Being closely affiliated with the Detroit Chamber of Commerce, the Manufacturers' Club and the Merchants' and Manufacturers' Exchange (organizations which to our best belief were among the first to complain against, and seek a cure for, the unpatriotic shift of these express companies), the writer is interested enough to say that we are not only uncompromisingly, but actively, in line with the advocates of fast freight and mail shipments.

Here in Detroit we took up the cudgel (not on the "friendly" plan either) in the Circuit Court and secured a decision from Judge Frazer against the companies. Copies of this decision, which was both logical and broad, have been circulated widely. Following this a memorial to Congress was prepared, urging the adoption of parcel post rates on, or similar to, the European basis. Copies of this memorial have been furnished to every congressman, senator and chamber of commerce in the United States, as well as to all the known commercial organizations in the country. There is no denying that an 11 or 12-pound parcel post would produce a salutary influence on these corporations, which impose extortionate rates so that they may pay dividends of 7 or 8 per cent on a fictitious capital, but which is really 70 or 80 per cent on the actual investment.

Our commercial clubs are invaluable and accomplish vast good. Those that are addicted to spasmodic, short-lived crusades are few indeed. Still, it is our belief that some concerted movement must be formulated and then pushed aggressively and everlastingly. In the meantime, in order to discourage these high-rate evils and the evasion of revenue on the part of the express companies, we are in favor of utilizing the fast freight lines and such other shipping facilities as may be at the hands of tradesmen.

Detroit, Mich. AMERICAN HARROW Co.

#### The Cost of Goods Increased.

We are heartily in sympathy with any movement to reduce the high rates charged by the express companies, which, for instance, is \$2.50 on a crated wheel from Chicago to this point, and other goods in proportion. We would use fast freight or any other way that would bring the goods in any reasonable time, but would like to call attention to the railroad rates on bicycles, which I understand are charged at three times the first class rate which almost brings the transportation cost up to the express rate. The last bicycle we had shipped from Chicago by freight cost \$1.67, which is almost as much as express charges, and if the railroads increase the rate for fast freight service would bring it up to that. We hope the movement will result in some good, as the transportation charges cut quite a figure in the cost of goods.

Cordele, Ga. CORDELE BICYCLE & MACH. WORKS.

#### Wants Government Ownership of Railroads.

We are in favor of any lowering of the exorbitant express and freight rates, but are more in favor of government ownership than any other way of reducing the express and freight charges.

In the issue of the Cycle Age of Dec. 22, you state the express companies are making from 150 to 175 per cent upon the capital invested. Now, if an express company can make that profit, why do the railway companies not turn all of their freight business into express, and cut off the express companies? Because the railway companies are

not starving upon a charge of \$6.20 per hundred upon crated bicycles from Chicago to Rock Springs, Wyo.

You also say that merchants are compelled to pay from five to 15 per cent of the value of goods for express charges. Why, we can cite you one case where a corporation was compelled to pay 160 per cent of the value of the goods bought for freight charges upon a whole carload; and we have paid as high as 100 per cent of the value of the goods, both by express and freight, and the most aggravating part of the affair is that we have no redress for such extortion in the courts.

Railway companies may extort what they please, and charge always "what the traffic will bear."

Rock Springs, Wyo.

W. W. PETERSON.

#### Absurd Variation in Charges.

You have struck a tender chord in my business experience. I am not at all pleased, nor have I ever been, with the express charges, as I have always considered them exorbitant; and not only that, but we cannot, or at least I cannot, get the same charges on the same article from the same place both going and coming. For instance, I sent a rear wheel, complete and crated, to Westfield, Mass., not long ago, and the charges were \$1.10; the same wheel came back in a few days crated in the same way, and nothing more nor less about the wheel or crate, and the charges were 90 cents. Now it seems to me that if it was worth a \$1.10 going, it ought to be worth \$1.10 coming, and if it was worth only 90 cents coming, the same amount ought to carry it. I would approve of fast freight instead of express if the roads would serve us promptly. I am very glad that you are agitating this question.

Columbia, S. C.

J. E. RICHARD.

#### Charges Vary Without Reason.

The proposal to use fast freight instead of express meets with our approval. Express charges are never twice the same. The express charges on one bicycle from Bay City was \$2.55. Freight on five others from Grand Rapids was 81 cents each. We can give better comparisons if desired.

Watertown, N. Y.

G. F. WILLIAMS.

#### Lower Rates Would Increase Shipments.

There is no doubt in our mind that the express charges are extortionate and out of proportion to the actual carrying expense. Almost every day we feel the need of rapid transit in the shipment of goods, and would have twenty times as many shipments come to us by express as we do now were it not that the excessive charges absolutely prohibit it. We certainly think the charges of these public carriers should be regulated by legislation; we see no other remedy. We would patronize fast freight, or anything else that would give us relief.

THE WHITE BICYCLE & SUNDRY Co.

New Orleans, La.

#### The Charges Are Outrageous.

We are quite in sympathy with the movement made against express charges. It is outrageous the charges we have to pay, especially when goods come through two companies.

Waterbury, Conn. THE CHARLES THATCHER Co.

#### Has Used Freight for Two Years.

The movement started against the express companies meets with my approval. It appears to me that something should be done, and I hope the efforts now being made will meet with success. Fast freight is what I want. In fact I have been using freight for about two years where 100 pounds to the shipment is made. However, there must be small packages, and here is where we suffer. The only specific complaint I know of is the refusal of the express companies to meet their part of the revenue stamp act. This item foots up no small amount to me. They should stand it.

Memphis, Tenn.

JEROME P. PARKER.

#### Rates Higher than Twenty Years Ago.

We think that the charges of express companies generally are exorbitant. Express rates are higher to-day than they were twenty years ago. The rates from Cincinnati, Ohio, and Louisville, Ky., were less

ten and twenty years ago than they are to-day, while freight rates are not more than half what they used to be. Why this state of affairs should continue to exist we confess we do not know, except that it seems that all express companies have agreed to get everything out of the business that it will stand. The railroad companies at one time had a reasonable rate on bicycles, but doubtless through the influence of the express companies who patronize their lines they doubled the rates. We would get all our bicycles except those we are in a particular hurry for by freight, if the railroads would class bicycles as they did four or five years ago

Owensboro, Ky.

W. A. GUENTHER & SONS.

#### Shippers Are to Blame.

If all bicycle, or other dealers, would guard against shipping goods by express, as I do, the express companies would either have to charge more for what they got, or charge much less in order to get more business. I am in favor of fast freight; it would no doubt enable us to get goods just as quickly as by express. As to making any complaint, I have none to make. If I should buy a horse, and was asked \$1,000 for him and paid it, I would have no one to blame but myself. The companies give shippers the price, they do the shipping, consequently the shipper is to blame. Let every dealer try to avoid them, and they will come down.

Sioux Falls, S. D.

ASA M'CARTY.

#### Compel Them to Abandon Robbery.

We are in favor of a fast freight and will use it so far as we possibly can. The smallness of the companies to compel the people to pay for the revenue stamp is about the last straw to break the camel's back. While but a small amount, it is unreasonable and unjust on their part, and some move should be taken to compel them to let up on the highway robbery which they are practicing on the people.

Sioux Falls, S. D.

MARKHAM & ROBINSON.

#### Reshipping Charges Heavy.

Since the crowding out of one express company here we have been entirely at the mercy of the other, which charges from 5 to 10 cents more on 25 cent packages wherever possible. All our express comes by one company to Springfield, and from there by another, and between the two they have raised the price from 25 to 40 cents more than it used to be. We are having all our sample wheels come in by freight and propose to use the freight shipping as much as possible during the coming season.

Meriden, Conn.

PROUDMAN BROS.

#### Approves of Fast Freight.

The proposal to use fast freight instead of express meets with my approval. The charges of four pound packages from Chicago to Yankton, S. D., are 55 cents.

Yankton, S. D.

GEORGE WAGNER.

#### In Favor of Fast Freight.

We heartily approve of the fast freight as a competitor against the express companies.

Seymour, Texas.

FINN, FOWLKES & Co.

#### Always Uses Fast Freight.

I am very much in sympathy with the movement started in New York. The use of fast freight does meet with my approval and I use it only. The express companies charge too much and their charges are not always the same on the same wheels.

Troy, N. Y.

E. H. BRUNELLE.

#### Has Begun Shipping by Fast Freight.

I think that the express charges are sometimes very high and would favor fast freight by all means. At any rate I have started to have all wheels shipped by freight. I hope that the present rate may be reduced in some way.

South Norwalk, Conn.

LUTHER M. WRIGHT.

#### Approves of Fast Freight.

The proposal to use fast freight meets my approval. The complaint I have is that the express rates are too high by 50 per cent. We would get everything by express if the rates were not so high.

Springfield, Mo.

J. E. ATKINSON.

#### Monopolistic Charges "Burn You Up."

There certainly should be some movement started and continued that will cause a reduction of the excessive express charges, especially at non-competitive points like this, where they charge what they please. Fast freight north and east means considerably different than it does in the south. It is the accepted opinion that express charges "burn you up" at this point, and I myself have paid in some instances 100 per cent. in charges compared to the value of

the goods when in small packages, thus barring the handling of any small matter of low valuation.

Pine Bluff, Ark. HARRY T. OLCOTT.

#### Overcharged on Weight.

We have complained for some time to the express companies direct. While their charges are high, we also find that their service is very poor, and goods are received in a damaged condition. We also find overcharge in weight of 4 per cent. for bicycles just received. Goods by freight are much cheaper.

Covington, Ky. J. H. MERSMAN & SON.

#### Order Early and Specify Fast Freight.

We are in favor of fast freight or any other transportation line that will lessen the outrageous charges of the express companies. Merchants should order early and ship by fast freight. If this takes place we will have the express companies soliciting our trade.

Camden, N. J. ROADSTER CYCLE HOUSE.

#### Cannot Understand Irregular Charges.

The proposal of using fast freight instead of express meets with our approval. Express charges are not always alike, and we do not know how they are made. About a year ago we received from Chicago one set of tires shipped us by express, which cost us 90 cents, and on the following day we got one dozen sets of tires from the same house which cost us just 70 cents.

Westernport, Md. C. A. PAGENHARDT & SON.

#### Southern Freight Too Slow.

Any steps taken to secure a low and at the same time reliable and rapid freight delivery will meet our approval and support. We are just at present having a rather severe lesson in fast freight delivery, which requires about seventeen days between Elyria, O., and New York city, and unless this time will be very much lowered by the proposed fast freight trains the express will get the balance of our business from that point. Our business relations from the express company at this point are all that we can ask, both as to rates and treatment, and individually we have no complaint to make of its services. Any movement tending to upset the pleasant relationship between the express company and ourselves will certainly be to our disadvantage.

Jacksonville, Fla. HARRIS BROS.

#### High Rates Protect Small Merchants.

I am not in favor of lower express charges, but heartily in favor of fast freight. My reason for high express rates is that they force thousands of country and village people to buy merchandise at home instead of sending orders to the big department and catalogue stores.

Paw Paw, Mich. H. C. WATERS.

#### Fast Freight as an Alternative.

I am emphatically in sympathy with the movement to compel express companies to moderate charges. If this cannot be accomplished I believe that the next best thing would be the use of fast freight.

Sturgis, S. D. GEO. B. BIESMANN.

#### Would Encourage Other Lines.

We are in sympathy with any movement that will help to lessen these charges, and will encourage any other route by our shipments if we can get any good service. We heartily indorse the movement to the fullest measure to down such corporations whose aim is to get all they can and pay less for labor than any other corporation.

Crisfield, Md. M. H. DOUGLAS & Co.

#### A Step in the Right Direction.

We are certainly in favor of compelling the express companies to moderate their charges, but do not think this can be done in a direct way. Using fast freight would be a step toward the point. We have no complaints to make of the express companies' services other than their robber charges.

Brookfield, Mo. E. L. CHAMBERLAIN & Co.

#### Declines to Pay Extortionate Charges.

I am in sympathy with the movement started in New York, and have been using fast freight instead of express for some time past and will continue to do so unless a change is made. I consider express charges extortionate to an extent that is simply robbery.

Columbus, Miss. J. C. BROYLES.

#### Seldom Uses Express.

I am not very much interested in the reduction of express charges. In a country town like this, department stores and city dealers sell more goods than I do, and all shipments by them are made by express,

while in many cases I can get my goods by freight and save the difference between freight and express rates. A reduction in express charges to me would mean a like reduction to any other person whether a dealer or not, and what advantage would that be to me? Of course there are times when I must patronize the express companies, but, under the circumstances, if the rates were cut in two it would do me no good. As it is now I am careful to buy my goods where transportation will not cost much. I am inclined to believe that manufacturers and dealers are fixing their prices, and getting stock in readiness in season, so that we may in most cases place our orders in time to have shipments made by freight. However I shall patronize freight lines whenever possible.

Central Lake, Mich. GEO. W. AUSTIN.

#### Freight All Right if Fast Enough.

We are in sympathy with the movement started in New York to compel the express companies to moderate their charges. Fast freight is all right if it is fast enough.

Quincy, Ill. PHELPS & BREMNER.

#### Pays Full Rates to Two Companies.

We are very much in sympathy with the movement started in New York to compel express companies to moderate their charges, and think the fast freight the very thing. Just the other day we lost 80 cents on a \$4 package shipped from Rochester, N. Y., after selling same at exactly list price. The U. S. Express Co. got full rates, so did Adams and Southern. We are compelled to pay two or three full rates on anything coming from any place beyond Washington, D. C.

Rock Hill, S. C. POA & WHITE.

#### Charges More than the Rate.

We have to pay from 15 to 20 cents per pound express from Chicago or New York, and while the express companies quote a rate much under that we have to pay it nearly every shipment. The average express on bicycles is about \$3 each, which is far too much for the weight. We will be glad to do all in our power to promote the movement now on foot, and believe it will result in considerable benefit to retail dealers.

Demorest, Ga. ADAMS & CASON.

#### Freight Shipments Need Care.

We are glad to note the interest the Cycle Age is taking in the movement to get the express companies to reduce their extortionate rates. We are certainly in sympathy with such a movement, as the rates are unreasonable. If the fast freight lines would use care with bicycles and bicycle sundries, there would be a good many more shipped that way. The trouble is that in loading bicycles they are so apt to be damaged unless properly loaded, and when shipped in mixed cars they are dumped in any way. That is the reason the express companies get so much of the shipping, even at their extortionate rates.

Kansas City, Mo. WILLIS ARMS & CYCLE Co.

#### For Fast Freight and Parcels Post.

I am entirely in favor of fast freight as against express, and would be willing at any time to give all the support I could to a movement for fast freight service and parcel mail delivery.

St. Johns, Mich. O. G. PLUNKETT.

#### Where Competition is Keen.

We have no just cause to complain of the treatment we have received at the hands of the express companies during the past year. Being favorably located, competition has been sufficiently sharp to keep rates to a nominal charge. Yet we know there are points which suffer from unjust discrimination, and are in sympathy with the move that is being taken in the interest of the retailers and hope that much good will come from the agitation. We appreciate fully the support that the Cycle Age is giving on the subject, and hope that it will aid in bringing about the desired end.

Dubuque, Iowa. VAN HORN & MILLER.

#### Takes the Profits to Pay Charges.

I am heartily in sympathy with the movement to compel the express companies to give us better rates; their methods are a sort of robbery. Often I get a package on which the charges are as much as two-thirds of the value of the goods. I have had bicycles come from New York the same day, weighing the same, one charged at 90 cents and the other at \$1.15 by the same express company. This charge is for one machine. I shall use fast freight this coming year, as it will save me a good sum. It will make only a few hours' difference. These exorbitant charges have been a hard yoke to bear, as the companies continually raise their rates, never lowering them. They

do not use their patrons as they should in trying to carry their goods as cheap as they can, but try to see how much they can get. I have wondered a good many times how long we would or could stand it in these days of small profits and lots of competition. It often takes the profit to pay the express charges on a package. I hope the business men will take hold and make them feel as though they must do us justice at least

Attica, N. Y. L. E. BATCHELDER.

#### Would Save by Using Freight.

I wish to express the deep sympathy I feel in the movement started against the express companies' extortionate charges, especially in the transportation of bicycles, and the firm stand your paper has taken in this direction. I have felt for some time that some effort should be made in this direction, as the carrying of bicycles is getting to be an immense business of itself. Although doing a limited business myself, I have felt like making a vigorous kick when paying the rates charged by the express companies for carrying my goods. Last year I had one wheel come by freight and the charge was 35 cents, while the express rate from the same point was \$1. If we could have a quick freight service we could save much by it. As the prices of wheels go down and the margins grow smaller it is very important to the retailer to save in transportation.

Westmoreland, N. Y. N. DE ROY LEE.

#### Freight Cheap and Satisfactory.

I am in sympathy with any movement to reduce rates, either express or freight. Most of my goods come by freight, as I keep a good supply on hand, and I find that it only takes one or two days longer by freight than by express. However, when I do get an express shipment the charges are enormous, in some cases exceeding the cost of the articles. The freight rate on bicycles, crated, to Wahpeton from Chicago is \$2.40 for 100 pounds. I think this is too high, but express is double the above.

Wahpeton, N. D. R. J. HUGHES, JR.

#### Favors Fast Freight.

I am heartily in sympathy with the movement and highly favor fast freight in place of express in many lines of goods.

Monticello, Minn. W. J. THOMPSON.

#### Offers Relief to the Dealer.

The proposal to use fast freight is all right. It would be far better than the express. The express charge is too much. I am paying \$3 on each bicycle that is received from New York. This is too much. Fast freight is what we want.

Biloxi, Miss. LOUIS MANGIN.

#### Using Freight Almost Entirely.

We heartily approve and indorse any means of transportation that can offer us fair service at reasonable rates. We certainly agree that the rates of the express companies are extortionate and very unsatisfactory to the retail trade, as it makes quite an inroad on the profits of the present day. We have, and we think most dealers have, complained many times of rates, but to no avail, and have therefore been having goods shipped almost entirely by freight, unless on hurry orders.

Wilmington, Del. PYLE CYCLE Co.

#### Sends Large Lots by Freight.

I think that shipping by fast freight will result in great saving not only to those in the cycle trade but the shippers in all lines of business. The difference in time won't amount to as much as the price by express. As for my business, I ship by express only small articles, say 25 cents or so; the large lots come and go by freight.

Atlantic City, N. J. CHARLES SINGER.

#### Believes in Fast Freight.

I am in sympathy with the movement to use fast freight instead of express.

South Lyon, Mich. JOHN CHALLIS.

#### Only One Railroad.

The proposal to use fast freight instead of express meets with my approval. The express charges are extortionate with but one railroad here.

Princeton, Ill. BANSCHBACH'S CYCLERY.

#### Wants Good Service at Lower Rates.

We think the express charges are entirely too high, and would be glad to use something that would give good service for less charge. We would be glad to give all the aid in this matter possible.

Cambridge, Md. CAMBRIDGE CYCLE Co.

#### Lower Rates or Fast Freight.

I am in favor of moderate express charges. If we cannot get them let us have fast freight instead.

Augusta, Ga. J. T. GRESHAM.

## SUBJECTS OF GENERAL INTEREST

**ENORMOUS VALUE OF PEAT FIBER** One of the most interesting and attractive exhibits at the Vienna exposition of last year was a building containing the most diverse articles made from peat. Everything in the building, from the carpets on the floor to the curtains at the windows and the paper on the wall, had been made from peat. These were but representatives of what will undoubtedly soon become a great industry and give to the peat bogs of the world a value never before dreamed of.

A study of peat shows that it is very largely made up of fibers. These fibers come from the remains of reeds and grasses, which, growing and dying in successive generations, form the peat. These fibers then are found to be very durable, very elastic, to be non-conductors of heat and non-combustible. If a fabric could be woven from them, it would be one possessing unique properties. To the toughness of linen it would add the warmth of wool, an absorbent power greater than that of cotton, and the indestructibility of asbestos. It must, however, be woven without the aid of oils or water, or much of its value would be lost.

After twelve years of experimenting, Herr Zschorner, of Vienna, succeeded in making the peat fibers weavable. There is now, therefore, scarcely any textile article which cannot be made from peat. Coats, hats, carpets, rugs, ropes, matting, and pillows are some of the articles which have been made, and have been found useful. What superiority these will prove to have in practice over fabrics made from other fibers, only time will tell. Some of them have, however, already been proved to be immensely superior to any other fabrics. This is especially true of the blankets and other coverings used for horses and cattle, for they greatly excel in warmth, absorbent power, cleanliness and durability. The unspun fiber possesses powerful antiseptic properties. The coarser fiber, it is expected, will come into favor for use in upholstery work, its extraordinary elasticity making it most valuable for this purpose.

The latest achievement of the discoverer of the uses of peat has been the making of paper from its fiber. This has been carried to such an extent that paper of almost every variety of weight and quality can be made, while the toughness and durability of each is equal to that of paper from any kind of vegetable pulp.

**TO RESTORE OUR MERCHANT NAVY** The new shipping bill, which was introduced in the Senate on December 19 probably represents the best effort that has been made thus far to frame the legislation necessary to create a great American merchant fleet, and to restore our supremacy in maritime commerce, which was lost by the United States half a century ago.

This bill as it stands is the product of the general effort of the various interests which are concerned in merchant shipping—the ship-owners, ship-builders, and the merchants and manufacturers upon whose trade the entire existence of ocean steamship lines depends. The two ends which this bill seeks to promote are the maintenance of a great fleet of merchant ships and the construction of a large amount of merchant tonnage in American yards. It is sought to accomplish these ends by providing for the payment of subsidies based upon tonnage and mileage, and the granting of American registry to

such vessels as are owned or contracted for by American capital; both of these privileges being conditioned upon the construction by the owners of a certain amount of new tonnage in American yards.

This plan possesses numerous advantages. It provides the necessary encouragement to the ship-owner by compensating him for those advantages which the owner of competing foreign vessels possesses, but which he does not enjoy. It provides business for American shipyards by compelling the construction of a large amount of entirely new tonnage. It gives to the shipper facilities for sending his goods abroad under the American flag at rates which it is fair to assume will compete with the rates offered by foreign tonnage. All of this is accomplished without imposing upon the importer or the exporter any restrictions which would hamper his business. The cost of accomplishing all these ends is to be defrayed from the general treasury and thus distributed widely and evenly over the whole country, just as the benefits of such a policy would be widely bestowed.

**FRUITFUL PARENT OF ALL TRUSTS** The fruitful parent of all the trusts that have been formed, and are now forming, is the Standard Oil Company. That is not only the oldest, but it is the strongest aggregation of capital and business capacity ever drawn together in any line of business outside of railroad operations. Its astonishing success fascinates the mind of every man who is familiar with commercial methods and who contemplates its attainments. Marvelous in the perfection of its organization, invincible in its strength, astonishing in its economies of production, and more astonishing in the low prices at which its products are marketed, it is the model from which every argument in support of the trust idea has been drawn. And so often and so furiously has it been attacked by press and pulpit, state legislatures and reformers of every kind and degree, that the American people have come to look upon it as a thing which must endure because of the essential soundness of the principles upon which it is builded. But the secrets of its strength are perfectly obvious to men who are trained in economic thought, says a writer in the India Rubber World.

In the first place, crude petroleum is a natural product. The supply is limited rigidly by the flow from known oil fields. The simple problem with which Rockefeller and his associates have to deal, therefore, is to get control in each new oil field as it develops. In other words, nature limits the supply of crude material, and geography definitely locates it. Having in the course of its operations secured absolute control of all existing oil fields, it is now a simple matter, with their enormous capital and obvious advantages, to speedily gain control of each new field as it is developed.

Beyond this, both crude and refined oil are large in bulk, and their transportation from the point of production to the point of manufacture, and then again to consumers in every part of the world, makes the item of transportation enormously important—so important that the Standard Oil Company has found it profitable to own thousands of tank cars and hundreds of miles of pipe line operated by gigantic pumping apparatus. Having command of this enormous amount of freight, they are in position to dictate terms which can either make or break railway lines, and

the sums they have thus saved on the cost of transportation mount into millions of dollars.

Beyond these two features of the business which broadly distinguish it from every other line of manufacture, enormous capital is required for the equipment of their factories, tens of thousands of employes are scattered all over the country, and the by products of their refineries are so many and so important that each in itself constitutes an important business. Indeed, it is said to be a fact that the profits from these by-products have come to be so great that the Standard Oil Company could afford to give away the ordinary grades of refined oil and still declare handsome dividends.

### BRITAIN'S COMMERCIAL DECLINE

It is to be doubted whether the British realize the extent to which their trade has fallen off. The explanation generally given for the decrease during the past year is that it has been caused by the great strike of the engineers, which ran through the latter half of 1897 and well into last year. Labor has during the past year been employed at increased wages over those paid previously, as a rule. But the productive capacity of the British mechanic no longer takes the lead. It is exceeded by that of the mechanic of the United States and of Germany. This is owing to three reasons: First, the British manufacturer does not avail himself of the latest improvements in machinery; second, the British mechanic is not now as technical as the American or German mechanic; third, the labor market is continually being disturbed by strikes and lockouts.

In spite of the above facts, there is a general confidence that the British foreign trade will revive. Manufacturers are becoming more enterprising in using up-to-date machinery coming from the United States. The engineers and their employers will probably not have another dispute for some time; the labor outlook, generally, is more pacific than for some time past; technical schools are being opened in most of the manufacturing towns; and in the commercial centers commercial schools have been opened to more especially meet German competition in foreign markets.

### GERMANY'S ONWARD MARCH

Constantinople is becoming as German as Berlin. While England and Russia have been disputing about the shell, Germany has carried off the oyster. They are steadily pushing on their railroad through Asia Minor. Every station is a little German colony. Every depot is a German bazaar. Before we know where we are Asiatic Turkey will have become a German province. So far as England, Russia and France are concerned, they have no ground for complaint. They have one and all failed to protect the populations of Asia Minor, and have thereby abdicated their right to object when another power undertakes to make the desert bloom as the rose. Of course it is very iniquitous that it should be done in alliance with the Turk. But there will be short shrift for the sultan as soon as the German really feels his feet in Asia Minor.

The French Budget Commission has voted a credit of \$8,000 for the purchase of folding bicycles for the army during the present year.

MAKE NO MISTAKE!

# Chase Tires

==== For 1899 ====

Are the best values ever offered. ❁❁❁  
No expense spared in their production.

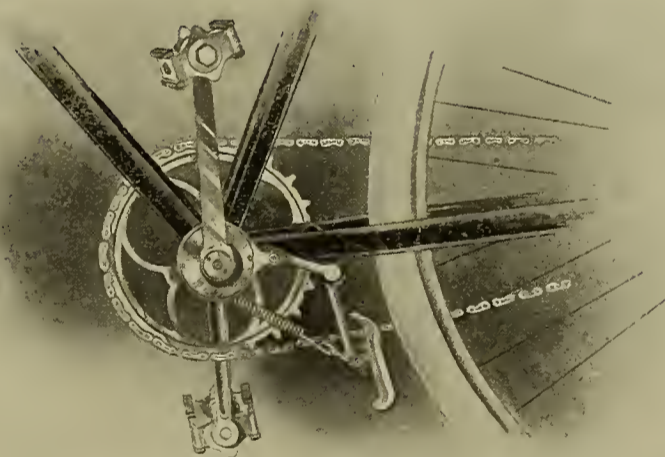
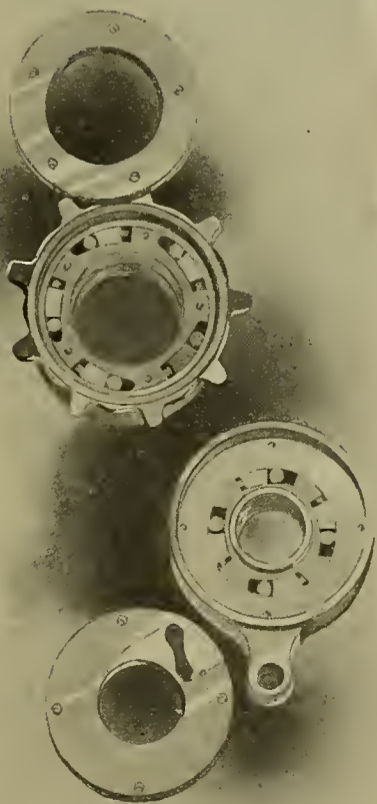
Our prices will surprise you.  
If our representative does not see you soon  
enough write us for them.

Mention The Cycle Age

L. C. CHASE & CO., Boston.

## Use this Hanger

And Build Your Cycles for '99.



## Fitted with the Morrow Automatic Coaster and Brake

We furnish the Hanger with all necessary parts  
for the Brake—and a pair of Morrow Hubs with  
the Automatic Rear Sprocket.

Write for prices on  
Complete Sets

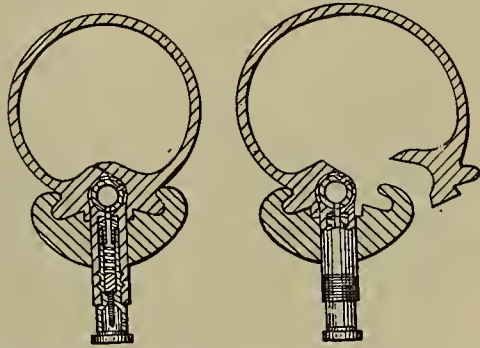
**Eclipse Bicycle Company**  
Elmira, N. Y.

Mention The Cycle Age

## RECENT PATENTS

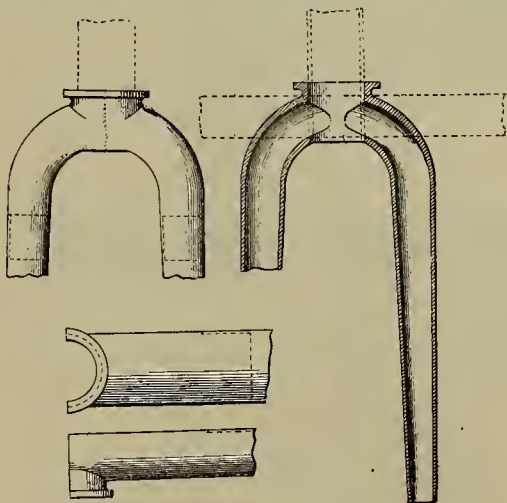
## American Tubeless Detachable Tire—Two-Piece Pressed Crown—Combination Handle Bar

**Single Tube Clincher Tire.**—The invention comprises what is probably the first of its kind in this country, though similar tires have been made, and are now in quite extensive use in England. The tire is made with a base which fits a rim similar to that of the G. & J. tire, but with



the lapping edges so formed as to receive between them an annular sealing tube. The inflation valve leads to the expansible sealing tube, all the air which is forced into the tire first passing through that tube and thence into the tire proper through small holes arranged along the top side of the tube near the joining edges of the tire. The claim made for the sealing tube is that after the tire has been inflated the pressure of the tube against the adjacent edges of the tire base will tend to make the joint more surely air tight than would otherwise be possible. The inventor is W. F. Cornelius of Indianapolis.

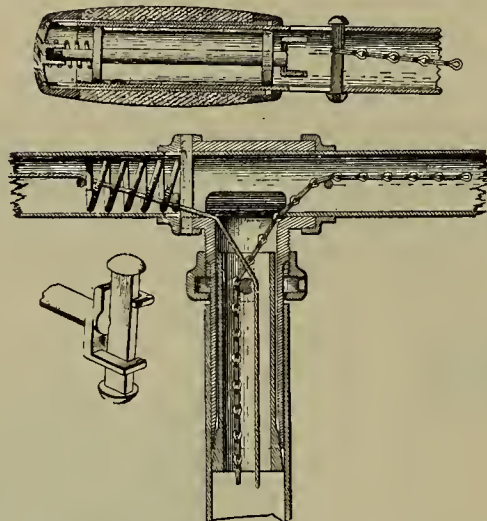
**Sheet Metal Fork Crown.**—The crown is composed of two pieces of taper gauge tubing, whether it is made separate from the fork blades or has them as integral extensions. The tubing is of oval section and before the sections are bent into arch shape the inner end of each is flashed to form a semi-cylindrical collar. After the two sections are united a complete flanged collar for the reception of the fork stem tube is obtained. The collar is formed only at the top side of the crown, the lower walls of the sections being merely scarfed off to form a hole to take the lower end of the stem. The two sections after being formed are electrically welded together and the piece thus made



is bent into arch shape, this operation completing the crown. If the tube pieces from which the crown is made are not extended to include the fork sides their lower outer ends are swaged to reduce their diameters sufficiently to receive the

fork blades in a flush joint fashion. One care to be observed in flashing the ends which join and form the central collar of the crown is to so work the metal that the thickness of the two adjoining walls will be the same, for in the electrical welding process if the two walls to be butt jointed are not of even thickness the thinner one will be burned out in the process. The inventor is C. H. Smith, Chicago, assignor to the Geo. L. Thompson Mfg. Co., same place.

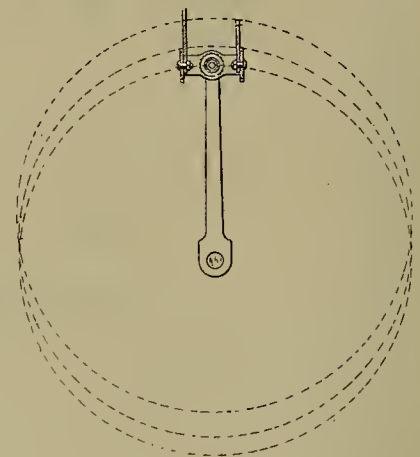
**Combined Bar, Brake and Bell.**—The head or T piece of the handle bar stem is notched around one end and receives in any two diametrically opposite notches a square rod extending through the handle bar tube and slidably engaging slots cut in the tube. The movement of the rod is restrained by a coil spring placed between it and a small pin crossing the bar tube. A collar holding the protruding ends of the sliding bar serves as a hand piece for releasing it when the rider desires to adjust the bars. The movement of the bar



in the head piece is limited in the opposite direction by a pin-secured collar. The stem directly under the head piece is externally threaded and carries a nut for the operation of the tightening device which comprises a hollow taper plug hung by means of slots in its walls from a transverse pin resting in the internal annular groove cut in the locking nut. The taper plug tends to expand the split lower end of the handle bar stem against the wall of the fork stem tube. The various cross pins needed in these devices also serve as guides for the chains or cords which run down through the stem to operate the brake and bell. The latter may be of any desired type, while the former is preferably made similar to one previously patented by the same inventor. The cords run to cross pins placed in slots near the handle bar grips, and are provided with button heads to be used as hand pieces. Inside of the handle bar at the grip end, to which runs the brake operating cord, is hung in a slidable manner, a rod having on its inner end a forked locking arm with reversed lugs. The other end of the rod is squared to match a squared hole in a button placed in the ferrule of the grip. By pushing this button with the thumb and turning it so that the reversed lugs of the fork are made to catch the transverse brake operating bar, the spring acting against the button will cause the brake to be locked

until the rider shall see fit to release it by disengaging the locking jaw from the operating bar. This locking device is for the purpose of making it impossible for anyone who does not know how to release the brake to ride away on the bicycle while the owner is absent. The inventor is M. L. Nichols, Westfield, N. J., assignor to the Evolution Cycle Co., Washington, D. C.

**Pedal Attachment.**—Removable sideplates are attached to ordinary pedals, the plates being toothed the same as the regular sideplates and of such height that the foot surface will be brought some



distance above the usual position. In riding under ordinary circumstances the rider places his feet on the sides of the pedals to which the extension plates are not attached. When it is desired to vary the length of the stroke, as for climbing hills, the rider by a foot movement similar to that which cyclists are accustomed to use in catching toe clips, rotates the pedals and catches the sides which are fitted with the extension plates. This change of foot position is supposed to give a longer leverage to the upper part of the down stroke. The inventor is Albert Wagner, of Chicago.

## PUNCTURE PROOF TIRE FILLING

German Inventor Produces a Light, Spongy, Elastic Substance from Gelatin or Glue—His Process.

Patent has been granted to Julius Deborde of Berlin, Germany, on an elastic filling for tires, saddles and similar cushioned articles, and on the process of manufacture thereof.

The inventor makes a jelly of glue or gelatin to which is added glycerin to prevent hardening, and an antiseptic substance to prevent fermentation, and heats the mixture until it becomes liquefied, when he beats it into a foam by suitable mechanical means, and, introducing it in this state into the tire or saddle, allows it to cool and solidify, retaining the air in the bubbles by which the elasticity of the substance, itself elastic, is considerably increased, and the weight much reduced. The result is a spongy substance of cellular formation. The weight may be further decreased and the substance made more elastic by the introduction of a number of small hollow balls or tubes of soft rubber.

Instead of forcing the substance directly into tires when in the heated plastic state, it may be run into molds of the desired shape and allowed to cool first. Cushions of this material are durable, do not become rigid, non-elastic nor hardened, and can be made economically. They are also good conductors of heat and consequently cool in use.

The inventor has secured patents in Germany, Sweden, France, Belgium, England, Austria, Hungary, Norway, Switzerland, Italy, Luxemburg and Spain.

# National Bicycles

Give you  
A NET PROFIT  
That's all yours.

You don't have to spend half your gross receipts taking care of your customers.

Good Bicycles  
A Living Margin of Profit  
Satisfied Riders

MAKE A COMBINATION  
PROFITABLE TO YOU.

## National Cycle Mfg. Co.

BAY CITY, MICH.

A NATIONAL RIDER  
NEVER CHANGES HIS MOUNT.



## WHEELER SADDLES

HAVE ALWAYS BEEN MADE WITH THAT  
CURVE IN THE BACK.

OUR LINE FOR '99 COMPRISES BUT FOUR DISTINCT MODELS:

- "EXTRA" Woman's . . . . . Broad, Soft and Easy. ❁❁
- "EXTRA" Men's . . . . . Hygienic and Durable. ❁❁
- "SPECIAL" Roadster . . . . . An ornament to any wheel.
- "CORK-TOP" Racer . . . . . Light and Graceful. ❁❁❁

These saddles are made and finished in the careful and stylish manner that has always characterized Wheeler Saddles.

Send for samples of the most popular saddle on the market.

### THE WHEELER SADDLE CO.

1427-1457 Woodward Ave., DETROIT, MICH.

Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT.  
New York Distributing Agents: HARTLEY & GRAHAM.

# Your Half?

Well begun is half done.

**T**HE STEARNS is a long established wheel. It is a largely advertised and therefore widely known wheel.

The Stearns is a prosperous wheel. The factories have been running continuously throughout the past summer and fall. The 1899 models have been greatly improved.

This is, in brief, our half.  
What about your half?

To make your agency a leading agency you should have a leader. The Stearns is known and is popular in every country on the globe. The color individualizes it as no other wheel has ever been individualized. The 1899 designs are new and fascinating.

The agency costs nothing. The terms are advantageous. The treatment is liberal. The prestige gained immediately stamps you as a leading dealer.

If you are progressive, our good will, purchased without price, may be easily worth thousands of dollars to you. There is no honest competition that will stand Stearns' competition.

Indications point to a brisk bicycle business this season. Are you going to remain at a standstill or secure your share of it? How about your half?

The Yellow Fellow Year Book, now ready, explains improvements, gives variety of wheels and prices. We invite correspondence. ❁❁❁❁

## E. C. STEARNS & CO.

SYRACUSE, N. Y.

The trade on the Pacific Coast supplied from our branch store, E. C. Stearns & Co., 210 McAllister Street, San Francisco.  
The trade in the Dominion of Canada supplied from our Canadian factory, E. C. Stearns & Co., 67 Adelaide St. West, Toronto, Ontario.

## HERTEL GASOLINE CARRIAGES

**Light, Inexpensive Vehicles Controlled by a Single Lever**  
—Prepared to Fill Orders

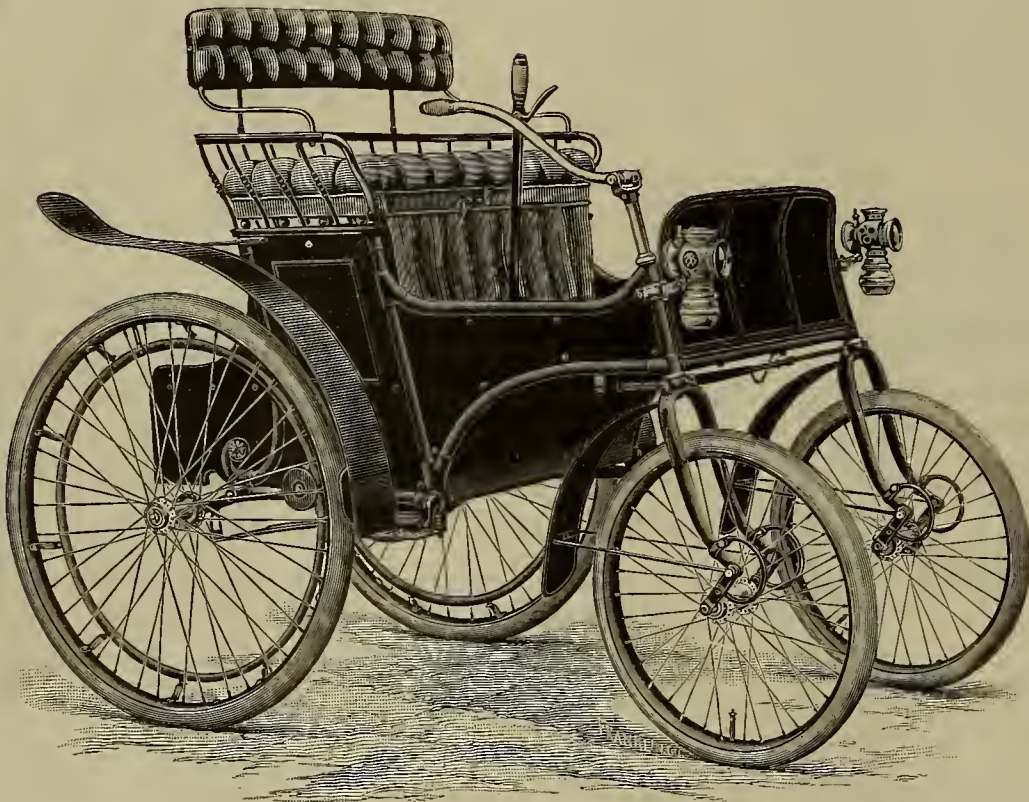
Many articles have been published during the past year upon the practicability of road wagons or carriages driven by motor power and it would seem that the solution of this question is rapidly approaching. In large cities in this country a few vehicles are encountered driven by motor power, but this country is several years behind Europe in the manufacture and use of motor vehicles.

France has paid more attention than any other country to motor vehicles. Motor carriage races were popular in France nearly a decade ago, but, as was the case with the bicycle, it has taken the United States some time to "catch on" to the motor vehicle idea. Now, however, many firms are experimenting and some of them are actually building commercial

The rapid improvement in roads and their construction will operate much in favor of the horseless carriage, but it is expected that there will be in many parts of this country obstacles to the introduction of the motor vehicle in the way of impassable roads which can only be traversed by the horse.

### The Hertel Carriage.

The Oakman Motor Vehicle Company, whose factories are at Greenfield, Mass., has just lately brought out the Hertel carriage and rapid package delivery wagon. This carriage has been brought to its present state through work extending over the past six years, and is apparently one of the simplest and lightest vehicles yet produced. It is driven by ordinary



motor vehicles of different types, ranging from a parcel carrier to the elaborate brougham costing \$3,000 or more.

### Gasoline Delivery Wagons in Paris.

Experts differ as to the best motive power, but at present the gasoline driven vehicle is much favored from a practical standpoint. Paris has adopted this machine and it is a common sight on the streets to see the hydrocarbon delivery wagon or carriage passing, many of the large stores using them exclusively.

The price at present on motor carriages driven by gas is much less than it is for electrical machines. Experts believe that before the century closes a good practical gasoline carriage will be sold for \$500 or less. This it is confidently believed, will bring them into common use.

### American Vehicles Going to Europe.

The manufacture of American motor vehicles will undoubtedly, as was the case with the bicycle, surpass European production, and the American article is already going abroad. The motor carriage will always be ready for use; is more economical than maintaining teams, and there is hardly a doubt that it will become the favorite means of locomotion before another decade has passed.

gasoline, is odorless, and can be run fifty miles at a cost of about five cents. Explosion is utterly impossible.

The carriage for two people weighs about 450 to 475 pounds, which compared with other vehicles, is very light. It is very simple and easily controlled. It is started with a lever held in the left hand, which not only starts the machine, but regulates the speed and sets the brake. The vehicle is steered by a lever in the right hand and is very easily managed. A novice can operate it in a short time. It is very simple in construction, having fewer pieces than other machines to get out of order. It can be geared to any rate of speed and yet be entirely under control of the operator. The economy of running, ease of operation and its light weight seem to make it a leader among practical road machines.

### Fuel For Seventy-Five Miles.

The accompanying cut shows the vehicle for two people. It is not affected by heat or cold, requires no cooling and no change of water, as is often the case with hydrocarbon machines. The tank when filled with fuel will furnish power for a continuous trip of seventy-five miles, but ordinarily should be replenished at the end of fifty miles.

R. N. Oakman, at Greenfield, Mass., is president of the company, and G. G. Brandenburg, of the Iven-Brandenburg Company, Chicago, is vice-president, and all western business will be looked after by him. J. I. Brandenburg, New York, will handle the business in the east.

The company is ready to deliver vehicles at once, and is prepared to turn out any quantity that may be required.

### To Build Motors for Vehicles.

The Denison Motor Wagon company has been incorporated under the laws of New Jersey to manufacture petroleum engines for use on tricycles, carriers, carriages, drays and motor vehicles under the Denison patents, which the new company controls. The engines are an adaptation of the Denison marine engines to the requirements of motor vehicles, the problem having been carefully studied out during the past three years by E. F. Walton and Ernest Merrick, with a view to producing an engine of excellent running qualities, great freedom from vibration, noise and odor, and easy to control. The engines will be made in various sizes from one-horse power up and will be offered to the public on all forms of vehicles. They will also be sold separately to the trade for use by those who wish to make their own vehicles and attachments. The factory of the company is in New Haven and the general offices are located for the present at 308 West Fifty-ninth street, New York. The officers are Ernest F. Walton, president; Ernest Merrick, vice-president; George L. Record, secretary and treasurer, and Julian F. Denison, engineer. The directorate includes the same men and also Julian B. Tinkham.

### Another Steam Wagon.

Springfield, Mass., Jan. 9.—J. H. Bullard, of this city, a well-known inventor, has about perfected a steam wagon for which lightness, simplicity of construction and low cost of operation are claimed. Mr. Bullard has been at work on the wagon for twelve years and during the past week has given the carriage several trials. The maximum weight of the vehicle will not exceed 500 pounds, and it can be speeded as slow as one ordinarily walks, or at the rate of twenty-five miles an hour. The power is furnished by a pair of vertical engines. The boilers hold about four gallons of water, or sufficient to run the wagon fifty miles. Either naphtha or other volatile oils can be used for fuel. The cost of operation is about one-third of a cent a mile. The boilers are equal to a pressure of 700 pounds, while the working pressure is but 160 pounds. There is no danger, it is claimed, should the water become exhausted in the boilers. The power is transmitted by a chain and sprocket. The wheels are of bicycle pattern, with ball bearings. In appearance the wagon is decidedly neat, all of the mechanism being concealed, and the lines of the body following closely those of the up-to-date pleasure vehicle.

### Motor Vehicle Speed Contest in Paris.

The first regular tournament of short distance races for automobiles was held in Paris on Sunday, December 18. There were twenty-one competing vehicles, of which fourteen were passenger wagons and carriages, six were tricycles, and one was a bicycle. Only one of the heavy vehicles was propelled by electricity, the others employing petroleum as a motive force. Two trials at one kilometer were given each machine, the first with standing start and the second with flying start, the sum of the two times determining the positions of the competitors in the contest. The electric vehicle, owned by Count Chassaloup-Loubat, made very much the



best time in both heats, the total time for the two being twenty seconds less than that of the closest competitor, which was a petroleum vehicle. The first kilometer was covered in 1:12 3-5, and the second in :57. The third best time was made by a tricycle. The motor bicycle was awarded sixteenth place. The tricycles made a better average showing than the heavy petroleum vehicles, the five slowest times being made by the latter class. The slowest time for the standing start was 2:58, and for the flying start, 2:52 2-5.

### AUTOMOBILE TRADE IN FRANCE

Makers of Cycle Parts Deeply Interested—Complete Sets of Parts for Motor Tricycles.

Nearly all French cycle manufacturers are making motor cycles, or motor carriages, or both. Their cycle trade is still large, but prices, ruling as they do from \$40 to \$75, are not remunerative. The demand for cycles is now easily met; the demand for motors is yet unfathomed. People load makers of well-known motors with their money in prepayment—premiums are offered to induce quick delivery. Bicycles sell and will continue to sell; but anybody who can afford and obtain a motor cycle or motorcar will not mount a bicycle. They laugh in Paris as they compare the exhilaration of le sport automobile with the less exciting pedaling of a bicycle.

Automobiles were so numerous at the recent Paris show that at least one-half of the space was devoted to them. In another year it would not be surprising if the title of the exhibition were reversed, and the cycle given second place. Every parts maker, tube maker, tire maker—everyone hitherto associated with the cycle trade as a maker of components or accessories—is now equally setting out to supply motor parts and fittings. Complete sets for motor tricycles may be purchased, leaving the purchaser to build up the frame and wheels and bolt together the motor parts.

An idea prevails that the motor tricycle, so popular in France, will have to give place to a neat little car for two or three persons.

Most of the fashionable cycling clubs in London have died from lack of support.

There are enough tandems stocked in England to make it unnecessary to build any for the coming season.

### That Big Deal in Automobiles.

Motor vehicle builders are skeptical about the truth of the published reports of the gigantic deal alleged to have been put through by the Fisher Equipment company and the Count de Jotemps, by which the latter is said to have contracted for the annual delivery of the company's machines for a period of ten years at a price of \$5,000,000. And in truth the story does sound strange in view of the fact that the contract implies a fixed form of manufacture for so long a period and presupposes that existing prices will remain constant. Colonel Pope has declared his belief that nobody in this age of rapid and revolutionizing invention, and in the very infancy of this business, is making contracts for delivery ten years ahead. It is quite likely that the press story is somewhat exaggerated in this respect; but it is certain that the Count is placing some big orders for these vehicles and it is natural that the contracts should make some sort of provision for the future.

Electric ignition in small explosion motors seems to be gaining in favor in England, where the partial failure of this method of firing was due formerly to the use of too small a plug and to wiring too highly.

## ONE HUNDRED STEAM WAGONS

### TEST FOR LIGHT CONSTRUCTION

Steam Vehicles Weighing Less than Four Hundred Pounds to be Tried on Large Scale.

The Stanley brothers, of Newton, Mass., have decided on their commercial model, and write that they have begun making their first lot of 100 wagons. They have made changes in the frame so as to use full elliptic springs instead of the half-elliptics; the new model will be about 40 pounds lighter than their first wagon, which weighed, empty, 410 pounds.

This new model wagon has a backing action, the engines being fitted with the link valve motion.

William B. Mason, of Milton, Mass., will supply the engines, and this insures excellent workmanship on the Stanley motors. Mason is past master of the art of using automatic and semi-automatic machine tools, and the Stanley motors will be perfectly interchangeable in all their parts, so that repairs can be supplied at low rates, when needed.

The cardinal feature of interest in this matter of a hundred new Stanley wagons is the weight of these vehicles. Without exception, all of the other and more experienced motorcycle makers assert that no mechanically driven wagon weighing under six or eight hundred pounds empty, will stay together on the road.

If Stanley builds and sells a hundred wagons weighing under 400 pounds each, the behavior of these vehicles on the road will settle the question of motorcycle weight possibilities, as no experiment on a small scale could settle it.

#### The Distribution of Weights.

The Stanleys have operated their 410 pound wagon for more than a year, and most of their running has been done with two passengers up; this would give the Stanley total weight on the road well towards 900 pounds, made up about as follows: Twelve gallons of water in the water tank and the water in the boiler, say 150 pounds of water; 30 pounds of gasoline; two passengers, 300 pounds; these items make up a total of 890 pounds. The Stanley boiler weighs 95 pounds, and the engines, with the link valve motion will probably weigh about 25 pounds. This makes about 140 pounds for all of the Stanley machinery, allowing 20 pounds for the chain and compensating gear and brake. This leaves 270 pounds for the weight of the running gear and the very light body and springs of the Stanley wagon, which is framed with steel tubing, bicycle frame construction, and has very light wheels, only 28 inches in diameter.

Here, then, we have a 270 pound wagon, running gear and body only, carrying a load of machinery and supplies and passengers of about 620 pounds.

#### Organize to Protect Owners.

The California Bicyclists' Protective Association has been incorporated in Los Angeles with a capital stock of \$10,000 to deal in bicycles, motor cycles and their attachments, to protect the owners from loss by theft, to prosecute persons charged with theft, and to hold real estate. The directors named are A. C. Harper, M. M. Griggs, C. J. George, M. N. George and H. C. Brown.

#### Motor Vehicle Service Recommended

The state council of the grand duchy of Luxemburg has recommended a project for the establishment of a public passenger and merchandise service by motor vehicles in Germany, and has sent a letter to this effect to the grand duke for his

approval. It is pointed out that in many parts of the country it is impossible to build even single track railroads, and that motor vehicles, which have proved themselves very efficient, would be convenient. The heavy weight class of vehicle capable of an average speed of twelve to fifteen kilometers an hour is preferred.

### PENNINGTON'S BUCK-BOARD

Nearly Four Hundred of them Claimed to Have Been Sold—A Horizontal Fly Wheel.

Pennington and Baines, 5 Great Winchester St., London, E. C., have out a new 4-wheeled wagon.

This vehicle is said to weigh a little more than 225 lbs. It carries two passengers on the front seat, and a third passenger can ride on a single rear seat. The price is 95 guineas, or about \$475. The body of the wagon is said to be built of "strong sheet tubing," whatever that contradictory term may mean, and the vehicle is said to be "elegant, comfortable, speedy and noiseless," and to produce "no odor." Pennington and Baines also assert that 397 of these wagons have been sold.

No detailed description of the machinery is given, more than that the explosion motors, electric ignition, have water jacketed cylinders and drive a heavy fly-wheel revolving in a horizontal plane, instead of in a vertical plane as is usual, and having a rope drive from V-grooved wooden pulleys, the rope passing over a flat-faced pulley formed on the compensating gear disk. The passengers are carried very low, and are wholly unprotected from the weather.

The buck-board platform carries all the machinery underneath, and unprotected from dust. The front wheels are driven, and the rear wheels are used to steer with.

The driving rope is made endless with a long splicing, and costs only about 65 cents. Of course this rope drive demands some sort of a "take-up," and this detail is in the form of a pivoted spring controlled lever, carrying an idle pulley over which the driving rope passes, so as to give a constant tension thereto. This tension may be increased by foot pressure if the driving rope shows signs of slipping.

This construction brings the machinery close to the road surface, but it has an inch more clearance, it is said, than the De Dion Four-wheeler has. The cylinder appears to be single; it is spoken of as having a long stroke.

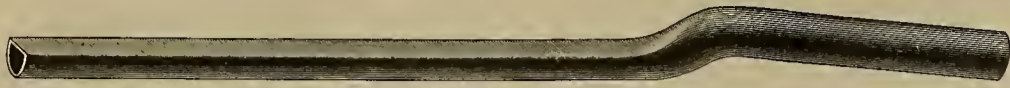
The water and the gasoline are said to be carried in cylinders set across the front of the up-curving dash board, much like the arrangement used in Pennington's first vehicles.

The carriage is said to be fitted with "compound springs," in addition to the springs afforded by the pneumatic tires. The "compound springs" appear to be vertical coiled springs, placed under the front seat. The rear seat, which appears to be a cycle saddle, hardly to be classed as luxurious for a long ride, is also supplied with independent springs.

This new vehicle of Pennington's is of interest because of its light weight, and because of the rope drive. It is of more interest commercially than mechanically, however, because 397 of these small, cheap, and by no means elegant wagons have been sold within a very short time, if the printed statements of Pennington and Baines are to be believed.

The first motor omnibus service in England was established December 21 between Kew Bridge and Hounslow by way of Brentford and Isleworth.

The German imports and exports of bicycles are now almost equal in figures.



Fork No. 22. Stay No. 22½.

Seven-Eighths Inch "D" Rear Fork, for 28-inch and 30-inch Wheels.

Length for 28 inch wheel, 3⅜ inches from hanger to bend, 14⅝ inches from bend to rear end, 18 inches over all.

Length for 30-inch wheel, 4½ inches from hanger to bend, 15¾ inches from bend to rear end, 20¼ inches over all.

Stay—length from seat post bracket to bend, 8 inches. Length over all, 24 inches.



Fork No. 23. Stay No. 23½.

Seven-Eighths Inch Tapered to Three-Quarters Inch "D" Rear Fork for 28-inch and 30-inch Wheels.

Fork—length for 28-inch wheels, 3⅜ inches from hanger to bend, 14⅝ inches from bend to rear end, 18 inches over all. Round both ends.

Fork—length for 30-inch wheels, 4½ inches from hanger to bend, 15¾ inches from bend to rear end, 20¼ inches over all. Round both ends.

Stay—length from seat post bracket to bend, 8 inches. Length over all, 24 inches.



Fork No. 26. Stay No. 26½.

Three-Quarters Inch by Three-Quarters Inch Round Rear Fork, for 28-inch and 30-inch wheels.

Fork—length for 28-inch wheels, 3⅜ inches from hanger to bend, 14⅝ inches from bend to rear end, 18 inches over all.

Fork—length for 30-inch wheels, 4½ inches from hanger to bend, 15¾ inches from bend to rear end, 20¼ inches over all.

Stay—length from seat post bracket to bend, 8 inches. Length over all, 24 inches.



Fork No. 36. Stay No. 28.

Seven-Eighths Inch "D" Rear Fork, for 28-inch and 30-inch Wheels.

Length for 28-inch wheels, 3⅜ inches from hanger to bend, 14⅝ inches from bend to rear end, 18 inches over all.

Length for 30-inch wheels, 4½ inches from hanger to bend, 15¾ inches from bend to rear end, 20¼ inches over all.

Length from seat post bracket to bend, 8 inches. Length over all, 24 inches.

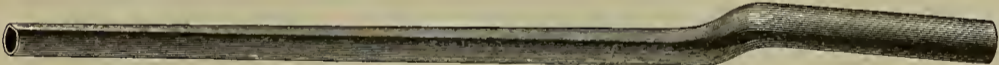


Fork No. 41. Stay No. 41½.

Three-Quarters Inch by Three-Quarters Inch Rear Fork, Round Both Ends, "D" Center, for 28-inch and 30-inch Wheels.

Fork—length for 28-inch or 30-inch wheels, 4½ in. from hanger to bend. Length over all, 19½ in.

Stay—length from seat post bracket to bend, 8 inches. Length over all, 24 inches.



No. 44.

Three-Quarters Inch "D" Rear Fork, for 28-inch and 30-inch Wheels.

Length for 28-inch wheel, 3⅜ inches from hanger to bend, 15⅝ inches from bend to rear end, 18¾ inches over all.

Length for 30-inch wheel, 4½ inches from hanger to bend, 15⅝ inches from bend to rear end, 19⅞ inches over all.

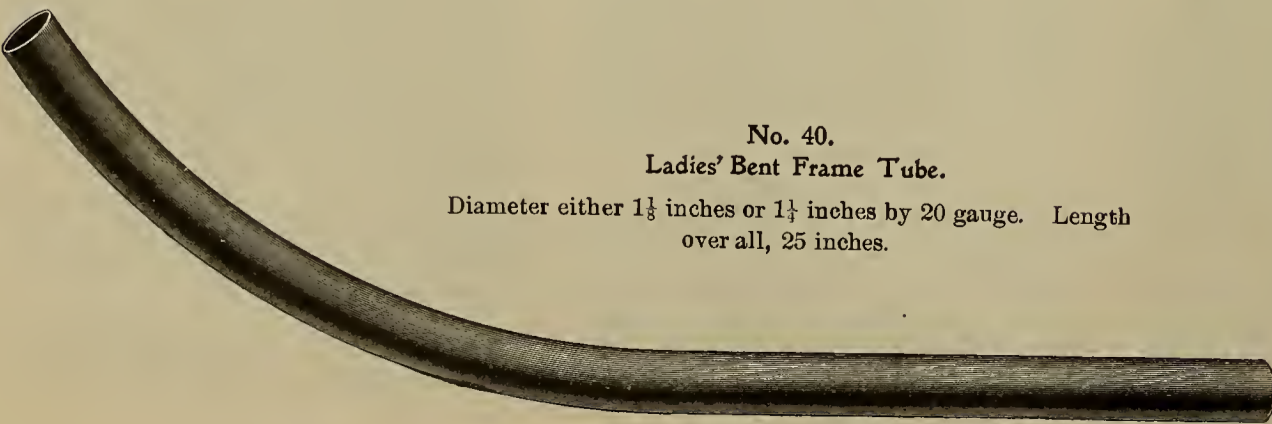


No. 49.

Three-Quarters Inch by Three-Quarters Inch Rear Fork, Round Both Ends, "D" Center, for 28-inch and 30-inch Wheels.

Length for 28-inch wheel, 3⅜ inches from hanger to bend, 14⅝ inches from bend to rear end, 18 inches over all.

Length for 30-inch wheel, 4½ inches from hanger to bend, 15¾ inches from bend to rear end, 20¼ inches over all.

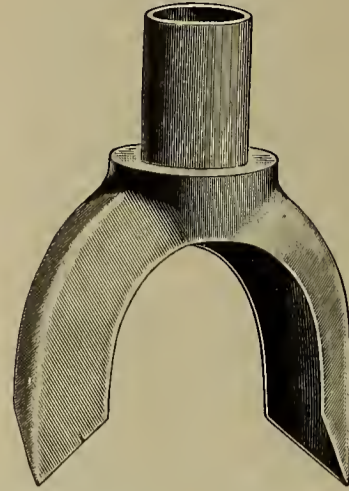


No. 40.

Ladies' Bent Frame Tube.

Diameter either 1⅝ inches or 1¼ inches by 20 gauge. Length over all, 25 inches.

No. 20-C.



No. 20-C.

Continuous Front Fork Crown

To fit 1 inch Continuous Front Fork No. 20. Top stem to fit 1x16 gauge fork stem.

**Shelby Steel**

MANUFAC

**Seamless Steel Tubing, Fork Sides, Stems, Taper Gauge Handle Bar or Frame or Handle Bar Pur Tubing, Continuous**

GENERAL

**CLEVELAND,**

---

BRANCH OFFICES

CHICAGO, 135 Lake Street.

NEW YORK, 144

No. 46.



No. 46.

Seven-Eighths Inch Tapered Oval Rear Fork, for 28-inch and 30 inch Wheels.

No. 47.

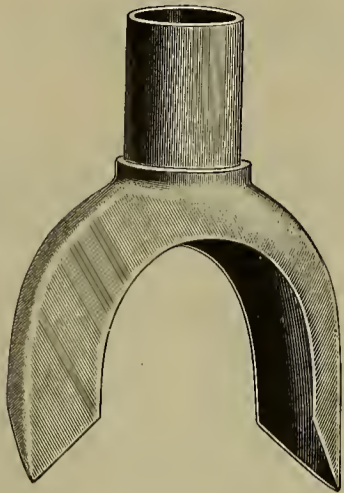
Three-Quarters Inch Tapered Oval Rear Stay, for 28-inch and 30-inch Wheels.

Fork—length for 28-inch wheel, 3⅜ inches from hanger to bend, 14⅝ inches from bend to rear end, 18 inches over all.

Fork—length for 30-inch wheel, 4½ inches from hanger to bend, 15¾ inches from bend to rear end, 20¼ inches over all.

Stay—length from seat post bracket to bend, 8 inches. Length over all, 24 inches.

No. 94-C.



**No. 94-C.**  
**Continuous Rear Fork Crown.**  
 To fit 1 inch Continuous Rear Fork No. 94. Top stem to fit 1 1/8 x 18 gauge tubing.

No. 20.



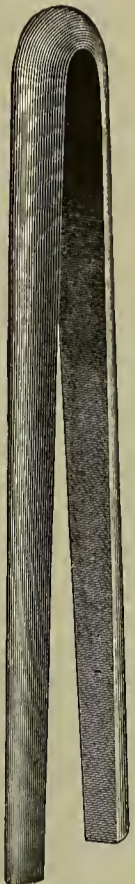
**No. 20.**  
**One Inch Continuous Front Fork.**  
 Taper gauge 16 to 20. Width inside at top 2 inches.  
 Length for 28-inch wheel, 14 3/4 inches.  
 Length for 30-inch wheel, 15 3/4 inches.

No. 84.



**No. 84.**  
**Seven-Eighths Inch Continuous Rear Fork or Stay.**  
 Taper gauge 16 to 20. Width inside at top 2 inches.  
 Length for 28-inch wheel, 14 3/4 inches.  
 Length for 30-inch wheel, 15 3/4 inches.

No. 60.



**No. 60.**  
**Continuous "D" Rear Fork or Stay for 28-inch or 30 inch Wheel.**  
 Gauge 18.  
 Length for 28-inch wheel, 14 3/4 inches.  
 Length for 30-inch wheel, 15 3/4 inches.

No. 18.



**No. 18.**  
**One Inch Front Fork.**  
 Gauge 18 or 20. 16 1/2 inches long, 2 1/2 inches sweep. Straight 2 inches from crown end.

No. 33.



**No. 33.**  
**Seven-Eighths Inch Front Fork.**  
 Gauge 18 or 20. 16 1/2 inches long, 2 1/2 inches sweep. Straight 2 inches from crown end.

Head Stem.



Head Stem.

One inch and 1 1/8 inches 16 gauge Head Stems. Length 12 inches. 24 threads to the inch, slotted and collared.

No. 51.

**Seven-Eighths Inch Tapered to Three-Quarters Inch "D" Rear Fork, for 28-inch and 30-inch Wheels, Round Both Ends.**

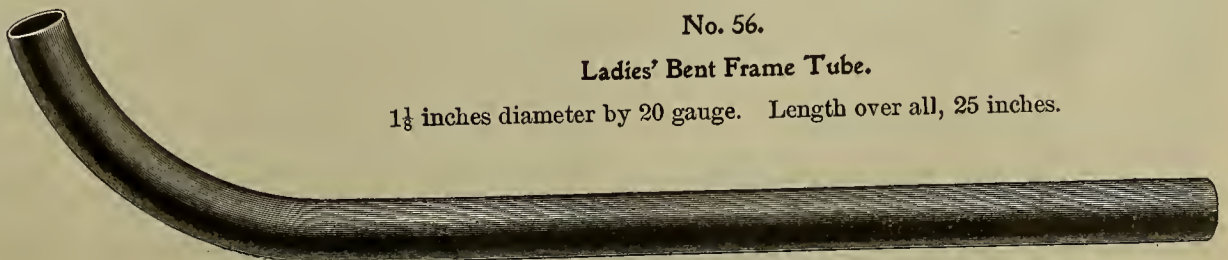
Length for 28-inch wheel, 3 3/8 inches from hanger to bend, 14 3/8 inches from bend to rear end, 18 inches over all.

Length for 30-inch wheel, 4 1/2 inches from hanger to bend, 15 3/4 inches from bend to rear end, 20 1/2 inches over all.

No. 56.

**Ladies' Bent Frame Tube.**

1 1/8 inches diameter by 20 gauge. Length over all, 25 inches.



# Tube Company

**MUFACTURERS OF**  
**"D" Rear Forks and Stays, Fork Frame Tubes, Swedged Tubes for poses, "D" Octagon Shaped Forks and Crowns.**

**SALES OFFICE**  
**OHIO, U. S. A.**

**AND WAREHOUSES**  
 Chambers Street. BIRMINGHAM, ENG., 29 Constitution Hill.

# INFORMATION FOR BUYERS

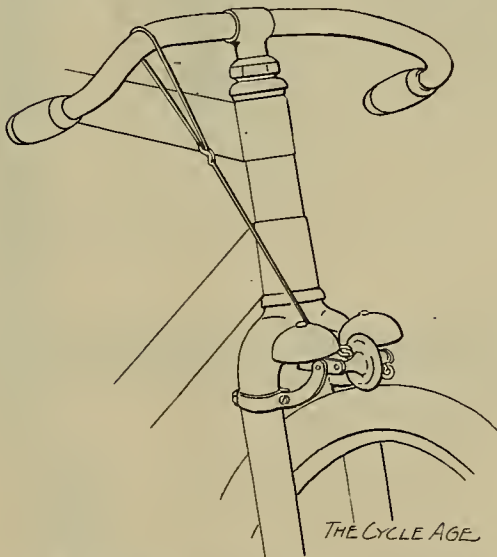
## APPRECIATIVE OF DEALERS' INTERESTS.

Dealers are always glad to do business with bicycle makers who are at pains to study their interests, and save them money in conducting negotiations. The National Cycle Mfg. Co., of Bay City, Mich., has perceived the value of this, and in its catalogue furnished a cipher telegraphic code which, in addition to offering a convenience in placing hurried order, avoids the danger of misinterpretation. In this catalogue the company takes occasion to remark:

"Simplicity is the keystone of successful and satisfactory bicycle construction. An improvement which does not make it easier for the rider to take care of his bicycle, which demands the services of an experienced mechanic, or which, while novel, is inclined to be troublesome just when the use of the machine is a necessary part of its owner's pleasure, is not an improvement. Working upon this theory, we have avoided all complex construction, devoting ourselves steadfastly to the simplification of our improvements and developing new ideas which would increase the pleasure of the rider. We have always felt that the rider should not be bothered by numerous tools. Specialties in the line of tools are as much of a nuisance to the rider as complex construction, for when they are most needed they cannot be found. A kit of tools is not a necessary part of National equipment. Put a modicum of common sense behind the use of a monkey-wrench, and you are equipped to take care of a National and all its parts, using it with pleasure, without repair bills, and getting the highest value out of the money you have invested."

## THE MOFFAT CHIMES.

The operation of this bicycle alarm is so plainly shown by the drawing that no other explanation is necessary than to state that a pull on the cord acting through the lever pivoted on the bracket attached to the fork-sides depresses the small pulley into contact with the rubber tire of the front wheel. In revolving this pulley causes the small metal rings attached to its axle to strike the gongs alternately, and as these gongs are selected in pairs of different tones they give forth a mellow musical sound that is at once pleasant and loud. The action is simple, positive, and always in order. The whole device has been improved by doing away with the unsightly clamp on the handle-bar and fastening the cord with a patent holdfast tie, making the adjustment of the cord easy, the pull direct, and allowing the use of a heavier

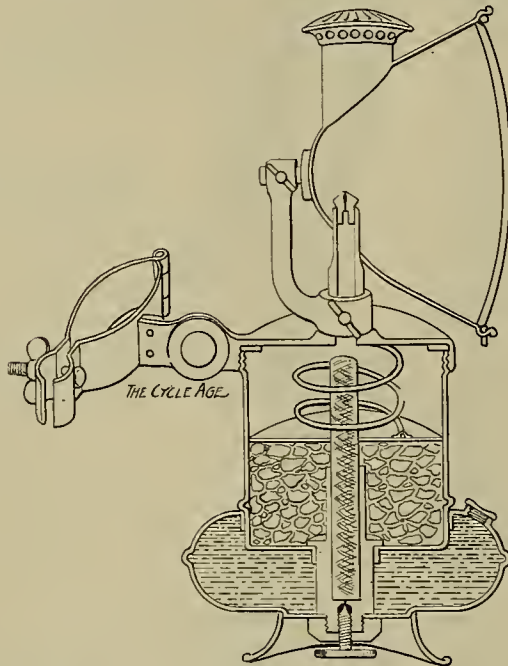


spring to keep the pulley normally off the tire. The gongs are also being fastened on with larger screws. T. B. Moffat, patentee and sole manufacturer, has increased the capacity of his plant at 132 South Main street, Pittsburg, Pa., and by buying material in larger quantities has felt it consistent to make a reduction in the price of the chimes. Besides manufacturing these chimes, Moffat also makes bicycles and other specialties and acts as jobber of standard parts, fittings and sundries.

## THE LONG BEAM GAS LAMP.

Unusually strong claims of perfection are made by the Long Beam Lamp Co. of Hillsboro, O., for its Long Beam acetylene lamp here shown in cross section. One of the principal constructional features to which special attention is called is the novel de-

parture of placing the water reservoir at the extreme base of the lamp, with the carbide chamber between it and the superposed reflector, which, being of the parabolic type, also serves the purpose of a combustion chamber. The water is fed to the carbide by capillary attraction through the wick filling the central tube and consequently the flow must be even and the gas generated in constant volume with the result that the flame is steady and of the same height whether the rider is traveling over smooth or rough roads. Water from the reservoir is admitted to this wick through the valve opened and closed by the thumb screw shown at the bottom. The upper part of the lamp, comprising the cover to the gas chamber, the burner, reflector and bracket, unscrews from the lower part, leaving the cylindrical portion open for the reception of the carbide. This having been introduced,



the metal diaphragm carrying the coil spring is placed over it to prevent it shaking about. The reflector is of the parabolic form, most carefully constructed upon scientific principles, with means for adjusting so that the flame can be brought to the exact focal point of the reflector. This reflector is heavily silver plated and the combustion of the gas is so perfect, it is claimed, that the reflector will not tarnish and with ordinary care will last for years. The greatest volume of light is projected straight ahead for a long distance in a narrow angle, whence the name "Long Beam," but an auxiliary oval of light is thrown downward upon the road immediately in advance of the front wheel for 75 feet and diffused light is thrown outward upon either side, illuminating objects that are passed. In attaching to the machine, the lamp body is set perfectly level and the desired angle of illumination secured by raising or lowering the reflector on the burner tube by means of the thumb lever shown. Concentration or diffusion of the rays can be regulated by front and back adjustment of the reflector in the top of the standard. The lamp will burn five hours with one charge of carbide. By photometric tests it is shown that the beam of light thrown is of 480 candle power strength, while the reflector has a magnifying power of fifty times. While expense has not been spared to make this a perfect lamp, it is being offered at a popular price.

## "ACETALITE" AND CARBIDE TANKS.

The difficulty heretofore experienced in handling carbide of calcium for bicycle lamps has been overcome by the two new specialties introduced by the Cycle Syndicate, 320 Broadway, N. Y.

Calcium carbide, as sold to dealers, has an extremely disagreeable and lasting smell. By a special process of deodorizing this company has succeeded in making it a sundry which is not in the least objectionable. It has given this the name of "Acetalite." Another important property of this compound is that it is anhydrous, which warrants its extensive use, as the successful generation of acetylene gas largely depends upon the affinity of the carbide for water. The carbide storage tank, made in compliance with the regulations of the fire departments of the principal cities, is an

indispensable article for the progressive dealer. Unless carbide is kept in a strictly water and fire proof tank or vault, six inches above the ground, dealers are not only prohibited from carrying it in stock, but the board of fire underwriters cancels their insurance policies. The tank is made of two heavy, low carbon, boiler steel cylinders, between which is a fireproof packing magnesia asbestos. The tank is capable of withstanding a strain of 500 pounds per square inch. It will hold from fifty to seventy-five pounds of "Acetalite" as packed in cans containing 1, 2 and 5 pounds or it will hold 100 pounds of the loose carbide.

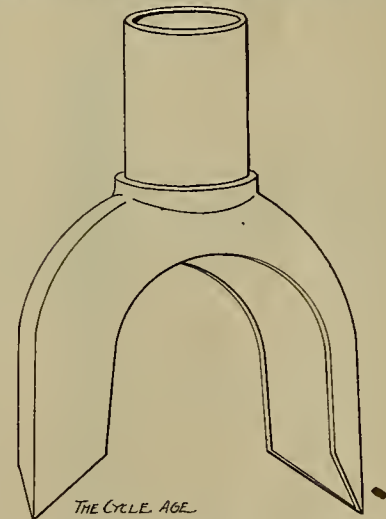
For the purpose of introducing these two articles the Cycle Syndicate is making a combination offer of the tank and 50 pounds of "Acetalite" in assorted cans at a specially reduced price when cash accompanies order.

## PREVENTS RUSTING UNDER ENAMEL.

The anti-rust enamel, made by the American Enamel Co., of Providence, R. I., has been severely tested, and is now pronounced thoroughly satisfactory. It is applied as a foundation, or first coating, on the bicycle frames before applying the regular enamels. There is, as all bicycle manufacturers to their sorrow know, a great deal of trouble arising from the rusting of the tubes underneath the enamel, and the blame for this has been ascribed to the enamel, but really the enamel has no more to do with it than the rise or fall of the tides. It is due to the acid treatment of the tubing at the factories, which acid enters the pores, and is not neutralized or washed off. It gives trouble underneath the enamel in a great many instances. The use of boracic acid in brazing furnishes another cause for rusting underneath the enamel on tubing. In order to counteract this many bicycle manufacturers now are coppering frames by battery process. The bicycle manufacturers throughout the country have from time to time written the American Enamel Co., and have really looked to it to make some kind of enamel or coating for a foundation, which will remedy this trouble, and material has been produced which serves its purpose admirably, as is evidenced by the orders received for it. It is what might be called a hold-fast and a specific, almost, easily and quickly applied at a small expense.

## COMPLETE TUBE CATALOGUE.

The Shelby Steel Tube Co., of Cleveland deserves to be complimented upon the thoroughness which it has displayed in com-



pling its recently issued catalogue. The work is a 74-page booklet printed on fine enameled paper, and illustrates, describes and gives prices on its tubing and tubing specialties in a more complete manner than is customary in catalogues of such material. In the first part of the catalogue are illustrations and general descriptions of the line of front fork sides, rear fork and stay tubes, curved drop frame tubes, etc., manufactured, and following these are line drawings marked with all possible measurements in such a manner that any purchaser by careful reference to these pages can determine for himself whether the Shelby Company has among its staple stock what he wants, and may also learn just what the exact proportions, measurements and appearance of the material are. The different combinations of round, D, oval, straight, bent, tapered, and other rear forks and stays form a very elaborate set of

# Barnes Bicycles

The most complete line ever offered.

Many agents having heard of the new line for 1899 are ordering sample wheels; the invariable result is that they obtain the agency as quickly as they can.

Equal style and equal quality have never been combined before in any bicycle.

Let us hear from you if you want a line that will do its own talking.



## The Barnes Cycle Company

SYRACUSE, N. Y.

### THE "ADMIRAL"

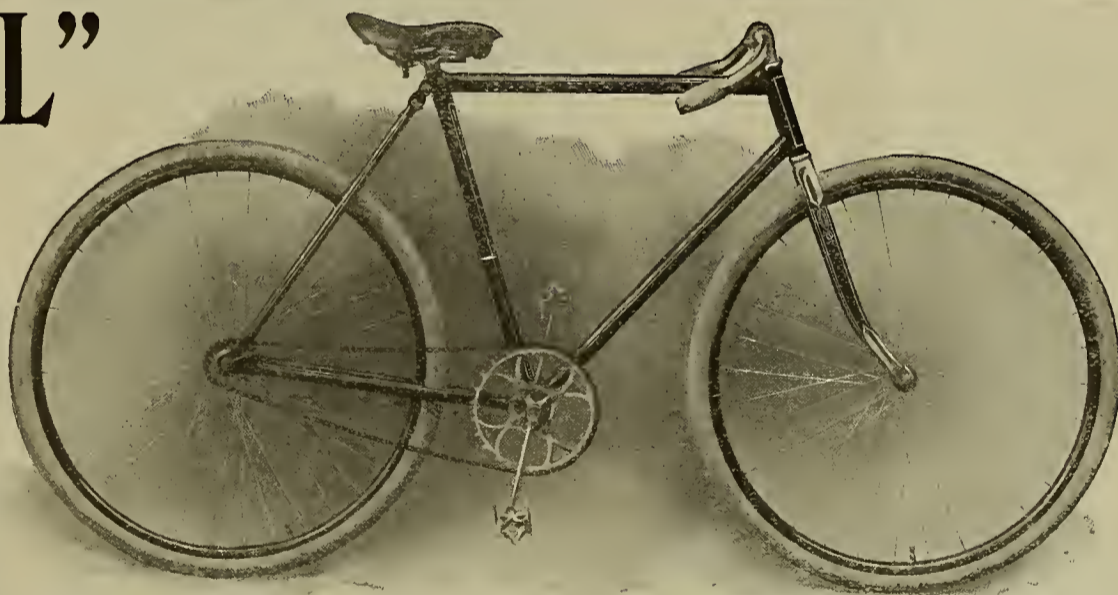
List \$30

M. & W. tires; 1¼-in. flush joints; 2 piece hanger; 3-16 in. chain; oval crown; D rear forks; large sprockets.

We want a few more good jobbers to handle this fast seller.

MARCH-DAVIS CYCLE MFG. CO.

FACTORY: MFRS.  
44th and North Aves. 47 Warren Street,  
CHICAGO NEW YORK



Careful observation of the wants of the trade—coupled with strict economy in production, enables us to offer the dealer at popular prices, a line of goods of unexcelled quality. Such are Snell Bicycles. If you do not believe it, investigate and be convinced.

Write for  
Catalogue....

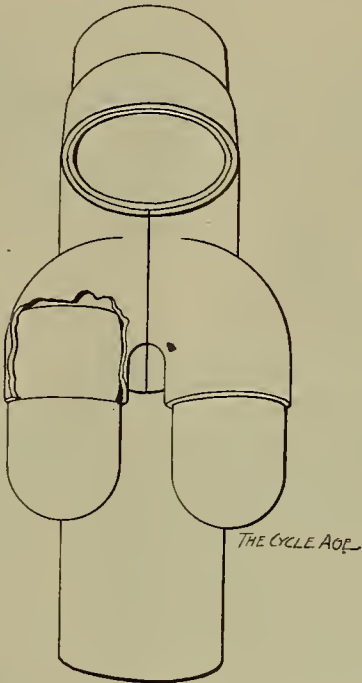
THE SNELL CYCLE FITTINGS CO., Toledo, Ohio, U. S. A.

such parts from which one would have to be very particular if he could not select what he desired. The various lengths, diameters, gauge, etc., of front fork stems in straight and tapered gauge tubing are also shown in diagrams. Handle bar tubes and frame tubes cut to length are treated likewise. Another valuable and novel feature of the catalogue is the code list for ordering tubing by telegraph. One code gives the terms for expressing prices of tubing, another gives the terms for pieces and pairs of specialties, while a third comprises a complete code for denoting feet and inches. One of the specialties made from tubing by this company, and included in the catalogue, is the arch crown here illustrated. It is to be used with continuous forks, and is made in two patterns, one for front forks and one for rear forks and stays in three-crown frames. The Shelby Company has also issued a small price list of such sizes and shapes of steel tubing as are used for mechanical and engineering purposes. It is compact, the prices and measurements being arranged in tabular form.

#### CROSBY & MAYER CO.'S FITTINGS.

A complete catalogue has been issued by the Crosby & Mayer Co., Buffalo, and is being mailed to the trade as representing the company's line of home manufactured sheet steel goods and the various other fittings for which the firm is manufacturers' agent. The sheet steel line comprises frame sets and parts of many styles, and stamped cups, cones, etc., as well as frame fittings, such as small chain adjusters, handle bar clamps, washers, ferrules and dress guard clips and braces. One of the specialties is the seat post cluster illustrated herewith, designed for flush joint construction, and of a present popular style in which the rear stays run close together and parallel down to the point of separation directly above the rear wheel.

Goods for which the company is manufacturers' selling agent, include the spokes



THE CYCLE AGE

of Fay & Bowen, Auburn, N. Y.; Hunter Arms Co.'s hubs; Springfield Drop Forging Co.'s wrenches, one and two-piece crank hangers and forged fork crowns, seat clusters, one-piece heads, etc.; steel balls made by the Hathorn Mfg. Co.; Snow chains; Syracuse Arms Co.'s pedals; brazed handle bars, fork sides, head stems, etc., made by the Toledo Tube Co.; Independent Supply Co.'s expanders; Brennan adjustable handle bars, and Fiber buckskin grips.

#### FEATURES OF KEATING MODELS.

The curved line in the frame of Keating bicycles serves a higher purpose than those who look upon it as a mere talking point care to admit. With it the downward stroke of pedaling produces a twisting, instead of a breaking strain at right angles, on the seat post mast, removing the danger of springing the frame out of line or fracturing the tube near the crank hanger. It also serves as a most important brace to the crank hanger, in overcoming the greatest strain on a frame, which is the pulling strain exerted by the chain. This is not generally appreciated by the average rider, although the value of rigidity at this point cannot be overestimated. Always identified with lightness in construction, the Keating Wheel Company of Middletown, Conn., preserves this valuable feature in its models. In its recently issued catalogue it gives prominence to its double roller chain, which is so constructed as to avoid all possibility

of stretching, to be self-cleaning, and to be efficient under all circumstances. The front fork crown is forged—axles are hollow—there are forty spokes in the rear wheel, to give strength and prevent buckling.

The Keating line is as follows: Thirty-inch wheel model; weight, 21 pounds; price, \$75; with 3½-inch drop to bottom bracket. Two light roadsters listing at \$50, weighing 22 pounds, and fitted without curve in seat mast when so required. Two cheaper roadsters listing at \$40, and weighing 22 pounds, and two Mattabesett models listing at \$35 and weighing 25 pounds.

#### ROBINSON'S GRIP FASTENER

This grip can be instantly attached by simply pushing it into place on the handle bar and tightening the screw at the end of the grip, and can be removed just as quickly and simply. The fastener is independent of the grip and can be used with any ordinary grip



THE CYCLE AGE

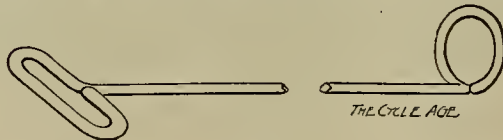
on the market in which a hole can be bored through the end tip. The device consists of a wood spool or thimble with split sides and tapered bore, which fits inside the metal handle bar; a cone-shaped metal expander which fits inside the wood spool and expands its sides against the inside of the bar when drawn up by the screw bolt inserted through the end of the grip; and a lock washer with protruding teeth on both sides which are forced into the end of the wood thimble and into the inner side of the grip end as the screw is tightened and the grip drawn up against the thimble by the screwbolt. This lock washer prevents rotation of the grip on the bar. Small lugs on the tapered plug engage the slots in the wood thimble and prevent the plug turning with the bolt. This expander device is so simple and cheap of construction that it can be supplied to manufacturers at a price that will enable them to adopt it on their cheapest as well as their best grades of bicycles. It is one of the sundries being sold by the Plew Saddle Co., 1446 Wabash avenue, Chicago.

#### TRIBUNE AGENTS IN NEW YORK.

The New York agency for Tribune bicycles has been placed with Tom Ward, 35 Barclay street and Fifty-fifth street and Eighth avenue, and with Arthur Townsend, 35 John street, who has for years worked in conjunction with Ward. To those who are acquainted with the retail trade in New York city, the extent of this deal will be apparent. These well known dealers sell several thousand machines each season and it is safe to say they will do the Tribune justice. J. H. Toole closed with them for the Black Mfg. Co., and it is stated that the first order given has still further increased the night and day work of the Erie factory.

#### TOOL FOR REMOVING INNER TUBES.

The accompanying illustration shows a simple tool recently patented by Phelps & Brenner, 729 Main street, Quincy, Ill., and which will soon be placed in the market



THE CYCLE AGE

by them. The tool is for the purpose of loosening inner tubes, which are stuck fast to the casing of tires, and resist the ordinary efforts of the workman to pull them out. It comprises a long piece of flexible wire bent into the form of a ring at one end, and having a handle at the other. This ring is slipped over one end of the inner tube at the lacing hole, and then the wire is pushed into the tire, the ring separating the tube from the casing as it goes. The tool cannot injure the inner tube in any way, and has proven very effective and handy.

#### CHAINLESS BICYCLES FOR WINTER RIDING.

"Bicycle Riding in Winter" is the title of a leaflet issued by the Pope Mfg. Co., setting forth the advantages of bevel gearing in winter cycling. The gist of it is that bevel gearing, being inlaced, cannot be im-

peded by snow, slush, or mud. Over the wholly or partially packed snow of city streets it may be propelled without undue exertion, and even the country road, only partially broken after recent snows, may often be negotiated with small difficulty. There are no sprockets and chain to become clogged with particles of ice or snow, nor to be stiffened by the action of the cold on the lubricant. Those who cycle chiefly for pleasure or exercise may thus take their recreation practically all the year around, and those who use the bicycle for convenience and economy need not return for three months of the year to wearisome tramps to or from business or work, nor to the expense, stuffiness and general discomfort of riding in public conveyances.

#### CHASE & CO.'S NEW POLICY.

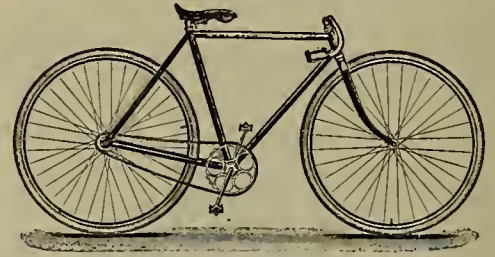
L. C. Chase & Co., 129 Washington street, Boston, announcing their new policy to the trade, state that the apparently large profits made in the tire business have induced manufacturers to pursue extravagant and ridiculous methods of selling, and to an extension of credit to parties not entitled thereto, which the Chase company, in an extensive experience covering a period of more than thirty years in the manufacture of various lines of goods, has never before had to contend with.

While it has built up a large business, the risks and methods are objectionable, and the firm has decided to offer Chase tires to the trade on the same business basis that it has found so successful in building up the large plants in its several other lines. In other words, it believes in large sales, conducted on an economical basis, and the marketing of a good article at a small but sure profit.

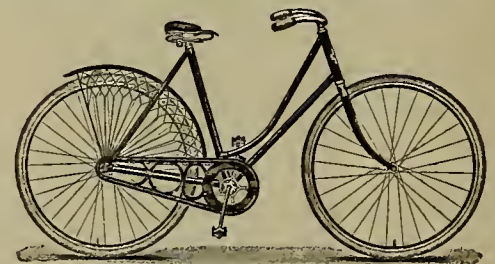
The company states emphatically, however, that while thus changing its selling policy the Chase tires will this year be better than any heretofore produced owing to the adoption of recent improved methods of manufacture.

#### AMES & FROST CO.'S IMPERIALS.

Imperial bicycle Model 100, for men, is the highest-priced machine in the line of five



Model 100—30-inch wheels. Price, \$55.



Model 91—Ladies roadster, Price, \$50.

patterns made by the Ames & Frost Co., of Chicago. It is a 30-inch-wheeled machine built in two heights of frame, 23 and 25 inches. The fork crown is of the hollow forged arched pattern matching the flush joint construction at other frame connections. The wheel base is 46 inches, and the hanger drop 4 inches. The finish is in plain black highly polished. Models 90 and 91 are the company's standard \$50 patterns for men and women. The general construction is the same as that of Model 100, though 28-inch wheels are used. The \$35 machines are Models 80 and 81. These bicycles have flush joints, except at the hanger, and are finished in black, maroon or green, striped and decorated. Instead of the Baldwin chain, which is fitted to the previous patterns, "Diamond" block chains are used on these. The tire options include Morgan & Wright double tube, and Hartford No. 70 single tube. The \$50 and \$55 models are fitted with Hartford No. 80, single tube tires, with the option of either G. & J., or Dunlop detachable. Wheeler, Lerch, Gordon, and Gilliam are the saddles specified.

#### ADVANTAGES OF RAWHIDE FOR SADDLES.

The peculiar nature of rawhide, together with the treatment given it by the Hollenback Saddle Co. of Syracuse, renders the use of a wood or metal base for the new Rawhide saddle wholly unnecessary as a means of keeping the top in shape. It is this that makes it possible to bring the weight down to 12 ounces, a reduction that has an importance in view of the advent of 30-inch wheels, large sprockets, lengthened chains.

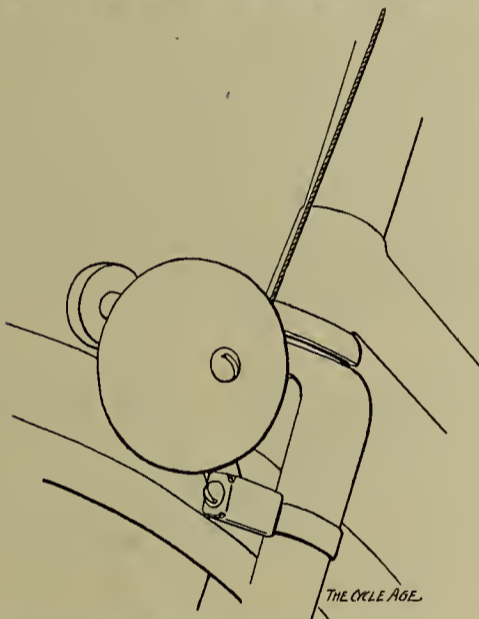
and generally slightly heavier construction of bicycles. Another effect secured by the use of the rawhide is the translucency of the seat, which lends a bit of novelty to its use and gives a lighter look to the machine. Thirty makers of high-class bicycles have already indorsed the Rawhide saddle by adopting it as part of their equipment. This saddle, together with others of the Hollenbeck line, will be exhibited in space 94, at the New York cycle show, January 21 to 28.

**THE SAGER GEAR IN MIDWINTER.**

As demonstrating the possibilities of the roller pin chainless driving gear for bicycles in midwinter, the Sager Gear Co., of Rochester, N. Y., cites the century ride on New Year's day made by F. Crestlik, who started from Buffalo at midnight and rode to Rochester in sixteen hours, including stops which reduced the actual riding time to twelve hours. The temperature was many degrees below freezing and the roads were so badly drifted with snow and then broken up by teams that Crestlik was compelled to ride most of the way on the frozen crust of the snow at the side of the roads. He did not know what gear he was riding until he reached Rochester, when he was told by Mr. Sager that it was 108 1-16.

**THE ERICKSON AUTOMATIC BELL.**

Nutter, Barnes & Co., 364 Atlantic avenue, Boston, are sole manufacturers of the automatic alarm here shown attached to the machine. The gong is rigidly attached to the end of the clamp bracket on the fork, but the disk covering the internal mechanism and carrying the little wooden pulley has a limited arc of revolution on the central pivot. To a stud on this disk opposite to the pulley is attached a cord running to the small finger lever on the handle bar. Pres-



sure on this lever pulls the cord and rotates the disk sufficiently to make the pulley contact with the rubber tire and the alarm to be sounded. The gong may be removed for cleaning the parts. All the attachments are furnished with the bell and are nickel plated, the gong being highly polished.

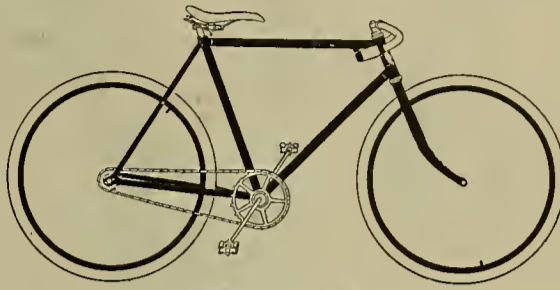
**PLEW SADDLE CO.'S SUNDRY LINE.**

A new catalogue has just been issued by the Plew Saddle Co., 1446 Wabash avenue, Chicago, which embraces a number of lines that should attract the attention of the trade. The company manufactures the Plew "soft nose" saddle, the Plew hub, and Plew lamp, and acts as selling agent for the Indiana Mfg. Co.'s Peru wood rims and Behse mud and chain guards; the Duthie Chain Co.'s Indiana and Duthie chains; the Collmer hubs; Topliff & Ely Co.'s Ely pedals; the Robinson grip fasteners, Excelsior balls, India tires, Perfection chain guards, and a line of small sundries, including grips, handle-bars, cranks, pumps, crank keys, chain adjusters, spokes and nipples. The company anticipates an increased sale of the Plew saddles, and gives an unlimited guarantee on its Plew hubs, which, though selling at a popular price, have the barrel turned from solid stock, and the cups and cones from special steel tempered and ground, every part being carefully tested before being assembled. There are no castings nor stampings in the Collmer hubs, which are self-adjusting and "fool proof."

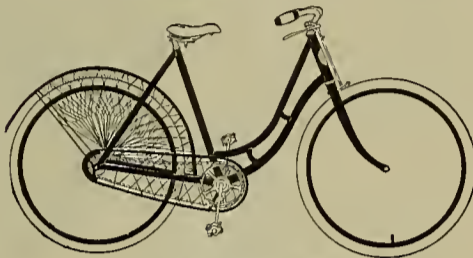
**THE POPE BIG LINE.**

The Columbia bevel gear chainless, first placed on the market in October, 1897, survived every apprehension of its early critics, has made a most enviable record during 1898 and bids fair to rank very high in popular

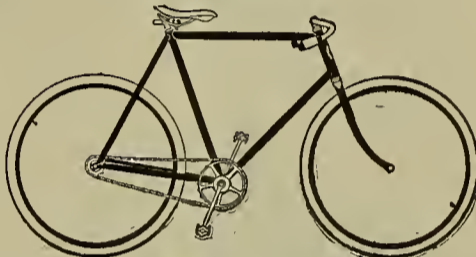
favor in 1899. The main argument for the machine is that its running gear is always at the point of highest efficiency, enabling the rider at all times to cover a given distance with the minimum of exertion. The mechanism is beyond the interference of dust, mud, slush, rain or snow, and this quality of being



Model 57—Price, \$50.



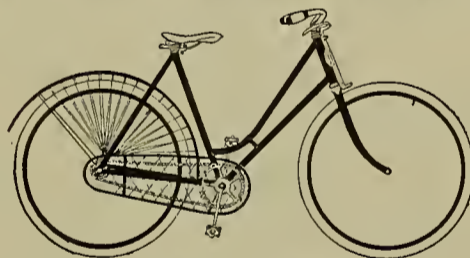
Model 58—Price, \$50.



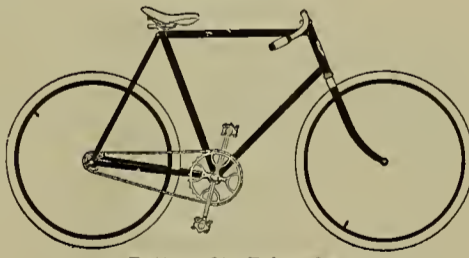
Model 49—Price, \$40.

proof against dirt and weather alone places the machine in a class by itself.

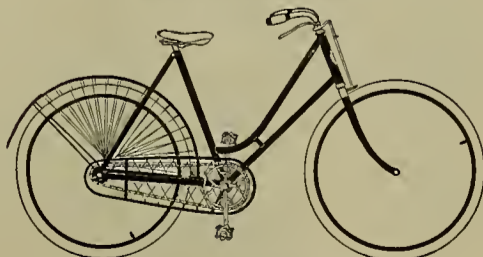
In the Columbia models 57, 58 and 61, are embodied every excellence which can enter into the making of a machine of the chain type. The main tubes are of 1 1/4-inch size with other tubes proportional. The wheel base is sufficiently lengthened to afford room for as large sprockets as may be desired front and rear. A special cutting of the sprockets does away with all danger of lost power through sliding of the chain at the points of contact with the sprockets. The narrow 3-16-inch chamfered hardened pin



Pattern 20—Price, \$35.



Pattern 21—Price, \$25.



Pattern 22—Price, \$26.

chain is used, the solid B block affording all necessary strength. The handle bars are of entirely new design and are carried forward two inches from the stem. The 4 1/2-inch tread and narrow construction at the rear hub gives these models a peculiarly compact and trim appearance. Both have the stylish low-hung crank bracket and very

handsome black enameled and gold striped special rims.

Model 61 is a machine with 30-inch wheels and frame to correspond, which in other details is similar to Model 57. Price \$60.

Columbia Model 49 is a light-running, finely-balanced, handsome road machine which was a favorite with a large class of riders a year ago. It is the same in pattern and general equipment as last year, but has been greatly improved by changes at the head which strengthen the frame construction materially.

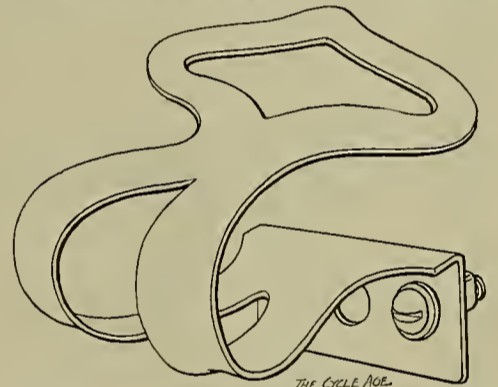
The company has devoted especial attention to the production of tandems of the double diamond and combination types, and believes that the present models are the strongest, safest and easiest running tandems ever manufactured. They are offered as embodying everything essential to the comfort, convenience and perfect enjoyment of the many who find exhilaration and pleasure in riding machines of this class.

The frame lines of the Hartfords have been brought into conformity with the most approved ideas of design, and the new machines show flush joints, internal expanders at head and seat post, new crank shaft construction which does away with the keyed-on crank, and other important improvements.

In placing the Vedettes on the market the company has sought to supply the best bicycles obtainable at the Vedette price. The Vedettes are well made, strong and handsomely finished machines.

**SUNDRY BUSINESS TRANSFERRED.**

A. G. Bagley & Co., 172 South Clinton street, Chicago, have succeeded to the sundries business of the Chicago Plating & Enameling Co. and the Standard Machine Co. and to the bracket manufacturing branch of the Bridgeport Gun Implement Co. Bagley & Co. now own all the tools, stock and patents of these firms covering the manufacture and sale of toeclips, lamp brackets and coasters, and are now manufacturing these specialties, in addition to doing nickel plating and enameling for the trade, and



are prepared to fill orders in large quantities for Bagley clips, Star brackets and Standard coasters, clips and brackets. The Standard brackets are made in eight styles, for the head, forside and axle, made of stampings, steel castings and bent wire, one of the cast brackets being made with three arms for use on a tandem where three lamps are desired. Eight styles of Standard toe clips are also made of stamped steel and wire, one of them being adjustable and having a corrugated rubber tread and a wire passing over the toes from side to side to prevent lateral movement of the foot.

**WOLFF-AMERICAN CHAINLESS MODEL.**

Last week the agents of R. H. Wolff & Co. were notified that the firm was prepared to supply chainless bicycles, of Sager gear pattern, listing at \$75 and weighing 28 pounds. The model has just been completed and has a fine appearance. Already the house has received many orders for machines of this pattern, but flattering though this is, it is clear from the orders simultaneously placed for chain models that there is no danger of the new comer in the Wolff-American line immediately superseding the other and better known patterns.

**LARGE SHIPMENT OF IMPERIAL BICYCLES.**

An order for 800 Imperial bicycles has been received by Ames & Frost Co. of Chicago from Beard, Goodwillie & Co. of Port Huron, Mich., who have been Imperial agents for that vicinity for several years. The first 500 of these bicycles have been shipped in two large furniture cars and constitute the largest single shipment of bicycles into that state that has ever been made. Although this agency usually orders in large quantities, this shipment is larger by more than 100 machines than any it has ever received before.

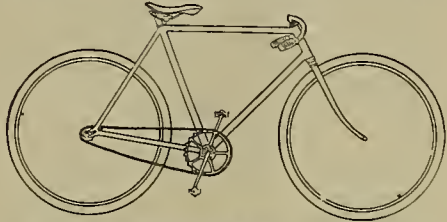
**PUNCTURE PROOF TIRE HAS MANY FRIENDS.**

The Milwaukee Patent Puncture Proof Tire Co. of Milwaukee, Wis., is so gratified

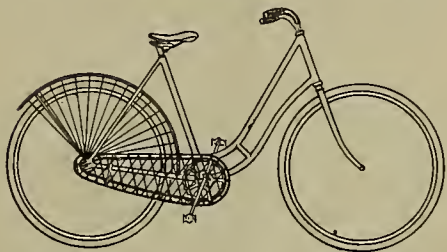
by the many testimonial letters received from riders of its new puncture proof tire that it has gathered together and published some of them in an attractive booklet, thus letting the trade and public generally know of the satisfaction which the users of the tire have experienced. Each friend of the tire, in writing, tells the same story of having ridden constantly during a season without a puncture. A few well-printed half-tone illustrations give the pamphlet an attractive appearance.

**THE BARNES LINE OF SPECIALS.**

The advance catalogue of the Barnes Cycle Co. of Syracuse, N. Y., which is just out, shows a very complete line of bicycles for the season's trade. The company has been



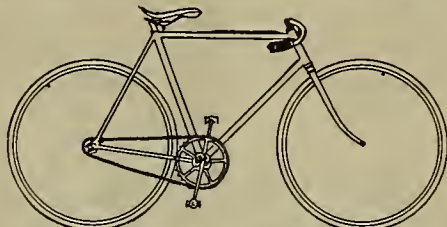
Model 20—Special roadster. Price, \$50.



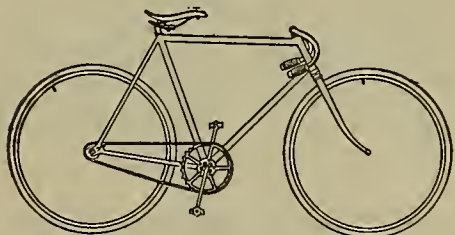
Model 23—Superba, roadster. Price, \$50.

generous in catering to the classes of buyers who desire specially made machines that different from the usual type of road machines. For them it has provided two chainless models, a track racer, two road racers fitted with 28 and 30-inch wheels respectively, while for others there are provided two regular road models and double diamond and combination tandems.

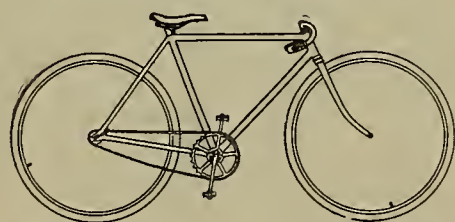
For road work and hard riding the Barnes Special, Model 20, is a graceful, sturdy, easy running machine. The style of the frame has been slightly changed, giving more rake



Model 21—Road racer. Price, \$65.



Model 22—Track racer. Price, \$65.



Model 29—Road racer, 30-inch wheels. Price, \$65

to the head and front forks, and a little more drop to the crank hanger.

The ladies' roadster, Model 23, is built on practically the same lines as last year, except that the crank hanger has a trifle more drop. This design of frame has proved very popular with ladies on account of the generous amount of dress room afforded, without sacrifice of the stylish appearance of the machine.

The road racer, Model 21, is extremely light, and especially designed as a gentleman's pleasure mount, or for road racing and easy country touring. In its make-up the material is so perfectly distributed that there is nowhere a sacrifice of strength for lightness. The wheel base has been slightly reduced, bringing the rear wheel closer to

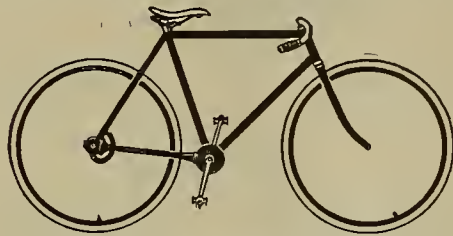
the seat pillar tube. Twenty-six-tooth front sprocket is the largest that can be used on this model.

Many improvements have been made in the White Flyer track racer, Model 22, which has been well introduced through the many victories it has won. The frame has been slightly changed, giving a trifle more rake to the front forks. The head and front fork crown will be enameled in royal purple. This finish, together with the well-known quality of the bicycle, will make it a popular mount for racing men.

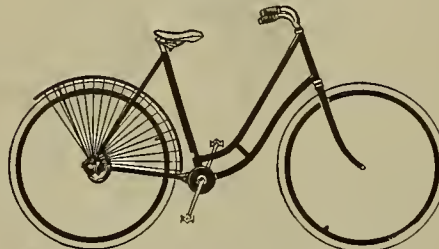
The 30-inch wheel road racing machine, Model 29, is presented by the Barnes Company with confidence that "it is as good as they make." With a 4-inch drop to the crank hanger and a level top bar, the head is necessarily rather short, especially in the 22-inch frame, in which it is 4 3/8 inches; however, care is taken to give this model equal strength to that of any of the others.

Some changes have been made in the outline and weight of the chainless machine, Model 27. The crank hanger has a drop of three inches, the same as in chain models, and with the same general outline of frame. The driving mechanism is entirely incased, and thus kept free from dust and dirt.

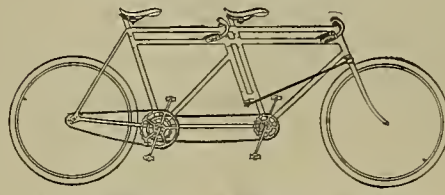
The ladies' chainless is similar in general outline to Model 23, except that it has the



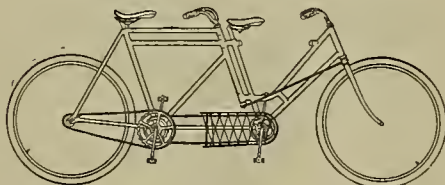
Model 27—Chainless. Price, \$75.



Model 28—Ladies' chainless. Price, \$75.



Model 24—D. D. tandem. Price, \$100.



Model 25—Combination tandem. Price, \$100.

bevel gear driving mechanism. With a low drop to the crank hanger, and the general outline of frame, a liberal amount of dress room is afforded.

No change has been made in the tandem models except in equipment, the truss frame having been found from experience well adapted to withstand an unusual amount of abuse. The combination machine has a front top bar that can be removed without tools.

**ELDREDGE AND BELVIDERE BICYCLES.**

The Eldredge and Belvidere bicycles are very handsomely catalogued in the booklet which the National Sewing Machine Co. of Belvidere, Ill., has issued, and is now distributing. The line is made up of nine models, all representative of the skill of the designers and constructors at the company's factory. The Eldredge Extra, Model 25, is a man's 30-inch wheeled road machine with flush joints, attractive conservative lines, and embodying all of the best special Eldredge features. The list price is \$60. Eldredge Model 25 is a woman's 30-inch wheeled machine to match the Extra. Outside of the enlarged wheels and the necessary changes in frame measurements the design is similar to the regular drop frame Eldredge and also sells for \$60.

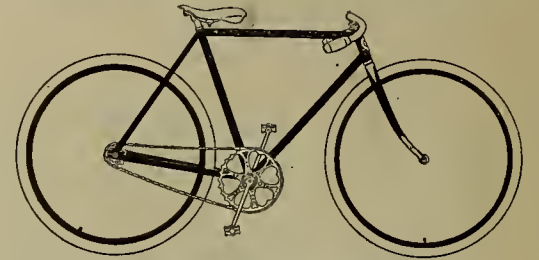
Men's and women's patterns in the Model 30 are the standard Eldredge machines, and list at \$50. The racer, which has light outside joints, one-inch tubing and a reputation honestly earned for it by Miller of long-distance riding fame, lists at \$50, as does also the ladies' little robin's-egg blue dia-

mond machine. Belvidere Model 10 is made for both men and women, and sells for \$40. The Eldredge double diamond, single steering tandem lists at \$100.

All machines are fitted with the Eldredge single tube tire, made by the B. F. Goodrich Co., although the Dunlop is offered as an option. Eldredge models have the company's special two-piece hanger, except the 30-inch wheel machines, which have three-piece keyless hangers, while the Belvideres are fitted with three-piece keyless crank and axle groups. Wheeler saddles, with the Hunt Model 50 as an option, are offered as the regular saddle equipment, and the riders are given the choice of bars of five different adjustable and rigid patterns. Front wheel plunger brakes are supplied if desired.

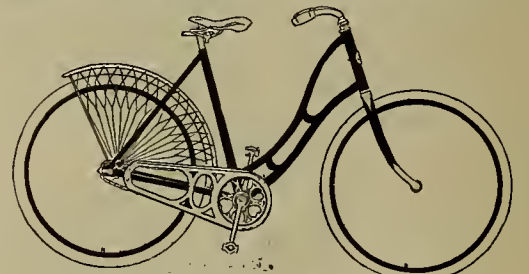
**LARGE LINE OF FANNINGS.**

The Fanning Cycle Co. of Chicago, has a line of bicycles ranging in list price from \$30 to \$50. The line allows an agent to meet all demands in the matter of price, there being a ladies' and a corresponding men's pattern at every \$5 raise in price above the lowest-priced bicycles. The ma-

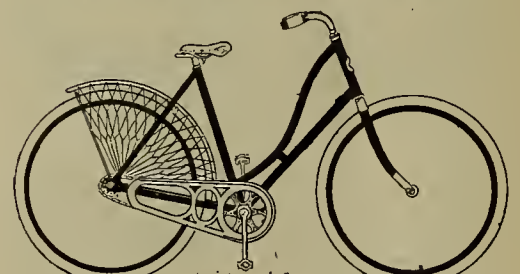


Model L—Weight, 24 lbs. Price, \$40.

chines weigh about 24 pounds each, and all have flush joints. The hanger used is of the two-piece variety, in which the division is made at the left end of the axle. Hanger drops are 2 1/2 and 3 inches. The standard finish is Brewster green, though cardinal and black are offered as options. Front sprockets, which are made after the company's own special design with heart-shaped openings between the spokes, are furnished in sizes ranging from 24 to 28 teeth. The handle bars and seat posts are secured by internal expanders. Morgan & Wright, or Kokomo tires are regularly fitted, with Palmer, G. & J., Hartford or Goodrich as options. Bridgeport and Star pedals are used, and the standard saddle is the Gil-



Model M—Weight, 25 lbs. Price, \$40.



Model K—Weight, 25 lbs. Price, \$35.

liam. The line also embraces a 30-inch wheeled men's model, and a track racer weighing 21 pounds.

**ARNSTEIN'S COMPLETE CATALOGUE.**

One of the most complete catalogues of bicycle parts, fittings, sundries and supplies ever issued has just been gotten out by Eugene Arnstein, 88 West Lake street, Chicago. It embraces everything needed in the production, decoration and equipment of complete bicycles, from lathes and tube cutting machines to enamels and transfers, and from tires and saddles to repair outfits and watches. It includes also assembled bicycle frames and bicycles complete with equipments. Specifications, dimensions, stock numbers and prices are complete.

**SECURES NUMBERING MACHINE CONTRACT.**

L. J. Burdick, manufacturer of cyclometers and recording machines, has recently closed a contract with the Buescher Mfg. Co. of Elkhart, Ind., to manufacture his counting machines, which embody the same me-





MR. DEALER:

Doctors advise cyclists not to contract the chest—not to prevent free respiration. Therefore it is advisable to handle the Claus Bar, because it is the only bar that retains its width at all adjustments. Our prices will interest you.

THE CLAUS HANDLE BAR MFG. CO.  
Milwaukee, Wis., U. S. A.

Initial Tension Expansion Spring **SEAT POST**

The Only True Jar Absorber.

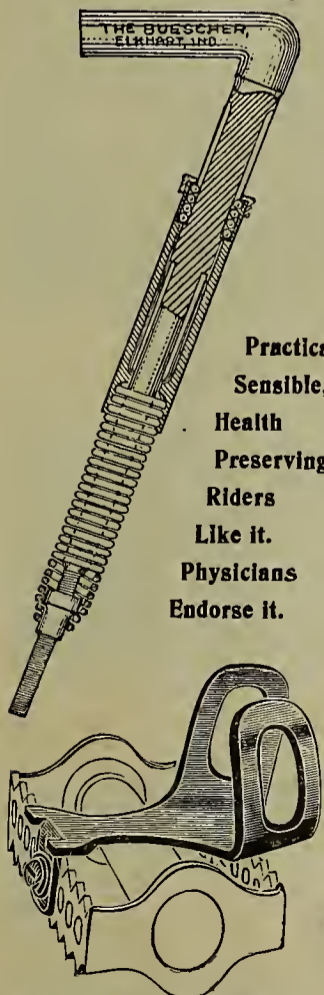
(Patent Pending.)

PRICE, \$2.50 EACH.

SYNONYM FOR THE BEST IS THE NAME OF

**THE BUESCHER MFG. CO.**

ELKHART, IND.



Practical,  
Sensible,  
Health  
Preserving  
Riders  
Like it.  
Physicians  
Endorse it.

The jobber, the dealer and the user of bicycle sundries know this.

We will not have an exhibit at the Cycle Shows...

because our products are in the hands of the Representative Jobbers throughout the country, and you will have ample opportunity to see them. If, however, you do not find our full line with your jobber, write us for Catalogue, and do not buy until you see the best things and best values made in Bicycle Sundries.

We make specialties—write for estimates.



No. 7 FOOT-PUMP, barrel 1 1/8 x 12. Solid stirrup. Price 80c Each.



No. 3 COUPLING.

No. 3 TOE-CLIP Patent Sept. 14, '97. Correct practical design, 35c pair.

Latest and Best. Every Pump should be fitted with it. Pat. July 14, 1896.

THE **Waverley**

Continues to Defy Competition for

**1899**

All the resources of the great Indianapolis factories are called into play as usual this year to make for Waverley agents and Waverley riders a line of Bicycles that shall provide for all wants and meet all requirements of purse and service. Here are the machines and the prices:

**Waverleys**  
**\$40** For Men  
For Women

Ivanhoe Specials . . . \$35  
Two sizes for men; one size for women.

Ivanhoes . . . \$25 and \$26  
Two sizes for men; one size for women.

The Waverley Bicycle is, as always, the best that can be produced by bicycle skill and knowledge and almost unlimited resources. We will tell you more of them next week.

You will marvel at the quality and elegance of the Ivanhoe line—made in a separate portion of our factories, devoted to Ivanhoes exclusively. Choice of equipment limited, that's all.

Send quickly for details and make sure of the agency.

**INDIANA BICYCLE COMPANY**  
INDIANAPOLIS, IND.

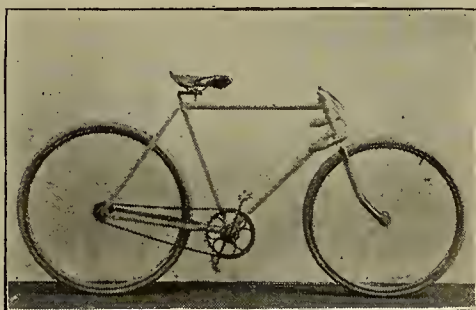
chanical principles as his cyclometers but are designed for use on presses and all machines when it is desirable to count the output. There is a large demand for this kind of an instrument, and under the well known high class workmanship and mechanical exactness of the Buescher factory this one may be expected to meet with the same success as the Burdick cyclometer.

**AN ATTRACTIVE SUNDRY.**

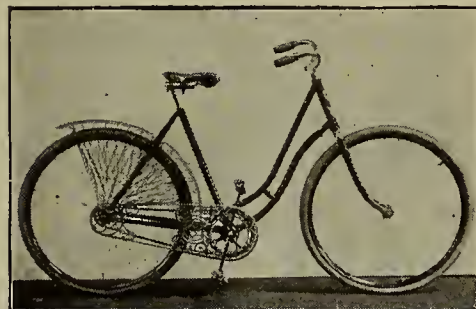
The "Perfect" pocket oiler, as exhibited at the Chicago cycle show, is handsomer than ever. The workmanship is of the best quality and the finish is a fine example of nickel plating. Such a sundry, while inexpensive, is important, and by its attractiveness creates a good impression in favor of any bicycle on which it forms part of the equipment. The makers, Cushman & Denisons, of New York city, will also have an exhibit in space 59 at the New York show.

**VIKING MODELS AND PRICES.**

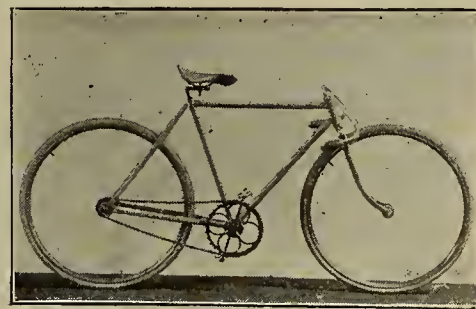
The Viking Mfg. Co. of Toledo, in designing its track racer, Model 21, has provided for close pace following and given the machine a moderately long head with low frame by



Model 21—Racer, 26-inch front wheel. Weight, 20 lbs. Price, \$65.



Model 30—Ladies' roadster, Weight, 25 lbs. Price, \$50.



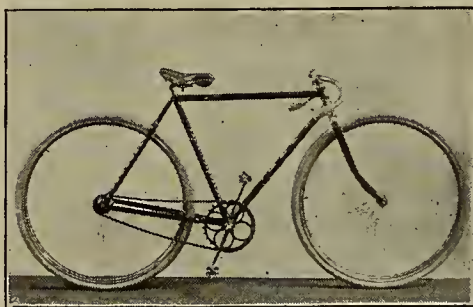
Model 32—Road or track racer. Weight, 22½ lbs. Price, \$50.



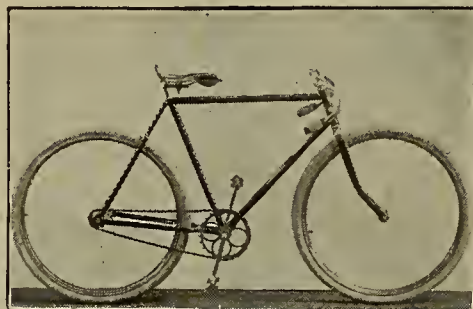
Model 34—Three crown frame. Price, \$50.

equipping it with a 26-inch front wheel. The machine, which weighs 20 pounds, and sells at \$65, has flush joints except at the hanger, and is enameled Viking blue. Model 39, a ladies' bicycle selling at \$50, has a double curved front frame, flush joints, 3-inch hanger drop and a decorative metal chain guard covering both sprockets. A light road

or track wheel weighing 22½ pounds is offered in Model 32, which with the exception that it has a 28-inch front as well as rear wheel, is similar in appearance to Model 21. Model 34, also listing at \$50, is a three-crown machine in other particulars similar to the previous pattern. The 30-inch Model 10, sells for \$45. It has the Modan two-piece hanger and flush joints except at the bottom bracket. Models 11 and 12 are men's and



Model 10—30-inch wheels. Weight, 25 lbs. Price, \$65.

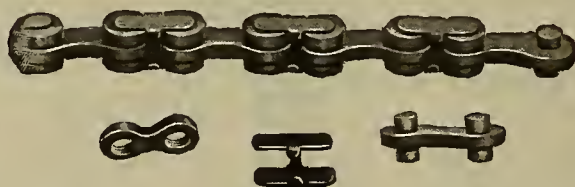


Model 11—Weight, 24 lbs. Price, \$35.

women's patterns selling at \$35. Morgan & Wright, Dunlop, and Hartford tires are the regular equipment. All machines have arch crowns, and Indianapolis chains are used throughout the line. Generous options in handle bars, saddles and gears are offered. The \$50 and \$65 machines have special two-piece hanger groups and eccentric chain adjustment.

**REMINGTON CHAIN AND SPROCKET.**

The object sought to be accomplished in the designing of the Remington Special chain used on the machines made by the Remington Arms Co., of Ilion, N. Y., was to produce a chain of increased strength which would run with less friction than the ordinary bicycle chain. It will be noticed that the form differs materially from those commonly known as figure 8 and B block styles



and that it requires special sprocket wheels with teeth divided to permit the two outside links of the chain to come in contact with the teeth. By this construction there are two points of contact instead of one and as they are separated to the full width of the chain there is no tendency to twisting of the chain and side sway. Lateral vibration is further reduced by having the rivets fit tight in the center links and free



in the outside links, thus widening the pivotal points of the chain links, which has an effect similar to the widening of the driving face of the sprocket tooth with the ordinary chain. The construction of the Remington Special chain is therefore a reversal of the ordinary chain and sprocket relation. The construction is such that it permits of the use of sheet steel in the manufacture of the driving link with the grain of

the metal running in the same direction as that in which the strain is applied, and it is also possible to reduce the weight as compared with the ordinary 3-16-inch block chain. Tests of the Remington Special chain have been made by running them on a jack at a tension of 200 pounds and for a length of time equal to a distance of from 100 to 1,000 miles with only 4-1000 of an inch variation in the entire chain of fifty-four links at the end of a 1,000-mile test. The tensile strength of these chains has been found to be from 1,750 to 2,000 pounds, with an elongation of 4-1000 of an inch in the entire length without breaking.

**HALL-SHONE CO. TO CHANGE NAME.**

The Hall-Shone Co., of Rochester, N. Y., has been granted permission to change its name to the E. H. Hall Co., by County Judge Sutherland. The change will take place July 1. It is stated in the petition that all the stock is now owned by E. H. and H. L. Hall and families, and for that reason the change of name is desired.

**PATEE CRESTS IN FOUR MODELS.**

The Patee Bicycle Co., of Peoria, Ill., is offering its old agents and friends, as well as those dealers who are preparing for the first time to wage the battle for business under the colors of the Patee Crest, four patterns of machines ranging in price from \$35 to \$45. All of these machines are built with low rakish frames, have Fauber hangers, with diamond-shape cranks, and are constructed with flush joints throughout. The front fork crowns are of the outside



Men's roadster—Weight, 24 lbs. Price, \$35.



Ladies' roadster—Weight, 24 lbs. Price, \$35.



Racer—Weight, 22 lbs. Price, \$40.

lap arch pattern, and are nickel-plated. The regular road models for men and women weigh 24 pounds each, and are enameled in black, green, maroon or orange to suit the purchaser. The machines are fitted with the company's special guaranteed single tube tire. The Patee Crest Orange racer has a longer frame and a shorter head than the regular patterns, and is equipped as a fast racing machine for track and light road work. It is fitted regularly with a light tire 1½ inches in diameter, and able to stand usage on the road. Unless otherwise ordered the finish is in a special orange, which gives the machine its name.

# Adlake Features

...ARE Original and  
Distinctive Features

EXAMINE THE REAR  
FORK END USED  
ON THE

*Adlake Special*



Removing Rear Wheel from Frame Without Disturbing Adjustments or Detaching Chain.



Rear Wheel Removed from Frame, All Adjustments Left Undisturbed.

**New Patent Rear Fork End**—To remove rear wheel in order to repair tire or change rear sprocket it is only necessary to unscrew with pocket wrench two small bolts in the fork ends. The wheel may then be entirely removed from frame without disconnecting chain or disturbing either chain or bearing adjustments. Every part, except the two bolts, remains attached and in its proper place.

**Chain Adjustment**—No amount of handling can loosen or lose any part pertaining to this important mechanism. By this arrangement the rear wheel may be removed and replaced in 30 seconds, with every part and every adjustment in its proper place. Is very simple and positive. The little hangers which hold the rear wheel are pushed back by screws and held by lock-nuts in any desired position.

**The Adams & Westlake Co. makers Chicago**

Mention The Cycle Age

Also Makers of Adlake and X Rays Bicycle Lamps and Adlake Cameras

While the Patee Bicycle Co. does not advocate the use of 30-inch wheels, it has placed in the line such a model selling at \$45, in order to meet the possible needs of its agents for such machines. In general construction and equipment it is similar to the regular patterns. Any choice of tires is granted on this model. The options in saddles and handle bars include various standard patterns of each.

#### TRUING AND LACING DEVICE.

The truing device and lacing stand made by the Eureka Supply Co., of St. Paul, fits all hubs, and is adjustable to all sizes of rims. It will hold the rim firmly and preserve its circularity. It is made in two parts which may be folded together, and weighs only 4 pounds. The device saves a great deal of time, as with it only 18 to 20 minutes are required to set and complete a wheel. It will pay for itself in a short time. The stand may be fastened on the work bench.

#### HOLLENBECK SADDLES AT THE SHOW.

While the Hollenbeck Saddle Co. of Syracuse has no exhibit at the Chicago cycle show, the visitors are given ample opportunity to inspect the new light-weight Rawhide saddle. The exhibits of Eugene Arnstein, the Snell Cycle Fittings Co. and Brown & Wales had samples of this saddle among the other goods displayed and the little 12-ounce seat was to be seen fitted to Sterling, Snell, Carlisle, Stearns, Dayton, Yale and Ariel bicycles.

#### AN EXCELSIOR SOUVENIR.

The Excelsior Supply Co., 88 Lake street, Chicago, is mailing to its patrons and friends a neatly printed booklet containing the words of Longfellow's familiar poem, "Excelsior," together with illustrations which lend the book the appearance of a charming little souvenir. The work is strictly one of good will, there being no advertising whatever between its covers except a picture of the new home of the Excelsior Supply Co.

#### WORKING OVERTIME ON BI-GEARS.

The plant of the Brown-Lipe Gear Co., Syracuse, is running overtime now to supply customers with the two-speed gear, recent shipments of 250 of which have been made to one large Cleveland firm. The "bi-gear" makers have also worked up a big foreign trade. H. W. Chapin, manager of the company, states that the outlook for a large volume of business during the next few months is entirely satisfactory.

#### NIGHT WORK ON BUESCHER SPECIALTIES.

The Buescher Mfg. Co. of Elkhart, Ind., makers of a complete line of bicycle pumps, toe clips and other specialties, began running its plant nights in December, whereas heretofore it has never commenced night work before the last of January or in February. This not only evidences an unusual activity in the industry, but the steadily increasing popularity of the Buescher products.

#### TRADE NOTES.

Fred A. Trowbridge, formerly manager and buyer of the bicycle department of the United States Net & Twine Co., in New York, who have retired from the bicycle business, is now connected with Cornwall & Jespersen, 310 Broadway, New York city, who are the eastern representatives of the Columbus Bicycle Co., as manager of the bicycle department.

J. M. Fisher, for a number of years connected with the Newton Rubber Works, is now representing the White Sewing Machine Co., of Cleveland, in New England territory. Mr. Fisher's extensive acquaintance among the trade will make his services especially valuable to the makers of the White bicycles.

Frederick J. Haynes, who has for several years had charge of the bicycle department of the Hunter Arms Co., at Fulton, N. Y., has gone to Toronto, Can., to become superintendent of the Canadian factory of E. C. Stearns & Co.

The Shelby Steel Tube Co. has begun running the rolling and piercing mill at the Shelby, O., factory all night on a large order from the government for boiler flues for war vessels.

A complete line of Racycle bicycle models made by the Miami Cycle & Mfg. Co. of Middletown, O., is being exhibited this week at the Great Northern hotel by Mr. Borderwisch.

Orrin D. Bartlett of New York city, who has been connected with the cycle trade since the advent of pneumatic tires, and is well known through his long connection with the

Gormully & Jeffery Mfg. Co. of Chicago, is now connected with the Keating Wheel Co. of Middletown, Conn., as advertising manager and superintendent of agencies. His face has been a familiar one at all cycle shows and national meets for many years.

#### GROWTH OF MEISELBACH'S BUSINESS.

From Humble Beginning in 1895 It Has Become One of the Largest in the Country.

One of the most notable individuals in the bicycle industry is A. D. Meiselbach, whose remarkable success during the last three years is a striking example of the energy and progress of the times. Starting from the humblest beginnings in '95, he has developed a business the value of whose product in '98 amounted to almost \$2,000,000 and which now regularly employs 800 workers at a total annual wage of \$200,000. Last year he employed 200 more men than he did in 1897 and the prospects are that the demands of his business will necessitate a further increase.

He manufactured for the 1896 trade 15,000 bicycles, for the 1897 trade 35,275 and in 1898 he sold upwards of 75,000 machines. During the last year he made substantial additions to his factory, increasing the floor space by 20,000 square feet, so that now there are 225,000 square feet in the factory, which has a capacity for building 150,000 bicycles annually. He also built an electric light plant to illuminate the factory and also to supply the light for the town of North Milwaukee. This plant cost \$10,000, while the factory, exclusive of machinery, is worth \$125,000 and the machinery \$100,000 more.

The development of this business and the outlook for the future show conclusively that the bicycle business, far from being on the wane, is improving. Whereas last year there were orders for only 32,000 bicycles in advance, the firm already has on hand for this year orders for more than 60,000 machines, so that the business for the coming season promises to be even more phenomenal than that of any other year since it was established.

Every part of the bicycle is manufactured in the plant except a few patented parts which have to be purchased from the concerns which manufacture them. The constant increase in the demand for the Meiselbach machines is the best testimonial for their worth. Mr. Meiselbach has also established a reputation for fair dealing, so that the trade have learned to rely implicitly on his representations in regard to his goods. A. D. Meiselbach, who is the sole proprietor of this industry, is a young and energetic man, 36 years of age, and has been in the bicycle business for twenty years. He has worked at all branches of it and knows it thoroughly. It is because of his knowledge that he has been so successful at it, as he personally superintends the entire business and there is not a day that he does not look over the factory and make improvements in the methods of turning out the work.

#### Changes in the Trade.

Joseph T. Kelly, a bicycle dealer of Dubuque, Ia., has filed a voluntary petition in bankruptcy.

B. F. Chambers has withdrawn from the firm of Roth & Chambers, wholesale and retail dealers in bicycles and sundries in Erie, Pa., and the business will hereafter be conducted at the same place by his former partner, Jacob Roth.

The plant of the recently organized Goodyear Tire & Rubber Company, at Akron, O., will begin operations very soon, employing 250 workmen at the start. Orders sufficient to keep the plant going for six months have been secured.

V. B. Perrine, a lumber dealer of Ft. Wayne, Ind., has taken a controlling interest in the Huntington, Ind., bicycle works, which will be continued at Huntington under the management of D. Fenton, of Brooklyn, N. Y., a brother-in-law of Mr. Perrine.

Fred C. Chase and Archie Matheis, of St. Paul, Minn., have entered into partnership under the style of the Archie Matheis Cycle company, to do a general bicycle business. They have secured quarters and opened their doors at 96 East Fifth street, St. Paul.

## Only Live Fish Swim Up Stream

Hollenbeck Rawhide Saddles  
are away ahead and still going up. \* \* \* \* \*



They will be equipped to over 30 makes of high class bicycles and 75 wide awake jobbers will distribute them at factory prices. Why? Because they dress the wheel and are light, durable and comfortable. Write for our "Eye Opener." \* \* \* \* \*

### Hollenbeck Saddle Co.

Syracuse, N. Y.

Stand 94, N. Y. Cycle Show, Jan. 21-28

# Everything for Bicycle Builders and Dealers

We are Western Agents for the following:

Aurora Automatic Machine Screw Co.

G. L. Thompson Mfg. Co.

Chicago Handle Bar Co

Bevin Bros. Mfg. Co.

India Rubber Co.

Excelsior Needle Co.

Write for our  
'99 Catalogue and Prices.

Established 1876.

Brown & Wales

Winona Wood Rim Co.

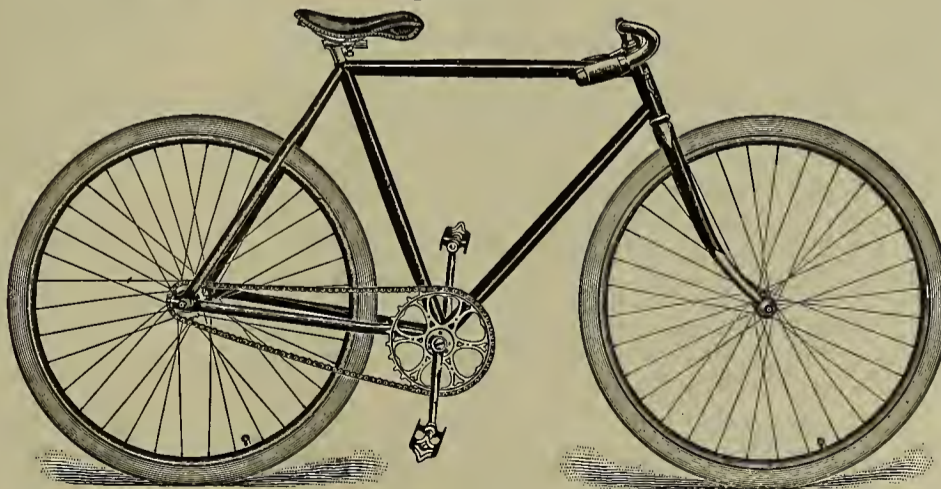
Edw. Miller Mfg. Co.

Butterfield & Co.

## Excelsior Supply Co., Chicago

Ride a   
Fanning AND KEEP KOOL.

All parts including Head Fittings and Hub Shells made by us turned for bar steel...



Flush Joints.  
Seamless  
Tubing.  
Best Excelsior  
Needle Co.'s  
Spokes.

\$30.00

\$35.00

\$40.00

Our Wheels are Guaranteed to Give Satisfaction. Send for a Catalogue.

FANNING CYCLE MFG. CO., 194-202 S. Clinton Street, CHICAGO, ILL.

# THE PASTIME AND SPORT

## GIMM WINS CHAMPIONSHIP

Twenty-Four-Hour Race Ends In Brilliant Sprint—Miller and Waller Quit.

New York City, Jan. 9.—The twenty-four-hour championship contest at Madison Square Garden ended at 10 o'clock last Saturday night in one of the most exciting finishes ever seen on the cycle track. As the race neared its close there were four contestants riding together a mile or more in the lead of the others who were asked to retire during the last fifteen minutes, leaving the track clear for the final sprint of the four certain winners. When this request was made, John Lawson, who was three laps behind the leaders, succeeded in catching them napping and gained a lap, but was unable to repeat the performance.

The order of the finish was Gimm, first by a wheel length; Pierce, second; Turville, third; Frederick, fourth, and Lawson, fifth. The four leaders covered 450 miles in the twenty-four hours. First prize was \$1,000; second, \$400; third, \$250; fourth, \$150; fifth, \$100, and all who finished secured prizes.

The race was a heart-breaking one from the start. Frederick, Pierce, Turville, and Gimm never left their saddles for a moment. They even refused to take nourishment and stimulant from their trainers when the sprint was on. Everybody realized that to fall behind a lap would be fatal. Waller lost a lap through an accident to his tire Friday night, and for fifteen hours he made a brave struggle to regain his lost ground. All through the day there was a succession of desperate sprints, in which the riders took long chances, and even risked their necks to gain a lap on one another. Eighteen men started Friday night, but at the end of twenty hours nine of them had been compelled to give up the struggle.

Pilkington and Albert fell early in the race and quit. Hicks quit at 9 o'clock in the morning for the same cause. Nawn retired an hour and a half later, because he could not stand the alternating fast and slow pace. Ashinger trailed along painfully at the end of the line through the morning. He was evidently suffering and not in condition and was therefore declared out of the race. Aaronson also had enough early in the morning.

Miller was the first of the eleven leaders to leave the track. But the fast bunch soon dwindled to eight. Later in the day Chapman and Barnaby retired, and also Waller. Then Stevens who had been in every sprint from the beginning of the race and was a great favorite with the crowd had to quit at two minutes after 7, after having been in the saddle twenty-one hours. From the moment Stevens retired and left only four men tied for first position a steady, killing pace was maintained.

The final score was as follows:

Gimm .....	450	..
Pierce .....	450	..
Turville ..	450	..
Frederick .....	450	..
Lawson .....	449	6
Julius .....	437	6
Hale .....	433	4
Miller .....	422	6

## Three-Days' Meet in Moscow.

A three-days' race meet run at Moscow, Russia, on December 25, 26 and 27, attracted immense crowds. The principal events were twenty-one match heats between the champions, the winner of the greatest number of first places to be de-

clared the winner. Seven heats were run each day, the distance being one and one-half versts. Strangely enough, the heats resulted in four firsts and two seconds each for Bourillon, Singrossi, Waschke-witch and Dei, while Parlby finished in first place once and in second place five times. After the last heat the judges proclaimed Singrossi winner. This was received with tremendous hisses and was protested by Bourillon, Waschke-witch and Dei. The international race at one and one-half versts was won by Bourillon by twenty meters from Singrossi and Dei.

## MOTOR VEHICLE MATCH RACES

Twenty-Kilometer Contests Excite Parisians—Riders and Machines Equally Matched.

By hooting and jeering at Fournier's queer looking petroleum tricycle in its first appearance on the race track in this country the American race-goers only exposed their ignorance of the progress that motorcycles have made abroad, especially in France, where especial race meets are now promoted solely for the competition of riders on these machines and attract large crowds of spectators.

On December 19 a twenty-mile match was run between Baras and Marcellin, two prominent French motorcycle riders, on the Prince track, Paris. It was an exciting event, the twenty kilometers being covered in 24:34. In the third lap Baras came to a standstill, because of a loosened screw and a new start had to be made. Baras took the lead, but after going nine laps was overhauled by Marcellin and passed. Then Baras came up and for eleven laps the competitors rode side by side, neither being able to make any appreciable gain. At this juncture Baras desperately oiled his motor from the saddle, with apparently excellent effect, for he immediately took the lead and won the match by 100 meters.

On the following day they had a return match, which was a see-saw affair until the last lap, when Marcellin passed Baras, who was leading, and won by a length. Without stopping, he continued for the hour record, adding nearly 1,000 meters to the old figures. The distance covered was 30 miles 1,150 yards.

## Elkes Wins Match With Waller.

The fifty-mile match race between Harry Elkes and Frank Waller at Madison Square Garden on January 2 was won by the former easily in 1:50:46 2-5. Waller was given a handicap of two minutes, in which he gained a lead of eight and a quarter laps, but his pace was inferior to that of his opponent, who gained steadily on him except when the Butler brothers were pulling him around the ten lap track. At twenty-one miles and three laps Elkes passed Waller. He finished the race nine laps and ten yards in the lead.

## Cordang Coming to America,

Private advices from Paris state that Cordang has signed a contract to come to the United States next June to ride in two 24-hour races, one in the east and the other in the west, for which he is to receive \$2,000 each. Miller will be his chief competitor. Cordang will bring with him four motorcycles for pacing purposes—two electric and two petroleum. Tom Linton will return to America in company with the Dutch 24-hour record holder.

## PEACE WILL REIGN AGAIN

Pros to be Admitted to League Membership and Control of Racing Retained.

Philadelphia, Jan. 9.—The white wings of peace will be made to hover once more over the ranks of the L. A. W., it is averred, through liberal concessions made to the racing element at the National Assembly next month. These include the probable admittance of professionals to membership and representation on the racing board, and a more liberal and common-sense interpretation of the racing rules for the benefit of the amateurs.

An amendment has been proposed by Conway Sams of Baltimore, providing that all professionals and amateurs must register with the league, paying therefor a fee of \$2, which will also give them membership in the body—in other words, a mild sort of compulsory membership clause.

The Pennsylvania representatives are, and have been, favorable to the admission of professionals to League membership, and should such an amendment be offered, the Keystone division's delegates will be found almost to a man favorable to such a measure. The feeling that many racing men, both professional and amateur, have been unjustly and arbitrarily treated by the racing board during the past two years, is widespread among the rank and file of the division, and present appearances indicate that any reasonable concession which may result in the retention of League control of racing will be supported by the majority of the state's delegates.

There will be little politics at the assembly, Keenan being an almost unanimous choice for president, and there being small opposition to Herbert Foltz of Indianapolis for first vice-president, H. R. Kingsbury of Keene, N. H., for second vice-president, and D. J. O'Brien of Omaha for treasurer. The fight will therefore be on such issues, as the abandonment of racing control and the admittance of professionals to membership. To accomplish either of these changes an amendment must be passed, and it will require a two-thirds majority of votes to pass an amendment. A careful preliminary poll by mail shows that almost twice as many votes will be cast in favor of the retention of the control of racing as are needed to defeat any measure to drop it. On the other hand there appears to be an overwhelming majority in favor of the proposition to admit professionals to membership.

## Foreigners Want an American Circuit.

From personal advices it appears that the prominent French and other European riders may not cross the ocean to ride at the world's championships in Montreal next summer unless a racing circuit is arranged in the United States in which they can take part afterward. The championships come at a time when racing is at its height in Europe and large prizes are offered at numerous meets so that in coming to America four or more weeks of the best part of the season would be lost unless equal opportunities of winning prizes on this side are offered. At the big European meets first prizes of from \$500 to \$2,000 are put up, while in this country prizes seldom go as high as \$200, except in special middle distance matches or long distance open events. The foreigners therefore think that a special circuit should be arranged on which large prizes

# ORIENT 1:30



ALL THE CRACKS RIDE IT.

Strong  
Speedy  
Stylish

26-inch front wheel  
28-inch rear  
Weight, 20 lbs.



GUARANTEED  
FOR THE ROAD

Don't wait 'till tomorrow  
before writing us.

Waltham Mfg. Co., Waltham, Mass.

## WANTED

WANTED—To know whether the roller chain is better than the block chain.

## FOUND

FOUND—That some of our customers prefer the block chain; others use nothing but the roller chain.

## FOR SALE

FOR SALE—The Roller Block Chain, which combines the rigidity and lasting qualities of the block with the frictionless running of the roller chain.

## PERSONAL

PERSONALLY the manufacturer and the dealer can afford to investigate the merits of a chain that pleases everybody. We show it below with our special coupling link which can be detached without tools.



THAMES CHAIN & STAMPING CO.  
NORWICH CONN.



The  
Trade  
Circulation  
of  
The  
Cycle  
Age  
Regularly  
Exceeds  
the  
Joint  
Circulation  
of  
The  
Wheel  
and  
The  
Cycling  
Gazette.



## Plain Talks on Andrae Cycles

THEY  
NEVER  
DISAPPOINT

... IV ...

An Andrae agent has the best of it right from the start.

He has no preliminaries to attend to. The very day he receives his Andraes he can start at selling them.

He need not introduce them. He need not create a preliminary demand. We have attended to all that.

Andrae Cycles are known everywhere. The people in the agent's town know all about them. It is only necessary for him to tell the people that he is selling Andraes.

Then his business begins.

He will sell many \$60 and \$50 Andraes to the people who want the best bicycles made, but there are some people who want the best \$40 wheel. To them he will sell the \$40 Andrae.

There are 14 Andraes all told. A wheel to suit any good taste—every pocket-book.

You ought to write for our trade prices.

Julius Andrae & Sons Co.

MILWAUKEE, WIS.

Eastern Export Branch: 95 Reade St., New York City.

Mention The Cycle Age

will be offered. The riders willing to come over under such conditions are Paul Bourillon, who won sixty-two races out of sixty-three in which he started last season, and Jacquelin, the champion of '96 in France; Houben and Protin, of Belgium; Franz Verheyen and Paul Albert, of Germany; and some Italian and English sprinters; in the middle distance, Bouhours, Champion and Simart, of France, and Palmer, Walters and Linton, of England, could be expected to come.

### TIMES HAVE CHANGED

Retiring Racing Men Can No Longer Feel Sure of Trade Employment.

It has for many years been the custom of the cycle trade to employ ex-racing men in offices, show rooms, and works; and when the ex-racing man has a genius for office, show room or factory business, such employment is no doubt an advantage; but the idea that the ex-racing man can look forward to employment in the cycling trade with any degree of reasonable certitude, is an altogether fallacious one, says Irish Cyclist. Even if every ex-racing man were endowed with the requisite aptitude for business, it must be obvious that there can never be such a continually increasing number of vacancies as would be required to accommodate the continual flow of ex-racing men into the trade, because trade expansion is limited, and when a person has installed himself in a suitable berth, he does not expect to be kicked out to make room for the next retiring racing man.

Scarcely a week goes by but that one hears of some ex-racing man who appears to be discontented with his present occupation and to be looking around for a position in the cycle trade, with which he has not one atom of practical acquaintance. There are hundreds of capable young fellows now idle through having given up situations in businesses with which they had some acquaintance, in the expectation of obtaining more remunerative and congenial employment in the cycle trade merely on the strength of being able to ride a bicycle fast. The trade is overstocked with experienced men already, and for every vacancy there are many applicants. The racing man must be content to race for sport without looking forward to the cycle trade as a final resort when his speed begins to flag.

### Bald and Sloan as Team Mates.

Ex-Actor Eddie Bald is traveling toward the Pacific coast in company with Tod Sloan, the famous little jockey who set all England agog last summer. The jolly pair are making the trip by easy stages and having and making what fun they can on the way. They are avowedly bent on pleasure, it being Bald's desire, possibly, to forget the worriments of an all-too-brief theatrical season. The jockey sets a fast pace, but finds it hard to shake the champion cyclist except in the matter of dress, in which he can give Bald a generous handicap and still come off victor. But the Buffalonian is enthusiastic over his little team mate and says he will go to Europe with him next summer and will ride in match cycle races there.

### Pennsylvanians Want Better Roads.

The Pennsylvania division L. A. W. is preparing to make a strong fight for good roads at the present session of the state legislature. At the last session the division succeeded in securing the passage of the Hamilton bill, which provided for a radical improvement in the existing system of road maintenance, but when the measure came up for final action its opponents succeeded in having it so

amended as to be inoperative until after a state appropriation of \$1,000,000 had been made. An effort will now be made to secure this appropriation, or else obtain the passage of a measure even more advantageous than the Hamilton bill.

### Elkes Loses to Gibson and Downey.

Joe Downey and Harry Gibson, on a tandem, defeated Harry Elkes on a single in a best-two-in-three half mile heats match at Madison Square Garden on January 4. The first heat was a pursuit race, and was won by Elkes by a yard in 1:03. The second and third heats were sprint races, and were won in succession by the tandem team in 1:07 and 1:15 respectively. At the same meet Charles Ertz defeated Kraemer, the amateur champion, in a half-mile handicap in 1:04 4-5. Both started from scratch.

### Washington-Baltimore Cycle Path.

The committee appointed to investigate the feasibility of constructing a bicycle path from Washington to Baltimore has begun discussing the plans, routes, and system of tolls in connection with the project. A civil engineer is to be secured to investigate and report upon the difficulties and probable expense of the undertaking, which is roughly estimated to be from \$100 to \$150 per mile, or \$4,000 to \$6,000 in all. The popularity of such a path, bringing the national capital within forty miles of easy riding from Baltimore, and connecting it with New York and Philadelphia, is not to be doubted.

### Banker Runs Third in Algiers.

The final heat of the race for the prize of Oran, Algiers, was run on Christmas, and was a remarkable event, the three winners finishing almost in a dead heat. The judges, however, gave the race to Tommaselli, with Grogna second and Banker third by five inches.

### NEWS IN BRIEF.

A movement is on foot in New Orleans to build an indoor cycle track.

A bill for the protection of bicycle paths has been introduced in the Minnesota legislature.

Arthur Zimmerman is once more reported to be seriously thinking of returning to the race track.

Jacquelin, Bouhours, Parly and Deschamps are giving exhibition races at Marseilles, France, during January.

President A. L. Mace of the Century Road Club has issued a call for the annual meeting of that organization to take place in Chicago on February 26.

Tom Eck is at the head of a movement in Minneapolis to organize the professional skaters and bring them under the control of the National Racing Cyclists' Union.

The Springfield (Mass.) Bicycle Club has discharged all its indebtedness and will hereafter devote itself to the social side of cycling, eschewing all racing affairs.

The indoor racing season at Madison Square Garden is to be concluded Thursday night by a twenty-five-mile paced match race between Harry Elkes and E. A. McDuffie.

A. A. Taylor's New York to Albany record of 15 hours and 10 minutes, made September 17, has been accepted by the Century Road Club. The previous record was 21:54:00.

The police department in New York issued orders last week to enforce the "unconsequence a number of drivers of vehicles were arrested and fined for violating the ordinance.

Major Taylor, who is this week the center of attraction at the Chicago cycle show to local racing enthusiasts, created a mild sensation last week by joining the Baptist church in Worcester, Mass. The colored wonder is without doubt one of the cleanest

and best conducted professional cyclists in the world. He neither drinks nor smokes nor indulges in the common dissipations, and will not train or ride on Sunday.

J. S. Johnson broke the half-mile professional skating record in Minneapolis last Sunday, making it in 1:18 2-5. Weather and track conditions were bad. He was paced the first 300 yards.

The Riverside Wheelmen of New York have decided not to take any active interest in cycle racing the coming season, owing to the uncertain state of affairs at present existing in the sport.

Overtraining is ascribed as the cause of the unbalanced mind and subsequent death of Henry Krupp, a professional cyclist of Uhrichsville, O., who died in the hospital at Massillon on December 30.

The Detroit consulate of the Michigan division L. A. W. is taking steps to introduce into the state legislature two bills, one providing for the protection of bicycle paths and the other a general good roads measure.

Hereafter every person who belongs to or becomes a member of the National Cyclists' Union of England and pays his dues will be insured for \$250 against death and paid an indemnity of \$5 a week for five weeks in case of accident.

The proposed meeting of the National Cycling Association, which was to have been held in New York on January 4, was postponed to January 25, owing to the inability of some of the track owners to be present at the earlier date.

W. E. Stafford, one of Boston's best-known wheelmen, started Jan. 1 to accomplish the feat that put Teddy Edwards in the hospital last summer. He says he will ride 365 centuries within the year unless compelled to stop on account of sickness.

The French say that every German rider is compelled by law to provide himself with a book which enlightens people that "cycling in itself is not a criminal occupation" and that "a person who slays a cyclist is liable to punishment just as if he had killed an ordinary man."

C. W. Mears, chief consul of Ohio, intends to offer an amendment to the constitution and by-laws of the League at the National Assembly, providing that each division have its own official organ. The purpose must be obvious to the publisher of "Joe Lincoln's Joke Book."

Cycle path advocates of Massachusetts will try to secure the passage of a bill by the state legislature this winter providing for the taxation of bicycles at 50cents each, half of the amount to be turned into the town or city treasuries, and the other half to be expended on the construction of bicycle paths.

Peter Berlo, ex-racing man and designer of the first multicycle pacing machines used in this country, is experimenting in the construction of petroleum-driven one and two-seated bicycles with which he expects to solve the problem of satisfactory pacing. By spring he expects to have in regular use a tandem capable of a speed of 1:30.

During the past season the L. A. W. national racing board took in \$2,000 in registration fees and \$3,000 in sanction money. Out of this there had to be paid \$7,000 expense money, a salary of \$2,500 to the chairman and \$1,000 each to the seven members of the board, or a total of \$16,500. Thus if the salaries are paid, racing will have cost the L. A. W. more than \$9,500 this year.

The proposed six-day race in San Francisco seems to meet with the approval of the people of that city, who have so far raised no objection to it being run there. A ten-lap track will be built in the Mechanic's Pavilion, which will be altered for the purpose. F. McFarlane, Stevens, Freeman, Coulter, Wells and other national circuit followers are already in training for the sprint races that will precede the long grind.

Harry Terrill is again restless. Terrill ranks with "Plugger Bill" Martin as a traveler, having raced in every known racing center of America from the Pacific coast, where he lives, to Hawaii, and in Europe as well. Terrill is one of the original outlaws of California, and was never reinstated, although he raced under the L. A. W. all the past season. Terrill applied for reinstatement, but was preemptorily refused. He applied for his registration card, enclosing \$2, and got it. He now contemplates a trip to France for '99, and may leave after the close of the indoor season in New York.



# THE CYCLE AGE

## AND TRADE REVIEW

VOL. XXII—No 12.

CHICAGO, JANUARY 19, 1899.

NEW SERIES No. 61.

### OUR GERMAN TRADE IN PERIL TO BOYCOTT AMERICAN CYCLES

**German Makers Will Refuse to Extend  
Credit to Agents Who Handle  
American Machines.**

The deep resentment of German bicycle makers toward American firms which have secured orders from importers and agents in the Fatherland has suddenly assumed a very formidable character. Failing to obtain from the Imperial government the prohibitory import duty on American bicycles which they have so earnestly and persistently demanded, the members of the German Bicycle Manufacturers' Association have decided upon the following simple but ingenious plan to kill the American cycle trade:

#### The Plan of Operation.

From this time forward they will un-animously refuse all credit to any dealer who handles, as part of his stock in trade, a bicycle of American origin. The probable effectiveness of this measure will be readily inferred from the fact that the association includes in its membership nearly one hundred of the most important bicycle makers in Germany, who have been accustomed to four months' credit and very liberal terms in respect to parts and materials to be used in fulfilling guarantees and making repairs. Under this system men of energy and tact have been able to turn their money over rapidly and do a large business upon a comparatively small capital. Henceforward, if a dealer in American bicycles wishes to adapt his stock to all classes of purchasers by keeping in his assortment a German-made wheel he must pay cash for what he has hitherto easily and cheaply obtained upon long and elastic credit.

#### What Our Makers May Do.

Since the majority of independent bicycle dealers in Germany are in close-business relations with and under personal obligations to one or more manufacturers, it is expected that the effect of this heroic policy will be to seriously injure the sale of American bicycles, unless exporting manufacturers in the United States take an aggressive attitude, and, by extending and broadening their system of credits and backing up their best retail agents vigorously, make the competition so hot that the German makers, many of whom are laden with unsold wheels carried over from last season, will be compelled to make peace by rescinding the present decree.

#### Novel Plan for Instalment Sales.

A Buffalo cycle company has adopted a new system of selling bicycles on the in-

stalment plan. It advertises to receive payments of \$1 per week on a \$30 machine, crediting the purchaser with \$3 for the first dollar paid in—probably as an inducement to begin the payments in the winter. By the time the riding season opens the buyer has his machine half paid for. By putting such a plan into operation the dealer reduces the probability of bad accounts to a minimum, has capital to conduct his business with and is saved the time and trouble of making collections and the loss caused by having to recover unpaid-for machines which must be afterward sold as second-hand. The initial credit of \$2 may be considered a moderate amount to pay to escape these common losses. The purchaser, on the other hand, having his new machine half paid for when he begins to ride it, can complete the remaining payments before the middle of the summer and will have small occasion to refuse to finish them. Whether he will feel sufficient confidence in the dealer to permit him to act as his banker to such an extent before the goods are delivered is an aspect of the case that should be given some consideration.

#### Local Show Movement in Buffalo.

Some of the Buffalo cycle tradesmen believe that a local bicycle show would be a good thing for the business and are earnestly at work in an effort to induce the others to come in and make the thing a success. The trade has been canvassed during the past few days and with but few exceptions the sentiment is strongly in favor of the project. Buffalo has never had a cycle show except those annually held in Martin's church before this edifice was razed and there is little doubt that the city is ripe for a good one at the present time. The promoters have the new Glenny building on Main street adjacent to "Cycle Row" in view. This building has an immense floor space and is admirably adapted for the purpose. The question will come before the board of trade at its meeting this week and the probabilities are that the project will receive its unanimous endorsement. If held, the first week in February will probably be selected.

### AUSTRALIAN TRADE IMPROVING RECOVERING FROM DULL TIMES

**Despite Auction Sales Some Dealers Are  
Doing Good Business—Others  
Quit the Trade.**

Sydney, N. S. W., Dec. 19.—The month of December has seen a slight livening up of the cycle trade throughout Australia, consequent upon the opening of the racing season. Trade was very dull during October and November. The dealers in New South Wales have felt the dullness more, perhaps, than those of any of the other colonies, and as a consequence a few of them have got rid of their stock by means of auction sales and quit the business. One or two of the big firms have also held auction sales of their old stock ostensibly to make room for fresh shipments.

On the other hand, the Austral Cycle Agency, the largest concern in Australasia, having branches in all the colonies and six stores in different parts of Melbourne, has secured quarters in a new four-story building there, and will give up the six retail rooms and hereafter have only the one house, in which will be located the work rooms, wholesale and retail departments, and general offices. This agency is an offspring of the John Griffiths Corporation of London and handles only English machines.

#### Rural Trade is Good.

The Victorian Cricketing & Sports company, of Victoria, reports having done more business during the past three months than for a long time previously. Its trade in the country has been especially brisk. It acts as agents for one line of American bicycles and an English chainless machine.

The English & American Agency of New South Wales (Gavin, Gibson & Co.) has announced a sale of sixty American bicycles at \$47.25, a price considered ridiculously low for Australia, and one at which they ought to be quickly closed out. This firm has removed the bicycle stock from its retail store to its warehouse and installed pianos in the former. Only French and English machines are carried.

#### Some Benefit from Auction Sales.

One of the leading auctioneers in New South Wales has opened a "cycle exchange" for the disposal of new and second hand bicycles and held his first sale December 15. Although the legitimate dealers feel that these sales will injure their business, they get consolation out of the fact that it will largely relieve them of the annoyances and losses incident to the trading-in of old machines for new mounts by customers. The first auction sale was very successful and a

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large number of machines were disposed of. There are a great number of persons here who declare that they will not buy bicycles until the price comes down to \$50, but as the cheapest "car" of an Australian-built machine brings \$60, they are likely to wait a long time before they can get good American and English bicycles from regular dealers at their price. Machines assembled locally from Perry's parts are being sold for \$62.50 in Sydney. They are not bad looking, but weigh about 29 pounds.

#### Local Builder Leaves the Trade.

F. Bell, of this city, who manufactured a machine that was popular locally and seemed to be doing a good business, has just surprised the trade by holding an auction sale and going out of the business. Bell catered to the preferences of the individual riders in the matter of high gears, etc. The day after he moved out of his shop another maker of a local machine moved in with the evident intention of trading on Bell's reputation.

Bennett & Wood, the busiest firm in New South Wales, are doing a good business with one of the best English machines, and now have about eighteen orders on their books, with only one machine in stock. These machines sell at \$100 and \$140.

#### French Bicycles Americanized.

As a type the French machine is almost non-existent, according to an English expert who visited the recent cycle shows held in England and France. At one time it seemed to be on the way to attaining distinction of merit and style alike; now it has neither. In style it is almost entirely Americanized; in workmanship and design it is inferior to either the British or American product. The enameling is poor, the finish imperfect and the design often faulty and obsolete. Moreover, it is clearly the product of a nation of fair-weather riders, for the gear case is unknown and the steel mud guard rarely seen. Most of the French machines have either no mud guards at all or light wooden ones, after the American fashion. On the ladies' safeties all the dress guards and chain covers are of the wood and cord variety common to American machines. Nevertheless the French bicycle appears to satisfy its patrons, and English machines were almost unrepresented at the French show, though American bicycles were numerous.

#### Import Duty on Calcium Carbide.

Washington, Jan. 14.—A quantity of calcium carbide was recently imported through the port of Niagara Falls. It was assessed for duty at 25 per cent as a chemical compound under paragraph 3 of the tariff act of July 24, 1897, but was claimed by the importers to be dutiable at only 20 per cent under section 6 of said act. The carbide is made from lime and coke finely ground, mixed in proper proportions and smelted in an electric furnace. The carbide contained in the lime combines chemically with the coke. This chemical union of the ingredients forms a chemical compound, and the United States Board of General Appraisers, before whom the matter came for decision, found that calcium carbide is a chemical compound and that it is not otherwise specially provided for in the present tariff act, and accordingly affirmed the decision of the collector in assessing it at the rate of 25 per cent.

The city of Wabash, Ind., is soon to have its street illumination furnished from an acetylene gas plant, which is now being installed by the Dietrich syndicate, a corporation formed for exploiting acetylene gas plants.

## TO PROTECT PEDAL DESIGNS ALLIANCE AGAINST INFRINGERS

### Record Pedal Makers Unite With Metz of Waltham Company to Fight Imitators by Law.

It has been the sad experience of every manufacturer of pedals who obtained popular recognition of the merit of his goods, that his design was forthwith copied as closely as possible and worked into cheap material. Frequently it was only an outward resemblance that was aimed at and produced by the imitators, while the bearings and other features which would not attract the scrutiny of the average purchaser, were made in any fashion that would reduce the cost of production.

The slowness of legal procedure and the doubtful responsibility of the imitators made it a burdensome task for the originators of a design to protect their property, and the result has been that infringers have had free play and have flooded the market with pedals of apparently excellent design but which in use soon gave out and threw discredit

royalty or forced to abandon the offending form of manufacture.

#### The Protected Designs.

The fundamental patents controlled by the Record company are No. 548,042, issued October 15, 1895, to A. C. Davison of London, Eng., and assigned to Walter Measure of Needham, Mass., and No. 615,505, issued to Arthur Sidwell and also assigned to Walter Measure.

The claim allowed for the Davison patent reads as follows: "A pedal consist-

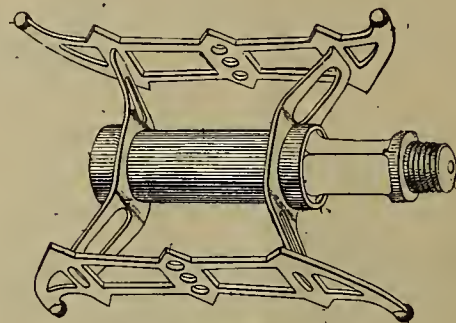


Fig. 3—The Metz Pedal.

ing of parallel supporting plates B, B, and parallel foot bars or plates A, A, arranged in planes across the ends of plates B, B, and projecting beyond the sides of the latter, with edge bearings for the foot, etc."; all as explained by the accompanying illustration, Fig. 1.

The Sidwell patent, illustrated by Fig. 2, carries two claims of which the second one is as follows: "A bicycle pedal comprising a supporting spindle adapted to be connected with the crank, a bearing hub supported on said spindle and provided with cross-arms at its inner and outer ends, and the treadpiece consisting of side bars and a crown or arch, all independent of the supporting bearings, the said side bars of the treadpiece being connected with the ends of the hub-arms one at each side of the hub and the crown or arch extending around the outer end of the hub and spindle in continuation of said side bars," etc.

The Metz patent, No. 546,071, of September 19, 1895, is illustrated in Fig. 3. The principal claim is for "arms extending laterally from the hub, and parallel footplates secured to the arms, the end portions of which form horns or stops extending beyond the length of the hub, of a shaft or spindle having a screw-threaded end and a wrench shoulder adjacent to the end, and a crank arm having a screw-threaded opening into which the threaded end of the shaft may be screwed."

#### Riders Considering Chainless Bicycles.

Philadelphia, Jan. 16.—The local cycling trade has been enjoying the beneficial effects of a fortnight of good riding weather, and already the first faint notes of the approaching spring trade have been heard in the many inquiries concerning new mounts for next season. That many of these inquirers have been endeavoring to solve the chainless question to their own satisfaction is regarded as an augury for good by the local dealers. As one of them remarked recently: "A chainless furor just at the present time would be a blessing for the 'Row.' Two years ago Arch street contained almost fifty bicycle establishments and the majority of them were making money. Now there are less than a dozen, and unless I'm greatly mistaken even this small number will be reduced unless there is an improvement in business. I believe such an improvement would be inaugurated by a good demand for chainless bicycles. My orders have been so placed that in event of a change in public sentiment from the chain machine to the chainless I will be prepared to profit by it."

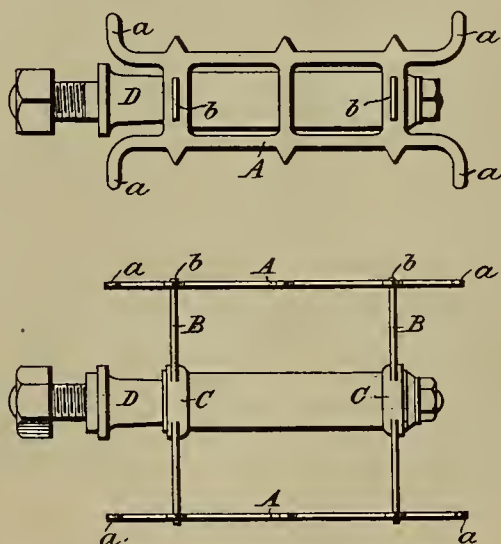


Fig. 1—The Davison Pedal.

on the original patterns. This condition has become so intolerable in more than one line of manufacture, that the leaders whose goods were copied, have finally been brought to realize the need of some form of cooperation to reduce the evil. The plan which has found most favor involves an informal alliance between those whose interests are nearly identical, with sole reference to legal protection. In the pedal trade such an alliance has recently been formed between Charles H. Metz, the president of the Waltham Mfg. company, and the Record Pedal Mfg. company. Infringements of the pedals for which patents are owned by either of the contract-

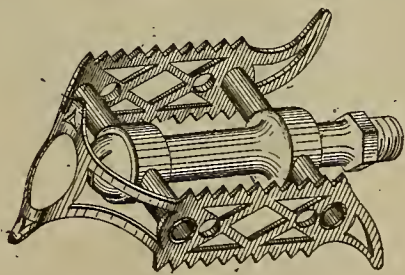


Fig. 2—The Sidwell Pedal.

ing parties will hereafter be run to the ground with the combined financial resources of both parties and no effort will be spared to fine-comb the pedal manufacturing so thoroughly that all who have overlooked any of the points in construction or design for which the law allows protection under the patents referred to below, will be made to tender an offer of

## BRAZING BY IMMERSION

### Means for Controlling and Regulating the Heat Supply Through Suitable Furnace Construction

In the process of immersion brazing, one fundamental condition for successful operation is the ability of the operator for maintaining a large quantity of molten spelter at the proper heat throughout its mass. This condition depends chiefly upon the construction of the furnace.

The furnace must support a crucible which holds from 250 to 300 pounds of metal, and the arrangement of the fire box and the air blast must be such that no portion of the molten spelter will lose more heat, by radiation or absorption in the work, than may be steadily returned to it from the furnace. To this end the heat must be carried over the open top of the crucible in a steady stream, which will prevent cold air from chilling the surface of the spelter.

#### Flames Under and Over the Crucible.

Working on this idea, the designers of the original or "old style" Fulton furnace, illustrated in the last issue of the Cycle Age, placed the fire box at the bottom of the furnace and supported the crucible directly above it, the crucible being held by its end flanges on the walls of the furnace and also supported under its lowest point by brick buttresses projecting from the side walls. These brick projections did not come together, and so did not conflict with the fire box arrangement or divide the fire into two parts. Between the crucible and the side walls of the furnace enough space was left at each side for the heat to come up around the crucible and keep it heated at all points. A brick cover was laid on the furnace projecting inwardly from the side walls and reaching to the side edges of the crucible. This top, being a short distance above the crucible top, compelled the flames rising from the fire box and coming up at both sides of the crucible, upon reaching the top of the furnace, to turn inwardly and rush from both sides laterally across the top of the crucible.

#### The Cast Iron Jacket.

These primary principles in design and construction have been adhered to by the Fulton Machine Works in the new pattern of furnaces which are now being erected by them. The most noticeable change from the older style consists in entirely surrounding the fire brick walls with a cast iron jacket, such as is shown in the accompanying illustration. It comprises four plain plates of cast iron the two end pieces of which bear lugs for the swinging and latching of the cast iron fire box doors. The jacketed furnace presents a neat and complete appearance and keeps the fire brick walls from cracking and spreading under the action of the high heat to which they are constantly subjected. It economizes heat and saves repairs.

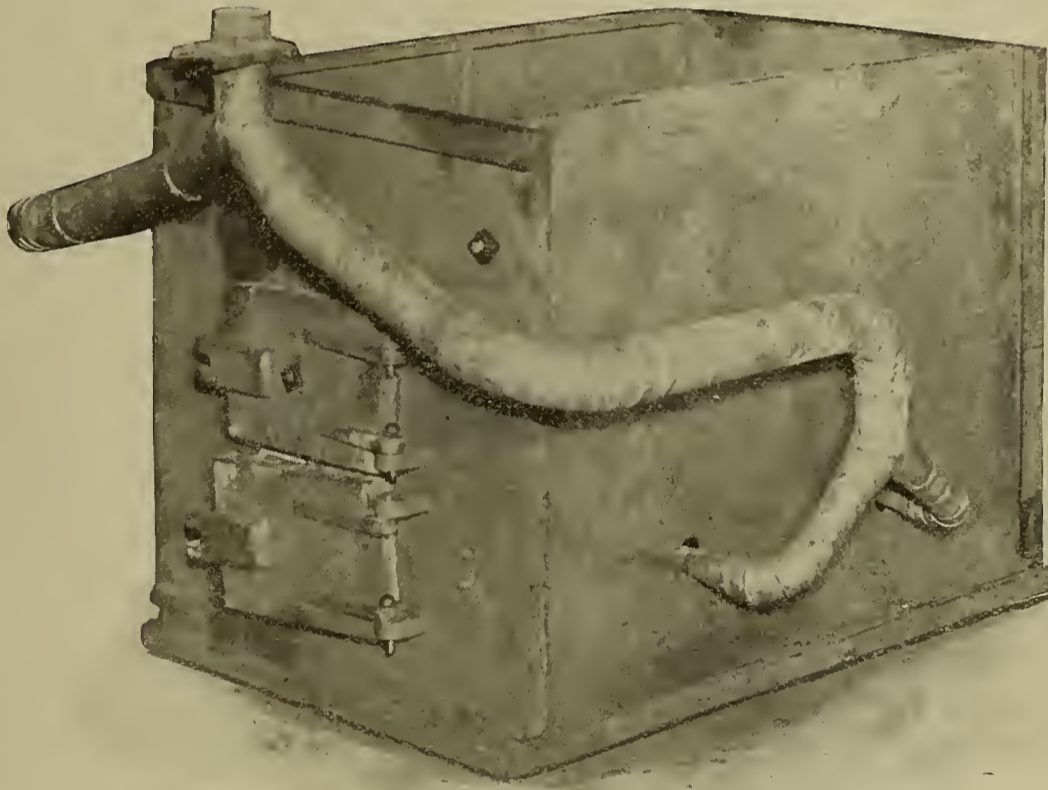
It being absolutely necessary that the fire may be maintained at any desired heat, the greatest possible convenience in attending the fire is highly desirable. It is conducive to better work and also saves money in other ways, for if the fire is kept clean from clinkers and the ash pit is not allowed to fill up, the iron grates will last much longer. Upon the care of the fire also depends the amount of coal burned. One dollar's worth of coal is sufficient for a day's work if the firing is properly done.

A capable fireman counts for a great deal and may reduce the coal expense

considerable, and may make one set of grates last a year and over, where another fireman would burn out a set of grates in a month. But a suitable fire box arrangement is also necessary, for the best fireman cannot save coal and grates and keep up a satisfactory fire in a poorly arranged firebox.

#### Description of the Firebox.

The Fulton firebox is simple. A door is placed above and another below the grate. By opening the upper door the operator may clean the fire from ashes and clinkers and replenish the supply of unburned coal. In cleaning the fire the only instrument used is an ordinary long poker. Through the lower door, opening into the ash pit, the ashes, which have been forced down through the grate at the times when the fire has been cleaned out, may be removed. In the original Fulton furnace the doors were placed only in one end of the furnace.



Iron Jacket and Draft Inlet Pipes for Latest Fulton Furnace.

In the new pattern a set of doors has been placed in each end, thus making it much easier for the fireman to reach all parts of the firebox with his poker. Further, there being doors in the front as well as the rear end, the operator may attend to his fire without walking around the furnace. To clean the ashes from the fire and put in new coal does not cool the furnace enough to cause the stoppage of brazing work more than a few minutes.

#### Distribution of the Air Draft.

The distribution of the air draft is a very important feature and one of those which have been changed in the new style Fulton furnace. The heat required in a brazing furnace demands a draft from the main pipe of about 500 cubic feet of air per minute under a pressure of 5 ounces. The regulating means should be in the main feed pipe, so that if part of the air is there cut off the reduction will affect all the firebox discharge pipes alike. In the original Fulton furnace the draft

inlet was placed at the front end of the feed pipe ends in a Y-connection at the back end of the furnace, a smaller pipe leading around to the center of each side. At each of these points another Y-joint is made, and from each Y a pipe runs directly to the firebox. There is thus an inlet air pipe near the end of each side of the fire—four pipes altogether, all of which discharge exactly the same amount of air at the same pressure. The turns in the air pipe have all been well rounded, so that there is no obstruction to the free passage of the air.

#### Arranged for Overhead Feed.

The pipes running to the furnace here illustrated are arranged for an overhead supply feed. The overhead supply is firebox. In the new furnace the main found most commonly in factories, but should the supply come along the floor instead of the ceiling, there would be a slight downward instead of a marked upward bend to the feeding tube, and the open joining end of the main pipe just in front of the first Y would fit to a horizontal floor pipe instead of a vertical pipe leading to the ceiling supply system.

The regulating check is simply a cut-off slide placed across the main pipe just in front of the first Y. In this furnace the proper brazing heat has been attained in about an hour's time in the

morning, and once attained no trouble has been experienced in keeping it throughout the day.

The points mentioned concerning the relation of the fire and crucible to each other, the support of the latter, and the arrangement of the air draft system are not only important for the proper maintenance of heat, but upon them depends to a large extent the amount of work which may be got out of one crucible. An ordinary commercial graphite crucible placed in a Fulton furnace has withstood regular all-day usage for over six weeks and has since been used off and on for six months. It is still in place and while nearly worn out is ready for duty.

#### Will Agree on Renting Prices.

The bicycle dealers of West Chester, Pa., are taking steps to combine and agree on a list of prices to be charged for the rental of machines.

**GARFORD**



**HUNT**

**BROWN**



# **Good!**

- Good Tires
- Good Springs
- Good Leather
- Good Design
- Good Form
- Good Contour
- Good Workmanship
- Good Style
- Good Comfort
- Good Durability
- Good Price
- Good Business
- Good Everything
- Good Day



**The Garford Mfg. Co.**  
ELYRIA, OHIO

**The Hunt Mfg. Co.**  
WESTBORO, MASS.

**The Brown Saddle Co.**  
ELYRIA, OHIO



**R. B. McMULLEN & CO.**  
Sales Agents,  
CHICAGO AND NEW YORK.

**HIBBARD, SPENCER, BARTLETT & CO.**  
Chicago Distributors.

# THE CYCLE AGE

## AND TRADE REVIEW

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

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### GERMANS' DESPERATE POLICY

Failing to obtain from the imperial government the prohibitory import duty on American bicycles which they have so earnestly and persistently demanded, the members of the Germany Bicycle Manufacturers' Association have decided upon a new plan for killing the American cycle trade in Germany. From this time forward they will unanimously refuse all credit to any dealer who handles, as part of his stock in trade, a bicycle of American origin.

Corroboration of the report according to which this vigorous and novel protective system is really being enacted by the German manufacturers has been received through the office of the American consul-general at Frankfort a. M., as related on another page of this paper.

Ordinarily Germans do not take very kindly to that which smacks of compulsion, and when, nevertheless, the German manufacturers have decided upon a policy which may cut both ways, and which it will require much commercial dexterity to follow without giving mortal offense to many of their customers, it is safe to conclude that they consider the situation so desperate that they must force the issue into the arena of a patriotic agitation. It is evidently their purpose to divide German cycle dealers into two distinct classes, one which carries German bicycles, with a possible addition of English and Belgian manufacture, and another which will refuse to yield to coercion and will carry American bicycles exclusively. Having effected this division, they may then endeavor to stigmatize the latter class as unpatriotic and unworthy of confidence, but it seems hardly probable that a movement of this character can have many chances for success in a country whose legislators have steadfastly refused to recede from the standpoint that the public are entitled to the greatest value for their money, from whatever source obtained.

On the other hand, there is perhaps in the situation a direct encouragement for our makers to canvass the German markets more thoroughly and more directly than formerly, so as to place before the German dealers a complete assortment of grades and prices in American bicycles and convince those among them who have heretofore kept only one grade of our manufacture in stock that they will be able to satisfy all their different classes of customers without yielding to the imperious edict of their home manufacturers.

### EQUIPMENT SELLS BICYCLES

The idea has been freely expressed lately in the camp of cycle accessory makers that the tendency of the present wholesale season runs to the extremes of grades and prices, and that saddles, lamps, tires, cyclometers, etc., whose makers aim to hold the middle ground, find buyers only outside of those circles where trade talk is current and up-to-date. Something similar to this has been said on previous occasions, however. There has always been a period in the beginning of each wholesale marketing season, when traders were so saturated with the opposing arguments of two opposite classes of sellers that they could see no room for trade between them. But as a rule the tendency in former years has been one-sided, with a preponderance in favor of cheap articles.

When this year the general opinion favors the higher grade article, the reason for the change is perhaps best explained by

reference to a new axiom which is working its way into the trade and which proclaims that "equipment sells the bicycle." This new doctrine, which has that in common with all other doctrines, that it is right or wrong accordingly as it is understood, might be expressed in several other ways. For example, it might be said, "construction does not sell bicycles, any more." That would be wrong, in so far as "construction" still has considerable to do to determine the buyer's mind—when wrong. But "construction" generally has lost in popular importance. It is now, from one point of view, second to "design." The market is tired of discussing cycle dynamics, while yet insisting that they must be right. It is not desired that the cycle manufacturer shall cease to discuss and justify his construction; on the contrary, he must continue to give mechanical descriptions, but he must not expect any comment, unless he is wide off the popular preference. In matters of construction, silence has come to be nearly equal to approval.

It is in this sense that "equipment sells bicycles," because it is taken for granted that "construction" is nearly right when nothing is said to the contrary. The thing to be demonstrated by the seller is now that the equipment has the proper value to justify the price asked for the bicycle; the rest will be allowed to pass on the reputation of the maker.

Nothing could be more natural under these circumstances than that the salesmen of accessories find their customers inclined to insist on one of two extremes. Either they will want the full benefit of an article of equipment the reputation and grade of which are strongly established, and will then be willing to sustain the price asked for such an article and support a high-class policy in regard to its sale, or they will exact the whole "pound of flesh" in the way of low prices if they conclude that their chance for selling goods by virtue of low price only is their best cue for profitable business.

At the present stage of the buying and selling activities these opposite standpoints are sharply marked and sharply noticed. Yet they are destined to be softened during the progress of the season. They are the standpoints of those whose minds are already made up and who have emphatic words at their command for expressing a decided bias in one direction or the other. But the great hesitating majority among the trade are yet to be heard from. They are not actuated by doctrines, are wary of extremes and travel in the middle of the road. They listen with natural sympathy—which leads to purchase—to the middle-ground arguments of those accessories manufacturers who make medium-priced articles. Such arguments do not read as brilliantly as those from the extreme camps of Simon-pure high-grade on one side, and of public-benefactor prices on the other, but they talk well and they wear well in the ever compromise-seeking estimation of the majority of the human race, viceroy the cycle riding public and the cycle selling retail trade.

There is no calamity threatening the manufacturers who cater to middle-price customers. There never is; for what the "middle-men" lack in brilliancy they make up through numerical predominance. Their goods are usually a little late in the market, and their customers are correspondingly late in purchasing. They have little to say for publication, but they "saw wood," and in the natural course of events they work out their own salvation with a sure-footedness that is somewhat exasperating to higher-prancing steeds.

For all that, the doctrine that "equipment sells bicycles" nevertheless has its significance for trade in the coming season, but a significance which is not a signal of danger to anybody except those who disregard it entirely.

### FOREIGN TRADE PROSPECTS

"There are many cycles to be made in the future, and by far the largest number of them must be made in the United States, the remainder being almost wholly divided between Germany and France, because England cannot be a successful competitor inside of twenty-five years to come."

This statement may read like mere "American bounce" in the estimation of many knowing ones on this side of the Atlantic, and will undoubtedly be received with derision in England, but, nevertheless, there is no lack of thrifty reasons for upholding the assertion.

Why cannot England compete with America in low cycle production cost? England has capital and managerial capacity

in abundance, and has been the acknowledged leader in all manufactures of metal ever since such manufactures became of importance in international commerce. Why, then, is England now to be suddenly taken out of the running in the cycle manufacturing contest?

Simply because the English workman has for generations been instructed, and has come to fully believe, that there is an economical limit to the extent of his individual production, and that if he exceeds this proper limit of individual production he does so at the expense of his fellow workman. This wholly absurd belief is formulated in the British workman's shibboleth: "A fair day's work for a fair day's pay."

Can a mere error of judgment, a simple failure on the part of the operative to grasp the true conception of industrial economics, make it impossible for a great nation to compete in an important manufacture?

If all the factory managers of England had a faulty conception of the fundamental conditions of economical production, then, very clearly, the English cycle maker would be at a disadvantage; but can it be possible that while the English cycle factory managers fully understand the situation, a mere mental misconception on the part of English workmen can force those managers to close their factory doors?

The convincing answer to this question is found in the fact that an American cycle plant cannot be made to yield the production with English workmen that it gives with American hands. Part of this failure in quantity of output is due to faults in form of material and quality of material furnished by English makers.

The English maker of bar steel, intended for use in automatic or semi-automatic tools, has not yet learned to furnish his product in sixty-fourth sizes, as do American makers; neither has he learned to make his bars perfectly round and of even size from end to end. Hence the English cycle parts maker is at a disadvantage with his automatics from the start, because his stock is not of the right outside form.

Again, our American tool makers know they must temper tools higher for foreign use than is needed for American use; this shows that the English makers of steel bars are not so certain of the constitution or treatment of metal as we are here, and as all users of rapid production machine tools well know, stock quality is the dominating cost factor in automatic tool product, and in fact fixes the price of all the operations in cycle making, from the drawing of the frame tubes to assembling the finished parts to form a completed cycle.

The cycle at present prices must be as nearly as possible a machine-tool product; hand work, in which the British workman delights and excels, is now out of the question. The parts must be perfectly machined, and must be to gauge before they go to the assemblers, to produce good cycles at a factory cost which will give the manufacturer a living when cycles sell to the user at present prices.

It is not, however, faulty stock alone which prevents the production of the cheap and good British cycle. It is the thoroughly ingrained conviction of the British workman that he is a good mechanic, as he often is, and that he can do a day's work in a day, as he often can, and last of all that if one workman doubles his day production, he takes the bread out of the mouth of some fellow workman, which makes it impossible for England to compete with America in cycle making.

Of what use is it to lay down the very best plant the world can produce, and then man it with workmen who will not exceed a rate of production which they themselves have fixed upon as "fair"? Absolutely none whatever.

Rapid cycle-part production by the use of machines involves the utmost limit of mechanical endurance, and unless the powers of the machine tools are supplemented by willing intelligence on the part of the machine tenders, no plant can give a good and low priced production.

The British workman prefers to starve rather than exceed a certain rate of production, often fixed in the secret councils of his "union," but just as disastrous to the manufacturer when fixed by the mulish workman's own estimate of "a fair day's work."

The English machine-tool maker also assumes an attitude which must be changed before England can ever again hope to rival America in light weight metal manufactures.

Modern machine tools have had two nativities, one British, one American—one owning such names as Whitworth, Maudsley, Bramah, Fairbairn, Nasmyth, and all the long illustrious line who laid the foundation of the heavy machine tool practice of the world, and the other a nameless nativity among the Connecticut clockmakers of the Naugatuck river, where our present automatic-machine tool practice originated. From the first the British tools were the best constructed in the world, and from the first the small Yankee tools excelled all others for production.

Now the time has come when these same ideas which made the Yankee "traps" so largely productive, and so "handy," have received appropriate embodiments at the hands of wholly competent designers, and have become thoroughly effective units of factory production, as durable as is compatible with high complexity of organization and extreme rapidity and low cost of production.

The British machine-tool maker still regards our American automatic and semi-automatic tools as "traps," and as a consequence the English tool shops have not produced any equivalent of our American tool-makers, a class of highly specialized artisans indispensable to low cost production of small metal pieces.

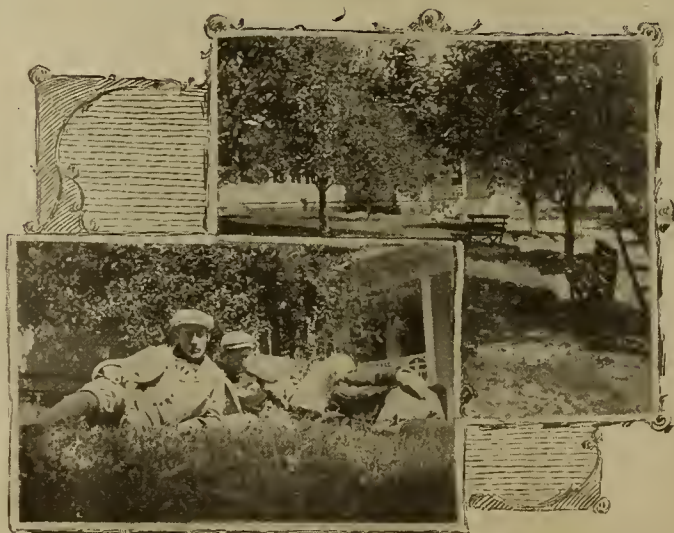
A whole generation will not more than suffice to produce in England tool-makers and automatic tool tenders equal in skill and adaptability to those of our ordinary American cycle shops. Hence it is perfectly certain that for a quarter of a century to come, at least, America can furnish English cycle users with cheaper and better bicycles than can be built in England.

\* \* \* \*

At the recent Chicago cycle show one of the noted features was the absolute absence of oil lamps and the prevalence of acetylene gas lamps. As nobody in the trade is prepared to believe that the oil lamp has been perfectly eclipsed, or, indeed, that there will not be sold at least equally as large a number of oil lamps as of gas lamps during this coming year, the failure to exhibit oil lamps has elicited considerable comment. It seems to be looked upon as a straw which shows how persistently the trade winds that blow at cycle shows fail to indicate the direction that actual trade will take.

\* \* \* \*

It also furnishes a hint to oil lamp makers to blow their horn, lest it may be generally supposed that the bright and steady gas flame has completely ousted the convenient kerosene from the affections of cyclists. The advantages of acetylene gas are too conspicuous to be concealed and the profits from the sale of gas lamps are too good in the aggregate to be slighted, but it may be doubted if there will be a sufficient number of really acceptable patterns of acetylene lamps in the market to afford satisfaction all around. It seems just possible that there will be a fine opportunity for pushing the sale of good oil lamps in districts where gas lamps of unsatisfactory construction first monopolize the attention.





## SPALDING DEFIES JOBBERS

### Complete Argument in Favor of Casting Off Jobbers and Selling to Retail Agents

Ever since the firm of A. G. Spalding & Bros. made public announcement of its intention to abandon the time-honored policy of selling to jobbers it has been the center of a storm which grew in fierceness as the jobbers rushed into print and sought to show that the new policy would end in disaster to its promoters. The Iron Age threw open its pages to all who cared to discuss the subject, and the acrimony and violence which some of its correspondents displayed in denouncing the Spalding plan of campaign, relieved occasionally by the vigor of some who held it to be justifiable, has resulted in a lengthy and masterly defense by A. G. Spalding, who if he does not effectually silence his critics at least defies them to do injury to his house or its trade.

The substance of Mr. Spalding's answer, as given in the Iron Age, is as follows:

#### Not Favoring Department Stores.

We are accused of favoring department stores in one city and giving up our entire wholesale and retail trade to a department store in that city, and that our goods could scarcely be found outside of department stores. We presume that this applies to our Philadelphia retail house, which we sold out last February to a prominent department store in Philadelphia, they buying the business, furniture and fixtures, taking our entire stock, assuming our lease, and the contracts and orders that our Philadelphia store had placed with our own factories. We decided that it was advisable to discontinue our retail business in Philadelphia and conduct our wholesale business in Philadelphia and vicinity from New York, and we happened to find a purchaser in one of the department stores there.

#### Department Stores Supplied by Jobbers.

Like all other manufacturers during the past three or four years we have been at a loss to know just how to handle so-called department stores. We have sold some of them under contracts and agreements that they would maintain our retail prices; in other cases we have refused to sell them because they cut our prices. And because of a disposition on the part of them to cut prices generally, we have refused to supply them with our goods; but none of them seems to have had any difficulty whatever in getting all of our goods that they wanted from certain jobbing customers who could not resist the temptation to supply them with what goods of ours they required because of the influence it had on the sale of some other articles of merchandise that the jobbers handled. Naturally the department store price cutters, finding that our system was so imperfect that they were able to get all of our goods they wanted, if not through us through the jobber, it rather tended to increase their desire to cut the retail prices of our goods still more.

#### Controlling Prices Made to Jobbers.

After these various experiences we began to study the question and finally came to the conclusion that, in order to control the prices of our goods at retail, it was absolutely essential that we control the source of supply from which the retail dealers secured their goods. We have always believed in the policy of handling our goods in such a way that the dealer could make a profit, but after several years of experience we have come to the conclusion that it is absolutely impossible for any manufacturer to control the retail price of his goods so long as he sells through the jobber; and, therefore, in order to carry out this theory and desire upon our part to establish retail prices and protect the retail dealer in the fair profit to which he is entitled, we found it was absolutely necessary for us to discontinue our trade relations with the jobbers.

#### Giving Up the Jobbing Trade.

Consequently, on November 21st last we wrote a formal letter to the 300 or 400 jobbers who had been handling our goods in the past, notifying them that on and after January 1, 1899, it would be impossible for us to supply any of our goods to jobbers for jobbing purposes at any price. This

means that we will positively refuse to fill an order from any jobbing house for jobbing purposes.

It might naturally be asked: "How are you going to prevent a jobber from buying goods for his retail department and then using them for wholesale purposes?" In reply to this will say that in making our arrangements with jobbing houses for goods for their retail department we propose to explain to them fully the conditions under which they receive our trade prices, and if they do wholesale the goods to retail dealers we shall simply cut off their supply and refuse to sell them any of our goods at any

#### Past Efforts to Protect Jobbers.

During the past twenty years we have done our best to try and perfect some plan by which we could protect the jobber in his profits, and I think, generally speaking, that our plan has been considered as successful as that of any manufacturer who has ever tried to do the same thing. Our plan of protecting the jobbers' profits and maintaining their prices to the retail trade was very successful until about four or five years ago, when the department store became a factor in the trade. Since then it has been more difficult every year to protect the jobber, not so much on account of his unwillingness to co-operate with us, but largely because of the conditions over which he had no control.

#### How Jobbers Cut Prices in 1898.

In laying out our policy for the last year, 1898, and at the urgent request of a number of our jobbing customers, we decided to remove all restrictions from the jobbers and follow in the wake of other manufacturers and let them sell our goods for what they pleased, always requesting, by the way, that they would maintain a price to the retail trade that would yield them a satisfactory profit. What was the result? Many of the leading jobbers at the commencement of the season not only threw away the small margin of profit that we allowed them, but in many instances sold the goods for considerably less than they paid us for them.

We did our best to maintain a price to the retail trade that would enable the jobbers to make a profit and we found ourselves in this delightful predicament. In sending our own travelers out representing bicycle sundries and other goods that the jobbers did not handle, we found no difficulty in selling them and getting good orders for them, but we found that we could not sell our own goods to the retail trade because jobbers had quoted prices on our leading articles at less than the jobbers had paid us.

#### General Dissatisfaction.

The jobber was dissatisfied because he could not make any money on our goods and was constantly hammering at us for lower prices, and not being able to get them he was constantly striving to get inferior, cheaper goods to substitute for ours, a very natural thing for him to do under the circumstances, for a jobber, like every other merchant, can't afford to sell goods without a profit. The retail dealer became dissatisfied because of the many different prices that were quoted to him on our goods and lost confidence and interest in them for the same reason.

All this tended to demoralize his profits, and he was selling our goods at cost or less to meet the cut price of some of his neighbors. Furthermore, the cut prices of the retail dealers carried conviction to the mind of the consumer that because of these cut prices the quality of our goods must necessarily have been degraded. The jobber was dissatisfied because he could not make any money on our goods, the retail dealer was dissatisfied because he could not make any money on our goods, and the consumer was dissatisfied because he thought the quality of our goods had been degraded; everybody dissatisfied except A. G. Spalding & Bros., who sold more goods and made a better net profit last year than at any time in their history.

#### Why the New Policy Was Adopted.

It will naturally be asked. If this worked so satisfactory to A. G. Spalding & Bros., why was a change made?

First.—Because we know the jobber cannot afford to and will not handle and push our goods if he cannot make a profit on them.

Second.—Because we know the retail dealer

cannot afford to and will not handle and push our goods if he cannot make a profit on them.

Third.—Because of the above two conditions we know self-preservation and self-interest will cause both the jobber and retailer to be constantly on the lookout for inferior unknown goods at lower prices on which he thinks he will make a profit (he won't, but he thinks he will), which will necessitate rival manufacturers cheapening their goods in every possible way in order to meet the demand of the trade for cheaper and constantly growing cheaper goods.

Fourth.—Because of these conditions A. G. Spalding & Bros. feel that the time will soon come, if it is not already here, when they will be forced to decide upon one of these two policies: (1) Either to constantly degrade the quality of their goods in order to meet the trade demand for constantly lower prices, and thus lose the reputation for a high standard of quality among the users of their goods that they have spent many years of hard work in building up, or (2) maintain the present high quality of Spaldings' trade-marked goods, which can only be done by establishing fixed selling prices based upon the cost of production. We have decided now on the latter course, and instead of waiting until circumstances and trade conditions may force us to decide upon the first named course. If this decision "busts" us, so let it be. We are confident that it will not, but we know if we adopted the first named course in time it surely would.

Fifth.—Manufacturing, as we do, every article bearing our trade mark, and having decided upon the policy of maintaining quality, the next question that naturally forces is decision is: How to reach the consumer at the lowest possible price to him. After much thought and mature deliberation we have decided this all important question to our own satisfaction, which in substance is as follows:

On and after January 1, 1899, A. G. Spalding & Bros. will reach the consumer direct from factory through the medium of the retail dealer, doing away with all intermediate jobbing profits, commissions to sales agents, special concessions, rebates, etc. Fixed prices to the consumer, based upon the cost of production, and no overcharging permitted. Fixed prices to the legitimate retail dealer, that will yield him a fair and sure profit, and no price cutting permitted. High quality maintained.

Sixth.—In order to successfully carry out these radical and apparently arbitrary methods, it is absolutely essential that A. G. Spalding & Bros. should control the source from which the retail dealer draws his supplies, and for that reason and for no other they have been obliged to discontinue supplying the jobber with any of Spaldings' trade marked goods for jobbing purposes.

#### Unanimously Approved By Agents.

Between December 1 and 10 our little red covered booklet, "A Radical Change," was mailed quite liberally to the retail trade throughout the country. Inclosed in this booklet was a return private postal card. Up to December 31 we had received 20,000 return postal cards from retail dealers, filled out in accordance with our requests, indicating the particular goods in our line in which the dealer was interested and handled. No catalogue with the new reduced prices was sent with it, and no effort was made to influence the opinion of dealers on the Spalding policy except in the matter contained in the booklet.

These replies give us no cause so far to regret having taken the retail dealers into partnership with us in the athletic and sporting goods business, and now, like good partners, we propose to take them into our confidence and tell them the truth, and we ask our numerous partners to do the same with us.

#### Retailers Should Get Together.

Manufacturers have their associations, and because of their small number, wealth and geographical locations it is not difficult for them to get together frequently and discuss matters pertaining to their own business and try and devise means by which they can correct abuses and make a better profit. Similar associations exist among jobbers, all trying to increase their profits and correct abuses in their particular department; but in all these conventions, conferences and banquets the interest of the retailer is seldom considered. It may be considered in a vague sort of way and pleasant addresses sent out to the retail dealer, but on account of his great numbers and lack of means to attend conventions held at distant points, and the further fact that as a rule he has to remain at home to attend to his own business, the retailers do not have their own conventions like the manufacturers and the jobbers, to consider matters for their own particular interests. If it were possible for the retail dealers to get together, compare notes and decide on a uniform policy that they would adopt for themselves and that they would like to have the manufacturers adopt, I am certain that



a very great majority of these retailers would be pleased, and if they could devise the power, would insist that manufacturers of well established goods go direct from the factory to the consumer through the medium of the retail dealer and maintain restricted prices at retail, cutting off such dealers as violated these conditions.

The responses that we have received in-dorsing the Spalding policy convince us that such a plan would meet with overwhelming favor by the retail dealer. As it seems impossible to get all the retail dealers in convention where these matters could be discussed among themselves, we have decided to try the experiment and find out for ourselves whether the retail dealers in athletic and sporting goods will co-operate with us in our honest efforts to make established retail prices to enable the retail dealer to make a fair profit and to prevent cutting on our goods.

#### Opposition to the Plan.

We have not asked any other manufacturer to join us. We are going it alone and we assure the retail dealer of the honesty of purpose back of this movement, and with the hearty and cordial co-operation and assistance of the retail dealers, we are confident of our position and success.

We realize that it is a big undertaking. Many manufacturers and jobbers are now laughing at us and insisting that it can't be done. We know it can be done and we are going to do it, and if we can have—as I am confident we will—the support of the retail merchants handling our class of goods, we don't care for the opinions of other manufacturers, who, we have reason to believe, are watching this so-called experiment with great interest, nor do we care what the jobber thinks about it.

We are assured that the 300 or 400 jobbers that are handling more or less sporting and athletic goods will try to circumvent us. We are sure that they will have in the aggregate some 4,000 or more traveling salesmen who will constantly be poisoning the minds of the retail dealers against us and our goods. We are assured that the advantages of the jobber in being able to ship goods by express or freight with a bill of lading, drugs or books will be of such consideration that we will not be able to reach the small dealer. It has been intimated that combinations will be formed against us, that manufacturers of competitive goods will receive the support and orders of the jobbers.

#### The Jobber Overestimates Himself.

We don't underestimate the advantages of the jobber, but, on the other hand, we think the jobber overestimates the control he has over the retail dealers of this country. Everybody knows that the present method of price cutting and lack of profits has not been satisfactory to the retail dealer, and we believe—and the Spalding policy is based on that ground—that our plan of giving to the retail dealer the very best prices that we want to give to any one, and our intention of giving him goods that will be cheaper in price and better in quality than can be supplied by any other manufacturer whose manufacturing facilities are not equal to ours, will be approved by the retail dealer and his co-operation and support accorded us. In addition to that we are giving the retail dealer standard goods in demand by the consumer, a demand created by the policy of 25 years in manufacturing the best quality goods, are protecting each article with our trade mark and our guarantee back of it, and at the same time are restricting the retail prices, thus enabling the retail dealer to make a satisfactory profit. Jobbers do not create a demand for any goods. They simply supply it, and are simply the middlemen or porters that carry the goods from the door of the factory to the door of the retail dealer, plus the jobbers' profit.

#### Creating a Demand.

There are three elements necessary to create a lasting demand for any article of merchandise.

First.—The manufacturer must make honest goods adapted for the purpose for which they are intended.

Second.—In order to acquaint the customer with this fact, and get the goods introduced and in use, he must be a liberal advertiser.

Third.—In order to make it convenient for the consumer to get the goods handily, without inconvenience to himself, the services and co-operation of the retail dealer are required. The Spalding policy contemplates the combination of these three elements; and going direct from the factory to the consumer, through the medium of the retail dealer, and eliminating the jobber, we believe will result in changing the present demoralized condition of the athletic and sporting goods trade, and will afford satisfaction to the consumer, who will be getting well known standard goods at fixed prices; will be satisfactory to the retail dealer, who will be able to make a fair profit because of the fixed retail prices; and

satisfactory to ourselves, who wish to perpetuate, and, if possible, increase our business. We do not go to the retail dealer with empty hands. We go to him with the two essential elements suggested above, and ask him to join us and make the necessary third element to produce success and satisfaction all round.

We appeal to the retail dealer with the same confidence of receiving his co-operation and support as Secretary of the Treasury Gage did when, ignoring the advice and opinion of many of the leading financiers whose selfish interests may have influenced their opinions, he went direct to the people of this country and asked for a loan to enable our government to carry on the Spanish war.

### BUFFALO REPAIRMEN THRIVING

Number of Shops Trebled in a Year—Mending Cheap Bicycles Kept them Busy.

Buffalo, Jan. 16.—The local repair business experienced a growth bordering on the phenomenal last year and where there were about sixty shops in the city at the opening of the season the number trebled before the end of the season and today the city is thickly dotted with repair shops. Mechanics who started in a very modest way the year before with scarcely work enough to make a livelihood found their quarters inadequate before the middle of 1898 and were obliged to secure more space and employ assistance.

This remarkable growth is largely attributed to the various cheap lines of bicycles with which this city was flooded at the beginning of the season.

Repairmen were sorely perplexed at times as to how to proceed with jobs that were brought them. So varied and difficult were they that hundreds of machines had to be sent back to the builders, if they could be located, which was a rather difficult task sometimes, many of them having gone out of business.

The greatest trouble experienced with this class of bicycle was the wretchedly bad brazing. To this imperfect work is traced nearly all of the trouble and accidents arising from the breaking of front forks which was epidemic here during the season. With very few exceptions there were no actual fractures. The entire trouble arose from the parting of the stem and crown. To all appearances the crown was simply shoved into the stem and the process of brazing hurried through with the utmost despatch and insufficient material. Not a pin was used in many cases and but very little brass appeared to have been used.

Two deaths and scores of painful and in several instances permanent injuries were the result of this kind of work, and public feeling was aroused to such a pitch that legislative action to protect the users of bicycles against faulty construction was demanded.

In the event of the reappearance of this trouble the coming season the makers and sellers of the machines at fault will be made subject to some restrictive and punitive law which will deal with this sort of workmanship in an extremely harsh manner, it is believed, for there are men who stand ready to introduce such a measure and force its passage.

#### How "Trading In" Works.

During the past season it became matter of frequent remark among riders that bicycles of the previous season were worth more to keep than to sell. When offered trade as part payment for a new machine, the allowance made by dealers was very small. Twenty dollars or \$25 was rare, and it was made only on strictly high-grade products in fine condition. More often only \$10 or \$15 allowance could be obtained, and most riders preferred to keep them to accepting that. This was the sad part of the situation from the rider's point of view. The dealers of such transactions had grievances of

their own. As a rule they had to sell the second-hand machines for less than they had allowed on them, and often they let them go for half as much rather than have them encumbering their stores. In connection with this state of affairs a dealer tells of a very neat trick that was played by a woman, according to a Pittsburgh paper. She bought a new bicycle and received an allowance of \$20 on her old one. After the bargain had been completed she asked the retailer what he would do with the old wheel. "Oh, sell it; and we're lucky if we get \$12 for it," he replied. The next day that second-hand machine was sold for \$12 cash to a young man who would not consider any other, and refused to pay more than \$12, although \$18 had been the original price demanded. It was not until some weeks later that the dealer learned that the young man was the brother to the woman who had turned in the machine. She had received a cash discount of \$8 in making her purchase and kept her old bicycle, which she afterwards sold to a friend for more than \$12.

### WIDE TIRES APPROVED

Professor Carpenter of Cornell University Demonstrates Advantage Over Small Tires.

Prof. Carpenter, in charge of the mechanical experiment station at Cornell, has completed a series of tests on the comparative value of large and small bicycle tires. In spite of the decided tendency in the past few seasons to diminish the size of their tires, Prof. Carpenter now shows conclusively that, other things being equal, the larger the tire the easier runs the wheel. This is particularly so in case the rider is of more than average weight.

It is not a matter of friction by contact with the ground, for, that being of the rolling type, amounts to practically nothing, but it depends on the loss of power in compressing the tire. On a two-inch tire the rider of average weight causes very little compression of the tire tread. The tire has a great bearing surface. Take half an inch from the diameter of the tube, however, and as it rolls along a constant indentation and release result. Here the power is lost, and hence the conclusion.

Prof. Carpenter says that a poor two-inch tire will run easier than the best one-and-a-half-inch tire that was ever made. A difference of over 15 per cent in the running qualities of a wheel is attributed to the kind of tire used. A single tube always proves faster than the double tube, but this may be due partly to the better material employed in making the former.

#### Death of Charles Daly.

Charles Daly, senior member of the firm of Schoverling, Daly & Gales, of New York City, died as a result of an apoplectic stroke on January 11 at his home in Summit, N. J. Mr. Daly began his business career with the old firm of Tufts & Colley about 1858, and subsequently was connected with Sargent & Co. and H. Boker & Co., which latter firm he left in 1865 to join Mr. Schoverling in the gun business. He was one of the incorporators and for many years president of the Marlin Fire Arms Co., of New Haven, Conn. He was one of the organizers of the Hardware Club. A son and a daughter survive him.

#### Heavy Overproduction in Germany.

It is said that the German cycle market is overstocked to the extent of 175,000 bicycles. "The outlook," says a leading German newspaper, "is most distressing. This year's sales will be most calamitously affected."

## EXPRESS COMPANIES WEAKEN

### Leading Officials Counsel a Policy of Concession, but the Controlling Spirits Are Firm

The aggressive manner in which the Merchants' Association of New York is carrying on its war against the express companies is said to have resulted in a temporary truce, during the course of which high officials of the carrying companies earnestly advocated a policy of concession in order to allay the inflamed commercial interests and put an end to expensive litigation, arising out of the construction variously put upon the affixing of stamps to bills of lading. But with that stubbornness for which they are famed, and that haughty indifference to the rights of the public for which they are held in disfavor, the controlling spirits among the carriers decided to let matters run their course. As a consequence the association is more active than ever in waging war and in seventeen states is making preparations for compelling by legislation the reforms which it is apparent can never be secured by more pacific agitation. Following are some late expressions of opinion from the retail cycle trade upon the subject of controversy:

#### Old Excuse Does Not Apply Now.

Decidedly I am in favor of the movement and will do all I can to help it along. For years I received all my bicycles by express; now I order all by freight and find that from Chicago to Mitchell the time is only one day longer than by express. I believe the express companies simply tuck on all the traffic will bear. By express it used to cost \$1.35 to \$1.50, but after I had twenty-five or thirty bicycles come by freight one bicycle came by express contrary to my orders to the manufacturer, and I noticed the rate had fallen to \$1.25. The local express rates are too high, also. One of my customers wrote me from White Lake, S. D., that it cost him 50 cents on a single bicycle wheel with the tire from Mitchell to White Lake, a distance of thirty-six miles. When bicycles were worth \$150 each the express companies said the reason the rates were so high was because the goods were so valuable that if one was injured it cost heavily to pay the damages. The prices are down now and I do not see why the carrying rates stay up unless it is because the companies can get their price. The railroad companies charged from 10 to 15 cents too much on each machine until I went to weighing the wheels before crating. I received rebate from the railroad company for all overcharging that I could prove. I hope this movement will be successful.

Mitchell, S. D.

L. E. STAIR.

#### Despotic Rates in the West.

It has always seemed a little despotic that we are compelled to pay \$3 to get one bicycle here from Chicago by express, whereas it costs an agent in New York (same distance) \$1 per machine. This could have been changed to a certain extent had bicycle manufacturers shown a disposition to make an allowance for excess western rates in upholding their theory of "treating all agents on equal terms." This excess charge comes out of our commission on goods sold. My opinion has always been that the bicycle manufacturers by a joint action could have secured a special rate on bicycles. There are also a great many other things that manufacturers could do for the benefit of their agents and patrons, one of the worst practices being the compelling of a man to pay express on his broken or defective parts and tires after he has once paid the market price on guaranteed (?) goods. We patronize freight if possible.

Colorado Springs Col

L. C. WAHL.

#### Express Charges Triple Cost of Goods.

We are certainly in sympathy with any legitimate movement whereby the express companies can be compelled to moderate their charges. We are compelled to use express more and more every year, and are willing and expect to pay for quick service, but we do seriously object to being robbed,

and that is what it amounts to out here where there is no competitive line. The charges on most goods are enormous, the express charges being in a great many cases three or four times as much as the first cost of the goods. Two or three houses have helped us out by prepaying charges, they being able to secure better rates, or at least it costs them less at their end of the line. We believe the fast freight would be all right, but think that something should be done to compel the express companies to make reasonable charges.

Devil's Lake, N. D.

C. P. BRAINARD.

#### Railroads Should Perfect their Service.

We have not been able to pay the exorbitant express rates charged out here for two years. We use fast freight entirely, and will continue to do so until a more reasonable charge is made by the express companies. Our freight service is nearly as prompt as the express and if the railroad companies would make a lower or less than 100-pound rate on small packages they would get every pound of our business. We are in sympathy with any movement that will educate the people as to the folly of using express where freight service can be had. The railroad companies should be encouraged to perfect this service, giving us rates on small packages, and the merchants will do the rest. A solution of this question is undoubtedly coming. The express companies must reduce their charges or the United States government should give us safe transportation of larger packages through the mails.

Denver, Col.

FELKER CYCLE CO.

#### At Mercy of Two or More Companies.

I most certainly am in hearty sympathy with the movement to compel the express companies to moderate their charges for the carrying of goods, particularly small packages. The fast freight plan seems to be one good solution of this evil that the retail merchants have to deal with. I have one particular complaint to make; that is, against the transfer charges which the western express companies make when goods are carried by two or more express companies. I wish this movement success.

Sandy Hill, N. Y.

L. E. SEXTON.

#### Risk Decreased but Charges Stationary.

The proposal to use fast freight meets with our approval. We feel very bitter toward the express companies for evading the tax; also for their very excessive charges for small packages, and because the tariff is the same now on a \$25 bicycle as it was on a \$150 bicycle, although the risk to them is six times less as far as damages are concerned. We sincerely hope the day is not far distant when their excessive charge will be lowered by fast freight, postal package delivery or something else, and it will surely come soon. The distant rumblings caused by evading the stamp tax will surely end in a striking of the lightning.

Arkansas City, Ark.

H. S. SIMMONS.

#### Rates Higher than Cost of Goods.

I am certainly in favor of the movement started and will do all I can to further it. Express rates to Denver from any point east of Chicago average \$5 per 100 pounds on large articles, and on small ones very often several times the value of goods. I use freight or mail whenever possible and shall continue to do so and never ship by express except when compelled to do so. Hope you will win.

Denver, Col.

E. T. WEIANT.

#### Freight Economical and Satisfactory.

More than twelve months ago I worked faithfully towards a reduction of these extortionate express charges on bicycles. Today the charges are the same on these goods that now retail at \$35 as they were a few years ago when they sold at \$150, with the difference that the express companies now carry fifty packages to the one of five years ago. After a voluminous correspondence I was informed that the companies could not discriminate in favor of our goods as against hats and millinery goods covered by the same rates. I was further assured that a movement was then on foot for a general revision of express tariffs, looking to a material reduction, but this promise has resulted in nothing. From the

attitude of the express companies on the stamp question, I saw no hope for a reduction, therefore, I say we must look for relief in fast freight. Personally I have no grievance on this score, as I handle machines manufactured in Chicago, and our freight service between Chicago and Memphis does not differ four hours from that of the express company. This applies only to one road, for I find sometimes that my positive directions are overlooked and goods shipped by other roads and their connections means anywhere from eight to twelve days in place of thirty-six hours in transit. Express rates from this point to Chicago per 100 pounds is 3 cents per pound; less than 100 pounds the rate is higher. Freight on bicycles is \$1.27½ per 100, considerably less than one-half, which resulted the past year in the saving of a neat little sum. The express companies have a very arbitrary rule. Bicycle parts must be crated, no matter of how little value. There may be small danger of breakage or injury in transit, but if not crated the rate is double first class. It simply means express charges on useless crating material and labor to the shipper to crate.

Memphis, Tenn.

CHAS J. SCHERER.

#### Express Companies Absorb All Profits.

I am in sympathy with the movement started in New York. I prefer fast freight. Express charges are too heavy, especially in the west. Our profits are all paid to the express company.

Ogden, Utah.

L. H. BEECRAFT.

#### Express Rates Higher than Postage.

We think the fast freight proposition would be a great thing. As for us, we get the largest part of our wheels and bicycle sundries, also guns and gun material, by express and have often noticed that the company has charged us more for small packages than the mail would have been from any part of the United States, and often these packages have only come 250 to 500 miles. We do not see why the fast freight could not be run on all railroads to good advantage to both small dealers and to the railroad companies also.

OKLAHOMA CYCLE & SUPPLY CO.

Oklahoma City, O. T.

#### Railroads Could Give Good Service.

I think the subject of lower transportation rates by express companies a timely one. I am a thorough believer in fair and reasonable charges for all articles of commerce and all individual or public service. While express charges in many cases are not exorbitant, there are cases in which the charges are far beyond the limit of reasonableness. The suggestion of organizing a fast freight service is, I think, a good one. I think the railroad companies are the only ones which should profit by the transportation of the goods they handle. Certainly such a service would be safe enough for goods of ordinary value, and goods could be transported in reasonable time if the long delays at stations could be eliminated. As to complaints, I once paid 70 cents to an agent of an express company for bringing a package containing a two-ounce bottle of lubricating oil a distance of 300 miles. I have received bicycles which were marked correctly to go by a direct route, which, when only twenty-five miles from their destination, were shipped by a roundabout way 200 miles more with increased charges. Surely these instances are enough to show what some express companies are capable of, and all who have occasion to ship or receive goods should welcome a reasonable and honorable service. Your efforts to bring about a change for the better should be appreciated.

Orient Point, Suffolk, N. Y.

R. W. TUTHILL.

#### Freight Better for Short Hauls.

During the past season I have avoided using the express companies as much as possible. Their charges are out of all reason and since they have compelled us to pay their revenue tax I have found the ordinary freight better for short carries, but dislike to put the shipper of small packages to the trouble of forwarding by freight lines. I have never been able to recover anything damaged or lost by the express companies, but have found the freight lines reasonable and ready to adjust all claims. Any movement that will compel the express companies to make their charges reasonable will be good for the well-being of all business.

Ashaway, R. I.

H. HERBERT KENYON.

#### Fast Freight Found Satisfactory.

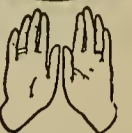
I am surely in sympathy with any movement to compel express companies to moderate their charges. I frequently use fast freight from New York and find it quite as satisfactory as express, but am not sure that to use it universally would be satisfactory; however, I believe it could be made so. I have had several special complaints to make concerning express companies but



TRADE MARK



59



MANUFACTURERS ARE FURNISHING

# Dunlop Detachable Tires



On their wheels AT NO EXTRA COST, either wholesale or retail.

Agents should see that the manufacturers whom they represent are among this number. Write us about it.



1899 IS GOING TO BE A DUNLOP YEAR.



## The American Dunlop Tire Company

134 Lake Street, Chicago.

Belleville, (North Newark) N. J.

36-38 Lombard St., Toronto.



TRADE MARK



# THE STERLING

## "BUILT LIKE A WATCH"

Chain Models, - \$50



Racers, - - - \$65

BUILT LIKE A WATCH  
 WORLD WIDE IS THE  
 STERLINGS  
 REPUTATION

SEND FOR CATALOGUE  
 STERLING CYCLE WORKS KENOSHA, WIS.

Chainless Models, \$75



Tandems, - - \$75

as I have kept no record of them and have dropped the matter, believing that I could get no redress, I am not now able to specify any particular one.

Auburn, N. Y.

EDWARD LEONARD.

#### Even Slow Freight Better than Costly Express.

Fast freight would meet my approval, and sometimes slow freight would, too. I have no other complaint against express companies than their extortionate charges.

Sodus Center, N. Y.

R. S. BORRADAILE.

#### Always Ship By Express.

We always have our bicycles shipped by freight.

Redwood Falls, Minn.

DALLAS E. LAIRD.

#### Has Stopped Using Express.

I for one have stopped all use of the express facilities except at most urgent need, using the mail instead where I can and freight for all other goods. In fact, they would have to quit if their patrons were all like me.

Vermillion, S. D.

D. W. C. NICHOLS.

#### Compelled to Use Freight.

We are situated so far from the centers of production that we have to pay an average of \$4 on a bicycle, which obliges us to get all our wheels by freight, and then we have to order in quantities to enable us to have some in stock, as it takes about three weeks to get machines by freight. Push it along.

San Antonio, Tex.

WAGNER & CHABOT.

#### Shipping by Freight this Season.

Express charges have been so high with us that we have been forced to make our shipments so far this season by freight and shall continue to do so.

Datonia, Fla.

HALIFAX CYCLE CO.

#### Freight Almost as High as Express.

The proposal to use fast freight instead of express meets with our approval. We hope arrangements can be made to cheapen transportation. The railroads have been charging almost as much as express companies. Both carriers are at fault; for instance, the express company delivers one bicycle from New York city for \$1.50, while the railroad charges \$1.10 on same, but takes five days longer to deliver.

Charlotte, S. C.

FITZSIMONS & CO.

#### Used Fast Freight for Two Years.

If the express companies do not give us the rate we ask, we believe in having the fast freight used as much as possible, which we have done for two years.

Arcanum, O.

A. F. SHULER & SON.

#### Prefer Express at Lower Rates.

We were very much interested in the recent article in the Cycle Age but we have no specific complaints to make. We are in favor of the fast freight proposal, and think it is quite generally used by the dealers here, especially those representing Chicago made wheels. However, this is not as satisfactory as express, and we are in sympathy with anything that will tend to bring express charges down.

Memphis, Tenn.

PRITCHARD, EVANS & CO.

#### Good Railroad Service at Low Cost.

Two years ago we were requested by the Western Wheel Works to have as many of our wheels shipped by freight as we could, and we took their advice. Since that time the express company has handled very few wheels for us as we get about the same service from the railroad company as we did from the express company at from one-fourth to one-fifth the cost.

New Egypt, N. J.

CHAPEY & BROWN.

#### Saved \$200 by a Late Change.

Last season we received over 400 wheels, nearly all by express. We shipped a few late in the season by fast freight and had we shipped all by fast freight we could have saved at least \$200. The wheels are handled carefully and the time is only eight hours slower than express.

Washington, D. C.

ACME REPAIR BICYCLE CO.

#### Wants to See a Change.

I am with you in the movement with both hands and approve of the fast freight instead of the express. The express companies' charges are too high for crated wheels and small articles, and very often breakage which can be found out only after goods are delivered cost a loss to the buyer and a delay of time. The express company here will not carry any small package or repaired bicycle parts unless they are prepaid, which often adds to the cost of the goods, and there is no way of getting a rebate

back. By all means I would like to see some change and do away with the express companies' overcharges.

Plattsburg, N. Y.

A. LANGLOIS.

#### Finds Freight Service Satisfactory.

We are heartily in favor of any movement that will have a tendency to cheapen the express rates that now exist. The proposal to use fast freight meets our approval; in fact, we are now using the freight routes as much as possible and find the service satisfactory. We have had some trouble with the company receiving two packages at the other end of the line from the same party (which could not easily be tied together) under the same receipt, and when delivered to us the company charged the same as if they had been received from two different parties and shipped out under separate bills. In many cases the express cost almost as much as the article shipped. We have watched carefully as to the express charges and find that the charges on all parts received except crated wheels will average between 20 and 25 per cent of the invoiced price of the shipment. Our express items foot up to quite a sum in a busy season and anything that we can do to lessen this expense will be done.

Rome, Ga.

WEST CYCLE CO.

#### Lower Rates Would Help Dealers.

Regarding the express companies I have no special kick, only the high rates charged for transportation. I think it would be a great help to dealers if they were lowered.

Bradley, S. D.

R. T. READ.

#### Cheaper to Send Collect than Prepaid.

I am very much in favor of what the merchants are trying to do in New York. It seems strange, but our agent here in town says that if we prepay goods the express will be more than if sent collect. A while ago I sent two crated bicycles to New York city, prepaid, for \$1, and when they came back I only had to pay 70 cents.

East Hampton, N. Y.

E. B. MUCHMORF.

#### Wholesale Thieving in Florida.

In no other state in the Union are the people robbed by the express and railroad companies as in Florida. I am heartily in sympathy with your movement and will give all the aid in my power to stop the wholesale thieving.

Tampa, Fla.

TAMPA CYCLE CO.

#### Excessive Rates Prohibitory.

We have not been able to use express for two years. Charges too high for profits on wheels.

El Paso, Texas.

EL PASO CYCLE CO.

#### Would Like to See Rates Lowered.

Express comes high and I would like to see rates cheapened if it can be done and let the expressman make a fair profit.

Omaha, Neb.

MIDLAND CYCLE CO.

#### In Sympathy with Whole Movement.

I am in favor of the New York movement to compel these carriers to moderate their charges, and to use fast freight.

Tyndall, S. D.

J. C. KIEHLBAUGH.

#### Cheap Rates by Boat.

For the past year we have been having our machines shipped to Boston and then to Baltimore by steamer at an average charge of 29 cents per machine as against \$1.10 each by the express companies, the difference in time being three days in favor of the express companies. We would cheerfully pay 100 per cent increase in the rates we are now paying to get goods by express, but draw the line when the increase is 300 per cent.

Baltimore, Md.

E. D. LOANE JR., CO.

#### No Alternative but Freight.

We had little to complain of in Providence until one express company squeezed out the other. Since then rates have gone up and there is no recourse but freight, which would be satisfactory if faster.

Providence, R. I.

CORP BROS.

#### Ships by Local Express Company.

We are most heartily in sympathy with the movement started in New York. We have had trouble with the American Express Company in our town and have made use of a local company wherever possible, but could not do this with business beyond Boston, Mass. Reckon us in on any move that shows the least hope of bringing them to terms.

Portsmouth, N. H.

F. B. PARSHLEY & CO.

#### Advocates Parcels Post.

We are fully in sympathy with the agitation to regulate this matter. In our experience with the express company here

(and they have a perfect monopoly) we have always found them a "law unto themselves" and it is next to impossible to get any satisfaction for any grievance, however real. We would like to see established a parcels post similar to that in successful operation in England for the last fifteen years.

Bridgeport, Conn.

BRIDGEPORT CYCLE CO.

#### Monopolistic Charges.

Express charges to this place are simply outrageous. I have paid sometimes as high as 50 to 75 per cent of the cost of the package. At Fulton, N. Y., the rates are about one-half less because there is competition. Heavy packages we send by stage to Fulton for 10 cents and get about half rates there.

Mexico, N. Y.

H. H. DOBSON.

#### Special Rates on Large Business.

I think the express companies' charges to some places are very high. I will lend my best assistance to put a stop to it. Would use freight in many cases. Think special rates should be allowed between factory and agents doing a large business.

Amsterdam, N. Y.

ED. T. DEGRAFF.

#### A Big Factor in the Trade.

A Big Factor in the Business.

I think the proposal to use fast freight is a good one. Express charges are quite a factor in trade at the present low prices of bicycles. I wish you great success in your undertaking and will give what little help I can.

Hudson N. Y.

WILLIAM PETRY.

#### Finds Freight Cheap and Fast.

I have been using Erie fast freight for the past season with the best results. A little more than a year ago the express company succeeded in suppressing all competition in Hartford and proceeded to advance rates; with me the charges on a single wheel advanced from 90 cents to \$1.35, and at the same time the time increased a day. I began experimenting with the different fast freight lines and found that I could get a rate of 40 cents a machine and only one hour longer time required than the present express time, by the E. & N. E. Despatch. As a result the advance of rates cost the company all the business I had previously given it on complete bicycles.

Corning, N. Y.

F. C. WILLIAMS.

#### Drawback to Freight System.

We could not use fast freight as goods are not delivered, and for this reason we prefer the express system. We have only one specific complaint to make against our express company, and that is their practice of making their patrons pay for the revenue stamps on express packages when the law was intended to tax the companies and not their patrons.

Watertown, N. Y.

CARPENTER & MALF.

#### Volume of Business Warrants Lower Rates.

Considering the extensive business done by the various express companies in the shipment of bicycles, I certainly think their charges are away above what they should be. I am heartily in favor of any movement which would bring about the reduction of their rates. I am not in favor of fast freight except in long-distance shipping.

Sing Sing, N. Y.

GEORGE OSTENDORF.

#### Small Buyers Suffer Most.

I think the present express rates on small packages are too high. When small dealers cannot order from the factory direct in quantities, it works a hardship on them on account of the express charges which take all the profits and in many cases more. I have given up the idea of expressing goods and have been ordering all goods sent by freight, and will continue to do so unless I can do better. The fast freight would be all right, I think.

Woodburn, Ore.

E. L. REMINGTON.

#### Thoroughly Tired of Abuses.

We are in sympathy with the movement started in New York to compel these carriers to moderate their charges. The proposal to use fast freight meets with our approval. Our complaints are too numerous to mention.

San Antonio, Texas.

FRANCE & THIELE.

#### Californians Would Use Freight.

The proposal to use fast freight instead of express meets with our approval. The prices of the express companies are too high.

Pasadena, Cal.

FD. R. BRALEY & CO.

#### Rates to the South Invisible.

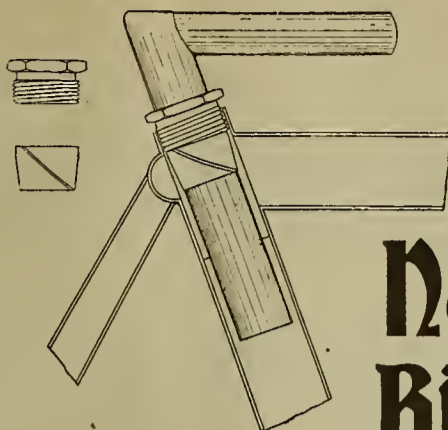
We never think of using the express company for shipping bicycles as the charges are "out of sight."

El Paso, Texas.

W. G. WALZ CO.

#### Will Patronize Fast Freight.

We are in sympathy with you in your move to compel the express companies to reduce



The Simplest  
Internal Binder

IS SEEN  
ON

National  
Bicycles only

**TWO PARTS** { The nut that fits in the top of the seat post cluster.  
The circular spring wedge.

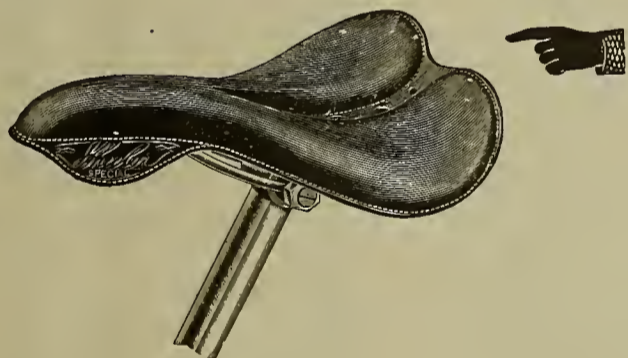
No special tools needed.—A half turn of your bicycle wrench tightens or releases it.—No threads to jam.—No expander to stick fast inside.—Just like all National improvements, **SIMPLE AND GOOD.**

THERE ARE OTHER GOOD THINGS ON NATIONALS

**National Cycle Mfg. Co.**  
BAY CITY, MICH.

"An improvement which does not make it easier for a rider to take care of his bicycle is not an improvement."

**A National Rider Never Changes His Mount**



**WHEELER SADDLES**

HAVE ALWAYS BEEN MADE WITH THAT  
CURVE IN THE BACK.

OUR LINE FOR '99 COMPRISES BUT FOUR DISTINCT MODELS:

- "EXTRA" Woman's . . . . . Broad, Soft and Easy. ❀❀
- "EXTRA" Men's . . . . . Hygienic and Durable. ❀❀
- "SPECIAL" Roadster . . . . . An ornament to any wheel.
- "CORK-TOP" Racer . . . . . Light and Graceful. ❀❀❀

These saddles are made and finished in the careful and stylish manner that has always characterized Wheeler Saddles.

Send for samples of the most popular saddle on the market.

**THE WHEELER SADDLE CO.**

1427-1457 Woodward Ave., DETROIT, MICH.

Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT.  
New York Distributing Agents: HARTLEY & GRAHAM.

# Stearns Bicycles

## Twelve Magnificent Models

—go to make up the Stearns product for 1899—a product that, in point of variety, elegance and perfect work in every detail, we believe to be without a peer in the world.

❀❀❀ The STEARNS CUSHION FRAME, Models K and L, mark a new era in bicycle construction. The cushion device adds from 2 to 2½ inches to the resiliency of the present pneumatic tired wheel, without loss of strength or durability to the frame or changing its graceful lines. It assists the pneumatic tire in making riding easier. They are ideal wheels for comfort for both men and women.

The STEARNS SPECIAL, LADIES' SPECIAL, 30-INCH SPECIAL and TRACK RACER show a degree of excellence never before attained in the history of bicycle making. ❀❀

The STEARNS MODELS E and F will be the favorite road wheels of the season. The extreme lightness, the pleasing lines, the narrow tread and the many technical improvements are irresistible attractions. ❀❀

The STEARNS CHAINLESS, MODELS G and H, combine the practical features of the bevel gear mechanism with the alluring charms peculiar to Stearns construction.

❀❀❀ The STEARNS TANDEM, diamond and combination frames, are entirely new models.

With so extensive a line of praiseworthy wheels we are confident that the dealer who handles them cannot fail to meet with success. ❀❀

The Yellow Fellow Year Book is now ready. We invite correspondence ❀❀

**E. C. STEARNS & Co.**  
SYRACUSE, N. Y.

The trade on the Pacific Coast supplied from our branch store, E. C. Stearns & Co., 210 McAllister Street, San Francisco.

The trade in the Dominion of Canada supplied from our Canadian factory, E. C. Stearns & Co., 67 Adelaide St. West, Toronto, Ontario.

their charges, and will be one to patronize fast freight instead of the express. We approve of the fight you are making against them and hope to see the extortionate charges reduced at an early day.  
Alexandria, Tenn. ROY & JONES.

**Meanness of the Monopolists.**

I consider the express charges from the east to the Pacific coast excessive, and think the express companies should be compelled to pay the war tax and not raise the charges to get even.  
Marysville, Cal. F. D. GORDON

**Big Profits the Strongest Argument.**

I consider the rates charged by express companies most arbitrary, especially on small packages. There is no classification and a package occupying one cubic foot of space may cost more than one occupying five, simply because it weighs more, etc. I use freight when possible, and have never failed to get bicycles from Reading, Pa., to Lockport in three days. Have had machines come from Waltham, Mass., in three and four days, at a cost of from 25 to 33 per cent. of express charges. If the figures relating to the profits of the express companies published by the shippers' association are true, I think there is very little remaining to be said in favor of reduced rates.  
Lockport, N. Y. F. S. COATES.

**Advise a General Request for Reduced Rates.**

The proposal to use fast freight instead of express so fully meets with my approval that I have been using it for over a year. I have noticed in other lines an inclination to grant a reasonable request, where any attempt to force the same party to make the same concession would be met with stubborn resistance. Certain lines of merchandise, such as printed matter, oysters, bread, etc., are granted special rates by the express companies, and it would seem that a general request by those interested (agents, makers or any one having occasion to ship or receive shipments of bicycles or accessories) should and would receive prompt and favorable attention from the companies and special rates be named. I have already asked the agents of the various companies represented in our city to take up at once with their traffic managers the matter of special rates on bicycles and sundries, and would suggest that all dealers and others interested take similar action at once. This will indicate to the authorities that there is a general and earnest desire for the special rates, and the same request from thousands of patrons would certainly impress the companies more than one from a committee, no matter how many representatives it might have. I favor making known our desire to the companies, and giving them a fair chance to make reasonable concessions voluntarily, before trying to force them.  
Dubuque, Iowa. C A NOYES.

**Shippers Should Organize.**

The proposition of fast freight meets with my views, and can, I think, be made a success if the shippers throughout the country will only organize with that end in view.  
Sacramento, Cal. F. M. JONES.

**Argument for Parcels Post.**

The remedy for high express charges is lower postal rates for packages under 10 pounds and fast freight for crated bicycles or large shipments of sundries. The government can afford to carry merchandise at 4 cents per pound and make a profit if it can carry periodicals and magazines (which are really three-fourths advertising circulars) at 1 cent per pound. The express companies will meet competition, of course. Freight charges on crated bicycles are \$6 per hundred weight, and express \$12, so we poor coast dealers suffer either way. The time required from Chicago by express is five days, and by freight ten days; these are minimum. The San Francisco Board of Trade is fighting the stamp charge, but California courts are so notoriously slow that we have no relief as yet.  
Hollister, Cal. THE LOGAN CYCLE CO.

**Charges Never Twice Alike.**

Not only myself but all the merchants I have spoken to on the subject in this country say that the express companies never have the same charge on the same article coming from the same place. The expressage is more from the west than from the east. I think that fast freight would be O. K. for this section, and I will do all I can for it.  
Boise, Idaho. J. B. TAYLOR.

**Western Business Lost to Manufacturers.**

We would like to use the express companies but cannot as their rates are too high, being out of all proportion to freight. The time is about six or seven days shorter than the freight time in reaching this point from Chicago. The freight rate from Chicago to this point on bicycles is \$6 per 100 pounds in less than car lots, and the expressage is \$12 per 100. The railroad companies stand in with the jobbers to force the retailers to buy

from jobbers here. They place the rates at \$2.40 in car lots, which means that if one can not buy 400 bicycles at one time at an outlay of \$10,000 to \$15,000 and \$480 additional for freight (as they weigh about 50 pounds each crated), he must in taking a smaller number at one time must pay \$1,200 freight for the same amount, or \$2,400 expressage.  
Portland, Ore. DALY & HIGLEY.

**All Charges Out of Proportion to Risk.**

For the past two years we have used fast freight instead of express as much as possible, but find that even the freight companies charge an excessive rate considering the small value of bicycles now and the small margin the dealer gets after paying express or freight. As far as we know there has been no reduction in freight or express rates since bicycles used to sell for \$125 to \$150 and we believe it is high time that both express and freight rates were reduced.  
Wichita, Kan. M. H. BURT CYCLE MFG. CO.

**Have Stopped Shipping by Express.**

We have practically abandoned all shipment by express except in extreme cases. In several cases we have paid more for express charges than the goods were worth, and have had charges vary 20 per cent for same distance and weight. The position taken by The Cycle Age is certainly commendable and should receive the hearty cooperation of dealers and tradesmen in general.  
Austin, Minn. HARRIMAN MFG. CO.

**Good Business for the Express Companies.**

The proposal to use fast freight instead of express meets our approval in a general way. Two days ago we had to pay 75 cents for a 7½-pound package from Chicago. The bill for the goods was but \$1.61. This is all right—for the express company.  
Frederick, Md. KEYSER & CO.

**Wants Lower Freight Rates on Small Packages.**

I most heartily sympathize, from the point of a fellow sufferer, with all business men who are imposed on by the transportation companies with their extortionate charges, but I must confess that as a rule I have suffered most on freight charges for packages weighing less than 100 pounds. If I can be assured that by combined efforts we can have our freight charges regulated so that we can ship fractional portions of 100 pounds at only a small charge for handling the extra packages, say, a rate of about 20 per cent more on packages under 50 pounds, then I vote for fast freight.  
Paris, Tex. ERLE K. BAKER.

**Lower Rates Would Increase Business.**

Situated as we are so far from the manufacturing and jobbing centers, we feel the heavy tariffs much more than dealers who are not so far away. We have just made an effort to secure a freight rate on a car of bicycles for shipment to El Paso, but find that we cannot get any lower rate on a carload than on a shipment of 100—either from Kenosha, Wis., or Chicago. We are of the opinion that it would be a good business move on the part of the express companies as well as a benefit to the dealers to reduce the express rates to the minimum, as if the rates were low the express companies would handle the bulk of bicycle shipments except when carloads are shipped, and this should increase their revenues much more than the increase in expense, but possibly they do not make a correct estimate of the increased business low rates would bring them.  
El Paso, Tex. MCCUTCHEON, PAYNE & CO.

**Express Companies Need a Heroic Dose.**

I think that fast freight would be good medicine for the express companies.  
Wilton, N. H. P. J. ABB TT.

**Weary of the Injustice.**

We are charged rates varying from \$1.75 to \$2.25 on bicycles of the same make from Dayton, O. This is very unsatisfactory. We trust that you will be able to do something  
Savannah, Ga. R. D. & WM. LATTIMORE.

**Prefers Express At Reduced Rates.**

We are in hearty sympathy with any movement that will compel express companies to moderate express charges. Unless this can be done, we will advocate fast freight, but inasmuch as express companies deliver all goods at our doors, we would prefer getting goods through them if charges can be lowered. Oftentimes the express on a bicycle lamp, bicycle parts, etc., is as much as cost of the article. We trust that your efforts will be rewarded and appreciated by the retail merchants.  
Aurora, Ill. HENRY RYAN.

**Assets Shrunk by Instalment Sales.**

In the schedule of assets and liabilities of the Sol Heyman company of New York

city, which went into bankruptcy some time ago, the total liabilities are shown to be \$154,172, with nominal assets of \$44,812 and actual assets of \$24,327. The direct liabilities are \$45,506, and contingent liabilities \$108,666, of which \$99,816 are unpaid leases of the stores which the company occupies. The difference between the nominal and actual value of the assets is on account of depreciation in stock and outstanding accounts for goods sold on installments.

**Cycling Increasing in the South.**

The bicycle is steadily gaining in favor in the south and Charleston, S. C., has probably more riders in proportion to the white population than any other city in the country. There are 30,000 white inhabitants and there are 7,000 cyclists. Four years ago there were hardly fifty riders. More women ride than men. One third of the streets of the city are asphalted and there is a shell road ten miles long running out through the woods from which bicycle paths branch off in all directions. These paths are made by the riders themselves, whose pneumatic tires pack the sand down as hard and smooth as a board. The real riding season is on down there now and more cyclists are to be seen at this time of the year than in summer.

**Exports of Bicycles and Materials.**

Exports of bicycles and bicycle material from the port of New York for the week ending January 10 are recorded as follows:

	Bicycles.	Material.
England .....	\$20,046	\$10,756
Canada .....	.....	26,653
Argentina .....	13,281	100
Holland .....	1,683	4,919
Germany .....	2,221	5,057
France .....	6,813	1,590
British East Indies .....	5,313	249
Denmark .....	439	4,007
British Africa .....	3,865	34
Belgium .....	65	3,925
Russia .....	117	1,808
Sweden .....	100	1,728
Brazil .....	1,032	83
British Guiana .....	356	586
Uruguay .....	915	.....
British West Indies .....	750	166
Prussia .....	47	625
China .....	609	34
Australia .....	400	75
Norway .....	342	.....
Portugal .....	71	209
United States of Colombia..	188	80
Mexico .....	112	84
Japan .....	57	68
Venezuela .....	85	.....
Central America .....	70	10
Italy .....	70	9,174
Hong Kong .....	36	.....
Arabia .....	55	.....
Other countries .....	44	16
Totals .....	\$59,232	\$63,036

**Eleven Months' Exports to Germany.**

That the apprehensions of the German makers are not vain or imaginary is made plain by glancing at the appended table of American cycle exports—all kinds of goods implied—for eleven months of the past year, which are put in comparison with similar periods for 1897 and 1896:

	1896.	1897.	1898.
	\$216,202	\$1,147,776	\$1,411,961

**Restoring Looks of Shopworn Tires.**

The following inquiry upon an interesting subject has been received from a dealer in Colwich, Kan.:

Editor Cycle Age: Will you kindly inform me through your paper, if there is a way to renew the appearance of tires of wheels left over from last year, slightly soiled? I have tried washing them but this will take the outer coat of gray off and leave black spots.

The Cycle Age is unable to furnish the desired information. Those who may possess it are requested to communicate it.

## COMMERCE IN FOREIGN MARKETS

### CYCLING IN SOUTH AFRICA

Cycling has developed at an astonishing rate in South Africa during the past six years and is now the most popular past-time. Interest has been awakened through racing on the track, and now the public has taken it up with an enthusiasm which bespeaks a bright future for the bicycle in that quarter of the southern hemisphere. There are seven tracks in South Africa, located at Cape Town, Port Elizabeth, Kimberley, Johannesburg, Durban, Maritzburg and Grahamstown. The track at Cape Town, which has not long been completed, cost \$50,000, the amount being provided by the city; while the authorities at Port Elizabeth have expended no less than \$20,000 on their track and ground, and the Kimberley track was completed eighteen months ago at a cost of \$35,000. Touring clubs are starting at all the principal centers, one of the best being the Johannesburg Cycle Touring Club.

### TRADE CONDITIONS IN TURKEY

The activity in industries and trade throughout Turkey is marked and unmistakable. Germany continues to show energy in every department of business, and is undoubtedly taking each year a part of the business given heretofore to England, Austria, and France. There is a general impression in business circles that the German manufacturers are giving credit upon such long time and to dealers of such doubtful responsibility that they will soon believe that commerce with this country is not desirable. The English, who have heretofore done the bulk of the importing business, are making no special effort to extend their business, and they seem to be relying upon the reputation they have gained for selling reliable goods. Germany, on the other hand, has already acquired the reputation of manufacturing cheap and comparatively worthless products. The goods of American and English manufacture are the only ones which have an unquestioned reputation for quality. This reputation has led the Germans to manufacture and market imitations of American and English goods.

Much has been written and said of the long terms of credit given by German and Austrian manufacturers to the retail dealers of Turkey, and it has been contended that the conservative ideas of American manufacturers, the large percentage of irresponsible dealers in Turkey, and the difficulty in enforcing collections render the markets there uninviting to American trade. The conditions complained of are partly real and partly fictitious. They are not unlike conditions in the various states of America, except that a somewhat longer credit is given in Turkey; but the tendency is decidedly toward cash or shorter credits. Nearly all the American goods entering the Turkish market are sold for cash or upon very short time. In many cases, a remittance or deposit is required at the time the order is given. Long credit is not given by any manufacturers to dealers in Turkey, unless their responsibility is unquestioned.

As to the difficulty of collecting debts, there is no more trouble or delay in collecting debts in Turkey than there is in the United States. As nearly all the merchants in Turkey are Greeks, Italians, English, Germans, Austrians, and French, a resort to the Turkish courts is scarcely ever necessary. The creditor must sue

the debtor before the latter's consul, and he is usually a man of such high sense of integrity that he will not shield a debtor, unless he is able to make a substantial defense upon the merits of the case. Moreover, the consular courts are always open, the proceedings are summary, and there is less delay than in any courts of the United States, except the courts of inferior and limited jurisdiction, like the justices' courts of the state of New York.

### WRETCHED ROADS IN CUBA

The presence of a few bicycle salesmen in Cuba and Puerto Rico does not imply an immediate demand from those markets. In fact considerable time will elapse before they add materially to the volume of our exports. No money has been spent on the roads of Cuba, all of which are in a deplorable condition. Attention should at once be given to this important question and a liberal sum out of both local and general revenues of the island set apart for this purpose.

The colonial methods of Great Britain are receiving careful study by members of the administration who have anything to do with the government of the new dependencies. There is still a strong desire for the creation of a new department having charge of all matters relating to the new dependencies. This will probably be recommended to congress at the next session. The experiment is being made in Cuba of an independent colonial service.

### CYCLE TRADE CONDITIONS IN HONG KONG

To thoroughly understand the Hong Kong cycle market it is necessary to describe the highway conditions of the colony. Hong Kong is built on the side of a mountain 1,800 feet high, and all streets above sea level are terraces broken by flights of steps, making the majority of them unavailable for cycling. Consequently, the available roads are reduced to two, although there are numerous excursions that the daring rider can take throughout the island. The favorite, and in fact only, road for ladies borders the harbor front and is about 8 miles long. This road has a hard, metaled surface and is beautifully kept. The view and scenery along it is unrivaled, and the breeze that comes sweeping in from the ocean is most refreshing. Every evening from 5 until 7 it is alive with cyclists with the most heterogeneous lot of machines ever seen. Bicycles of all dates run side by side. The other road referred to is called the Aberdeen road, which is also 8 miles long. This road contains some heavy grades which a strong rider can take, but they do not commend themselves to the majority.

Hong Kong is a free port; consequently, custom-house duties do not have to be considered in the purchase of bicycles or bicycle parts. There are no real importers of bicycles. There are two small bicycle repair shops which always keep a few machines on sale. On the other hand, every firm, from the largest to the smallest, handles bicycles for the convenience of customers, who are scattered all over China and the Philippine Islands. Possibly half of those which are in use here were purchased by their owners direct from San Francisco, and probably two-thirds of all the machines in use here are American. There is no favorite make. There has been very little money spent in advertising any particular make. The Chinese, who are becoming the largest

users of bicycles on this coast, are utterly indifferent to name or reputation.

What this market demands is a low-priced machine—one that would sell for, say, \$20 gold in America wholesale. If there is added, say, \$3.50 freight from New York to Hong Kong, the machine could be sold at a nice profit. The high grades of American machines are at present selling in Hong Kong for \$185 Mexican, and where one could be sold at this price, one hundred at the cheaper figure would find a market. It is not necessary that the machine should even be of a late model. The 1896 make would command just as good a price as the 1899. China is a magnificent field for bicycle manufacturers to unload all their old stock. All bicycles should be fitted with brakes, lamps, and bells, as the streets are crowded with rickshaws and sedan chairs, and darkness comes on almost without waning.

Since the occupation of Manila by the Americans, there has been something of a boom in the bicycle trade, as Hong Kong has for years been the feeder for the Philippine Islands, as well as its warehouse. In time, of course, agencies will be opened in Manila for bicycles; but until that time arrives, Hong Kong will be the distributing center.

Bicycle makers should not sell indiscriminately to the unknown individual purchaser on credit, as there are no collection agencies. The same conditions exist with regard to bicycles as to all other shipments, the shipper drawing for his shipment and negotiating his draft through a bank, with complete documents attached.

### SENDING CATALOGUES TO GERMANY

An avalanche of circulars and catalogues, printed in English, are sent to Germany annually; they can not be read and are therefore consigned to the "basket." Circulars should be printed in German, and good German from both grammatical and technical standpoints. Some which are sent from the United States are not only unintelligible, but ridiculous. Illustrations of the machine or article should be given, with full description of its construction, operation, advantages, range of work, and application. Net and gross weights should be given in kilograms and not in pounds, and dimensions in meters and centimeters. The price should be given free on board ship at New York, Boston, Philadelphia, or Baltimore. Many circulars give prices at some inland city, and the cost of transportation to the seaboard is often greater than the freight charges from New York to Bremen or Hamburg. Shippers should secure bills of lading from the ship, if sight draft is made with bill of lading attached. Sight drafts are frequently made upon a bill of lading issued by the railroad company at the original point of shipment, and, as the consignee does not know the American seaport from which the property started, he is unable to form any idea as to when he will receive the goods and can not trace them in cases of detention, which are frequent.

Four years ago there were not one hundred bicycles in the city of Rheims, France. Now they are coming into more general use, and workmen are commencing to use them. There are a number of machines of American make. These have been introduced generally by houses having headquarters in Paris. Many more can be sold. The roads are fine.

## SUBJECTS OF GENERAL INTEREST

**CITY STREETS OF THE FUTURE** What will the streets of large cities be like when the motor vehicle comes into use? This is a question which interests greatly all students of electricity and civil engineering, and any one who talks much with them will be likely at first thought to reach the conclusion that they are extremely visionary in their views. Whether they are visionary or not, their descriptions of possible developments are interesting.

The first result of the final passing of the horse will be the elimination of stone pavements. Some engineers think it not improbable that before many years iron may, because of its cheaper quality, take the place of asphalt. With no iron shoes of horses and no iron tires to come in contact with it, there are no obvious objections to be made to its use. It could be cleaned as easily as asphalt, and it might be so constructed as to make the effects of heat and cold upon it comparatively unimportant. With smooth pavements everywhere, over which horseless vehicles can move with ease and rapidity, an extraordinary transformation of street locomotion becomes possible.

But the greatest gain of all from the departure of the horse will be in cleanliness. When he goes the larger part of the work of the street cleaners will have come to an end. The cleaning of the roadbeds will be a simple matter and can be done almost entirely by flushing them from the water mains. The same electricity which gives us the motor vehicles will give us in steadily increasing measure better lighting of our streets and houses and better heating as well. Even the bicycle may rise in public favor as a result of good pavements.

**THE DREAD OF LARGE BANKS** In many large cities there is just now taking place a perfectly natural and wholesome consolidation of banks. The movement is slow; the banks participating in it, or those which are absorbed into others, are failing to make money, or are making very small profits, so that reason for the consolidation is perfectly plain. With a decreasing rate of interest larger capitals have to be employed in order to meet the fixed charges of bank management and afford a reasonable profit, while in the investment of funds, a bank or trust company with \$6,000,000 of capital has decided advantages over sixty banks of \$100,000 capital each.

As to the effect of large banks upon popular sentiment, it is quite certain that popular sentiment is not going to be more hostile to aggregations of capital, and, on the contrary, that this relic of barbarism, the fear of banks, is destined to recede before advancing enlightenment.

As to branch banking, there are many communities in the west and south that cannot adequately support independent banks, even of small capitals. It costs a certain amount to run even a small bank. A small capital does not afford profit enough, and there is not employment enough for a large capital. In cases where these small communities do support banks they do it only by means of high rates of interest, made still higher by charges and commissions which are the cost of the local community. In a purely agricultural community the obstacle to banking is that, in the spring, all the bank's customers want to borrow and none make deposits; in the fall all are depositors and none are borrowers.

The branch bank meets most or all of these difficulties. A branch is more cheaply run than an independent bank. It can be maintained, therefore, where the independent bank cannot be. In the fall it can take all the deposits offered because the parent bank, or some other of its branches, can find use for such funds. The country branch can accommodate all its customers in the spring, because its resources are not limited to its local deposits; it can obtain funds from the parent bank. Under a system of branch banking experience shows that there is far less difference than in the United States between the rates of interest in the great monetary centers, and those in the agricultural communities. The great obstacle to branch banking is the ignorant suspicion and opposition of farmers in the newer or poorer states, and yet of all classes of the community no other one would be nearly so much benefited by branch banks as the agriculturists, who would find the rate of interest drop nearly to the rates in New York and Boston, instead of remaining at the high figures due to the local stringency of credit.

Much of the opposition to legislation permitting branch banks undoubtedly comes from the small local banks that have little competition and are able to get very high rates for the use of their funds.

**ELECTRIC RAILWAY ENGINES** A noted electrician contends that in the next fifteen years, unless there should be an unexpected slump in electrical progress, steam will be superseded by electricity as the motive power for even the trunk-line railroads. The change will mean the reduction in time between New York and Chicago to ten hours, and a general readjustment of business and social conditions to a standard of 125 miles per hour instead of 40. This revolution will come without any great sacrifice in railroad properties and without radical departure from present methods of railroad construction.

The chief difficulty in the way of this great revolution is the waste which conservative railroad men always point out that it would bring to the enormous railroad plants already in operation. In the matter of locomotives alone there are now 30,000 steam engines in the United States in service, and if they only cost \$10,000 each it would mean that some \$300,000,000 worth of machinery would have to be sold as scrap-iron, as they could probably not be adapted to electrical service. It has been estimated that the cost of installation of an electrical plant—conductors, locomotives, motors, and cars—for a single railroad system such as the Pennsylvania would reach \$100,000,000.

It would be much more feasible than some railroad men think to change the plant. Running over an inventory of the items in a steam railroad property of today he finds a great number of the asset of a sort which would not have to be changed—real estate, office and terminal buildings, stations, round and car houses, repair shops, road-bed and appurtenances for its control and protection, passenger and freight car bodies, car-trucks, and many of the locomotives. All mentioned here, except the car-trucks and locomotives and the general repair shops devoted to locomotive work, would continue in uninterrupted use.

This electrician then takes the case of

a railroad running by steam and goes into the details of the cost of changing it. He suggests that as fast as a steam freight locomotive should become superannuated—and the life of such a machine is just so many years—an electric locomotive should be substituted, and thus in time the whole equipment would be changed.

Aside from the enormous advantage of greater speed, there are obvious economies in fuel and repairs. Five pounds of coal in a steam locomotive are now required to do what one and a half pounds will do in a stationary plant. The cost of fuel per horse-power per hour would be brought down to a half cent, and if gas engines were used to still less. The cost of repairs would be enormously reduced, in spite of the greater speed obtained. Track life would lengthen with the gradual elimination of the locomotive, and repairs to a motor are both less costly and less troublesome than to a locomotive. The electric motor runs without intermission, requires little attention, and gives an output far in excess of that demanded of any other machine in hard service. While it may not be asserted that electrical apparatus is invulnerable or that the mighty power which we drive through devious ways finds its pathway always free from obstruction, it is true that correctly designed and well-made electric railroad apparatus is of lasting utility.

**REMARKABLE FOREIGN TRADE** The story of the foreign commerce of 1898 is now complete. Its exports are the largest in our history, its imports the smallest since 1885, although the consuming population is now 33 per cent greater than at that time. As if to emphasize the great work of this greatest year, the month of December made for itself the highest record of exports ever made by any month in our history. The total exports of December were \$137,247,448, and of the full calendar year \$1,254,925,169. Only two earlier calendar years crossed the billion dollar line, that of 1897 having been \$1,099,709,045, and 1896 \$1,005,857,241. The largest record of any month prior to that just ended was that of November 1898, which was \$129,780,014, while only sixteen months in our history ever crossed the one hundred million dollar line in exports.

The imports of the year are as notable as the exports, but for reverse reasons, being the smallest since 1885, although the consuming population is, as above indicated, greater than at that time. They amount to only \$633,664,634, as against \$742,623,893 in 1897. Thus the year shows an increase of more than 150 million dollars in exports and a decrease of more than 100 million dollars in imports, giving by far the largest excess of exports ever known in our commerce.

The total excess of exports of merchandise is \$621,260,535, against \$57,090,914 in 1897, which was the highest record prior to 1898.

It is said that there are about 45,000 bicycles in Denver. The small builder does a thriving business. There are about 125 repair and machine shops where bicycles are built. One concern made 1,200 multiple and single machines.

A partner has authority to execute a chattel mortgage of firm property to secure a firm note, without the knowledge of his copartner.



Get Your Money's Worth

\*\*\* IN A \*\*\*

# Patee Crest.



PATEE CREST, \$35.00.

**Warranted the Best Bicycle in the World for the Money.**

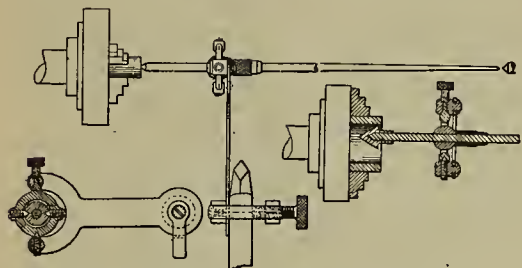
A good, live agent, who is not in business for to-day only, will investigate the merits of this machine before closing a contract for his '99 leader. It always pays a dealer to give his customers their money's worth, whether there is a big profit to him or not. The margin on the Patee Crest is small, but it is "honest money" and a fair compensation, while you can sell three Patee Crests to one of any make, that pays a larger profit. Does this interest you? If it does, drop us a card for agents' prices and a copy of our circular, "Opinions from 100 of the best retail agents in America." Up-to-date dealers don't wait until their neighbors secure all the good lines. They write to-day.

**PATEE BICYCLE CO., = Peoria, Ill.**

## RECENT PATENTS

### Device for Centering Stock in Lathe—Boltless Seat Post Binder—Folding Mud Guard

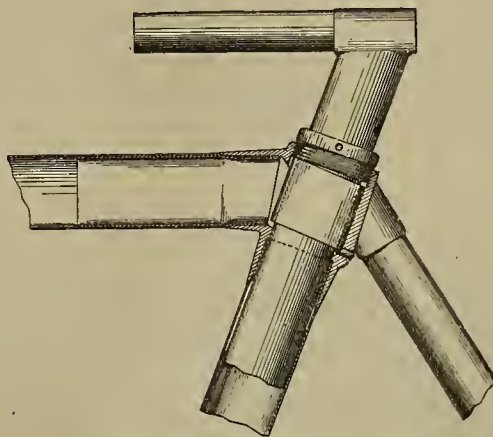
**Center Indicator.**—The object of the instrument is to aid one of the most common difficulties in lathe work, that of centering chucked turning stock. The instrument is hung from an arm adjustably fastened to the cross slide of the lathe. The clamp for this attachment may grip the cutting tool. The forward end of the hanger or yoke is divided and has at the end of each arm a cross journal. These cross journals hold a ring which is pivoted on a vertical axis and made to be tightened against swinging by a thumb screw. At right angles to the axis of the ring another axial line is formed by two pivot points which support a ball. The ball thus constitutes a universal joint which may swing in both vertical and horizontal planes. The ball is equipped with a collar-like projection which clamps a long rod or bar passing through the horizontal center of the ball. If the instrument is to be used for determining when a chucked bar is exactly centered with relation to the lathe spindle the rod point at the universal joint end is placed in the depressed center point in the chucked piece and the center at the long free end of the bar is held on the tail stock center of the lathe. The thumb screw holding the ring at the universal joint is loosened so that the joint may swing freely in both directions. As the chucked piece revolves the eccentricity of its center will cause the adjacent end



of the rod to revolve accordingly and the long end of the rod will revolve in a magnified path. As soon as the machinist by manipulating the chuck brings the center of the work truly to the spindle axial line the rod will cease revolving and remain still in a straight line. It is not necessary, though best, that the ball at the universal joint be set exactly coincident with the axial line of the lathe spindles. When the tool is to be used for centering a chucked annular piece or other work which has a central hole the head end of the rod is supplied with a conical headed thimble and the ring is secured by the thumb screw against movement, thus limiting the motion of the rod to an up and down swing. The conical thimble is permitted to rest against the upper peripheral wall of the hole in the piece to be centered. The counter-poising weight of the long arm of the rod keeps the thimble up to its bearing at the top of the hole and as long as the work remains untrue the eccentricity of the wall of the hole will cause the rod to vibrate in a vertical plane. As soon as the hole becomes concentric the vibrations will cease. The inventor is C. P. Fay, Chicopee, Mass., assignor to the J. Stevens Tool & Arms Co., same place.

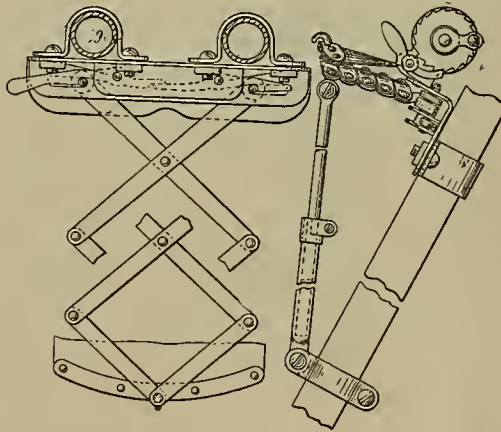
**Seat Post Clamp.**—The clamp, which is that used on Tribune bicycles, consists of but two pieces. The interior of the seat cluster lug is bored out about three-sixteenths of an inch larger than the diame-

ter of the seat post and is internally screw threaded at the top. Near the bottom of the lug a shoulder projects so that below this point the post is hugged snugly. Surrounding the post and resting on the shoulder in the cluster lug is a short



piece of tubing with its ends cut obliquely so that the rear lower edge touches the shoulder while the front upper edge touches an actuating nut which is screwed down into the lug. This tube should fit around the post snugly but lies loosely in the cluster lug. When the nut is screwed down the pressure on the upper front edge of the binding tube causes this tube to press against the seat post in two places—at the upper rear edge and lower front edge. The pressure of the nut will also cause the comparatively thin walls of the tube to give so that the cross section will assume an ovoid shape and the tube will bind on the sides of the seat post as well as at the front and rear. Upon the unscrewing of the nut the binding tube will spring back to its normal position leaving the post loosened for adjustment or removal. A small pin projecting inwardly from the lower rear side of the cluster lug and engaging a notch or hole in the binding tube keeps the latter from turning. The inventor is L. B. Gaylor, Erie, Pa.

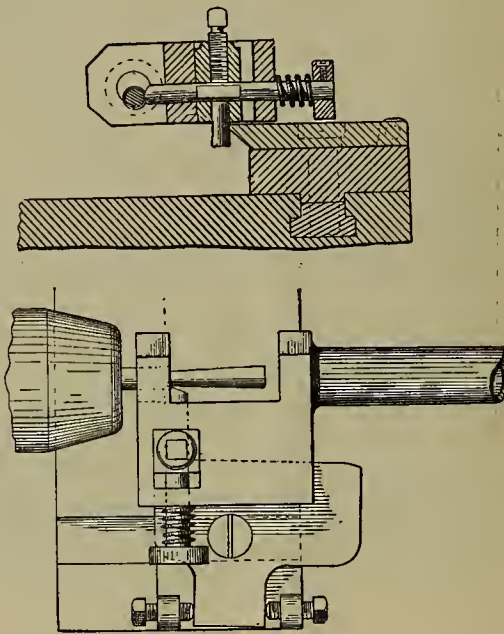
**Folding Mud Guard.**—The guard is composed of flexible material, such as sheet rubber, which may be wound on a small cylinder, reel fashion. This reel is secured to a frame which is mounted on the rear stays of the bicycle frame directly



above the rear wheel. The outer end of the flexible strip is secured to the end of a folding frame comprising crossed and jointed slats like the extension frame used by dentists for supporting an electric drill. The end of this frame is secured to rods which swing on clamping pieces secured lower down on the stay

tubes. When it is desired to extend the guard over the rear tire the latch on the reel ratchet is lifted with one hand and with the other the rider grasps the hook at the end of the guard and pulls it out, the folding frame extending itself correspondingly. The brace rods compel the extended guard to conform to the curvature of the rear wheel. To fold up the guard it is simply necessary to wind up the reel. The whole when folded occupies a space equal to about four cubic inches on the back of the stays. The inventor is R. A. M. Herman, New York.

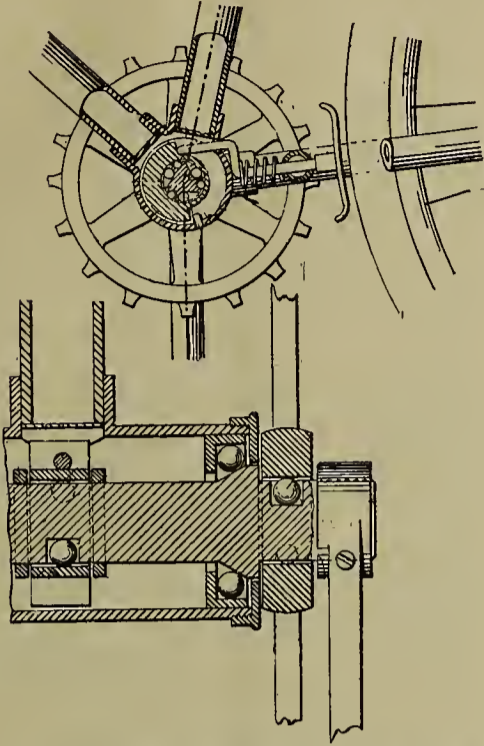
**Screw Machine Attachment.**—The device is for the purpose of turning tapers or irregular forms upon a screw machine automatically. The cutting tool is held in a box mill which is cut away at its head to provide for the reception of the working stock and the cutting tool. The stock passes through a hole in the end of the cut away portion nearest the chuck of the machine. The cutting tool is fastened by means of a set screw in a block which slides in a transverse slot in the mill head. The shank of the tool extends backward beyond the outline of the box mill, and is restrained in its sliding movement by a spring acting between the box mill and the head of the shank. A pin depending from the lower side of the tool block touches the edge of an adjustable forming guide secured by set screws to the cross slide of the lathe. The box mill is held in the machine by its spindle and as the latter is fed along toward the chuck the cutting tool must follow the contour of the forming guide



on the cross slide, as the spring at all times keeps the depending pin against the edge of this guide. By varying the form of the guide any irregular or taper form may be turned without attention from the operator other than that ordinarily necessary in the operation of a screw machine. The inventor is J. P. Brophy of Cleveland, assignor to the Cleveland Machine Screw Co., same place.

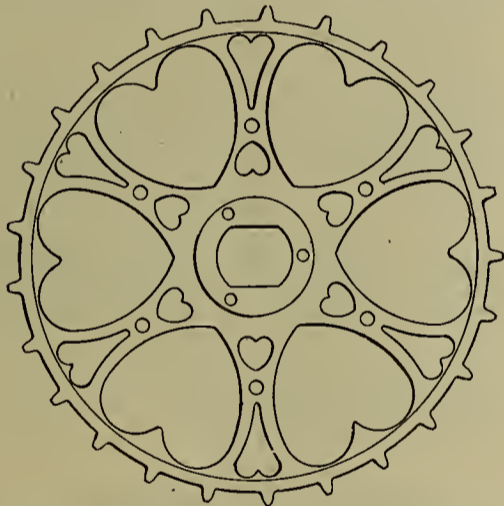
**Back Pedaling Brake.**—The front sprocket is secured to the axle by means of a ball ratchet device so that it will rotate forwardly in unison with the axle, but will run free when the motion of the pedals is reversed. Around the central part of the crank axle is a similar ball ratchet, though reversed in the direction of its operation. This ratchet actuates a collar which carries a cam acting at one end against a limiting pin placed in the hanger bracket, and at the other end against the forward extremity of a horizontal plunger brake rod. When the rider back pedals the internal ratchet catches the collar and turns it with its cam backward, so that the brake rod is pushed toward the rear wheel where an

ordinary spoon brake shoe acts on the tire. A coil spring around the brake rod returns the brake to its normal position



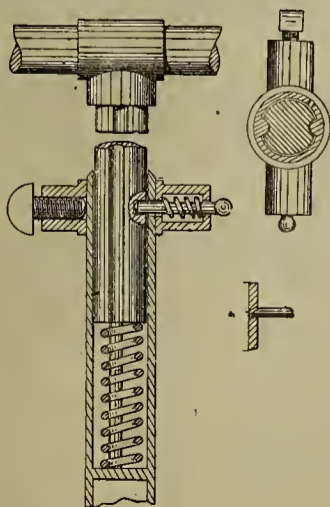
after the rider has ceased to back pedal and has returned to the regular forward pedaling. The inventor is V. E. Doremus, of New York.

**Sprocket Design.**—The principal feature of the design lies in the heart-shaped opens cut in the sprocket plate. This cut-



ting gives spokes wide at their intersection with the hub, narrow at their centers and wide and divided where they join the rim. The design is granted to J. F. Fanning, Chicago.

**Handle Bar Adjustment.**—Working upon the assumption that riders desire to



adjust their handle bars by raising or lowering them in the fork stem, this inventor provides a spring for the auto-

matic raising of the bars when the binding screw has been loosened. The handle bar stem is splined to match feathers on the interior wall of the fork stem and is supported on a spiral spring resting on a partition across the fork stem, so all that is necessary when it is desired to raise the bars is to loosen the binding nut. The spring does the rest. A small spring-operated headed pin is held in a box on the opposite side of the fork stem when the handle bar stem is raised sufficiently slips into a depression in the bar stem. This locking arrangement serves the purpose of limiting the action of the stem-raising spring and preventing it from throwing the bars entirely out of the machine. A modification of the locking pin provides for a beveled end and a beveled engaging depression so that the pin may be pushed out of its locked position by simply pressing down on the handle bars. The inventor is Carl Ehling, Bremen, Germany.

J. A. Reed, Morvin, Ala., is the patentee of a changeable gear driving mechanism comprising two sets of chains and sprockets, one placed on either side of the machine. Both front sprockets run loosely on the crank axle, being mounted on ball bearings. There are on the outer side of each sprocket clutch teeth which may engage corresponding clutches arranged to slide along the axle. An arm extends upward from each of these slidable clutches and the two arms are connected at their upper ends by a cross rod passing above the sprockets. The cross bar is further supported by two stationary arms projecting from the hanger bracket. A lever is pivoted to a lug about midway up the lower tube of the bicycle frame and is secured at its lower end to the cross bar. The upper end of the lever rests in one of the notches in a catch piece secured to the frame tube. By lifting the free end of the lever from the catch and swinging it one way or the other, one clutch piece is freed from its adjacent sprocket and the other made to engage with the clutch teeth on its sprocket. Thus either the high or the low gear sprocket may be made to turn with the crank shaft and drive the bicycle.

Alvin M. Cushing of Springfield, Mass., is impressed with the idea that the only proper way to brake a bicycle is to use the same method as that common among tobogganers, that of pressing a rod into the ground while the machine is in motion, thereby retarding its movement. He consequently gives his impression form in an invention which comprises a hand lever swung from the lower frame bar near the head and reaching a short distance above the top frame bar. Midway of this swinging handpiece is attached a rod which extends obliquely back past the hanger, where it is guided and controlled by a spring. The lower end of this rod is in close proximity to the ground. When the rider desires to operate the brake he pulls back on the hand lever, thus lowering the long rod until it touches and drags on the ground. A simpler scheme for accomplishing the same result is that employed by some of the riders in the hilly portions of Pennsylvania, who, when they approach a descent which is too steep to coast safely, get off and cut down a small sapling or shrub and, tying it to the rear of the frame, drag it after them down the hill.

J. J. Harden, Chicago, is the patentee of a cushion tire in which resiliency is suppositiously obtained by constructing the inner surface of the tire in the form of a series of longitudinal ridges with V-shaped recesses separating them. The tire is detachable and is held on the rim by flanges at the edges which fit into cor-

responding grooves around the sides of the rim. When the tire is in place on the rim the ridges press close to each other, narrowing the sectional area of the V depressions. When any pressure is brought to bear on the face of the tire the ridges immediately underneath will separate, this ease of separation making the tire flexible. At the same time the tire at other places than where the pressure is applied becomes more stable than normally.

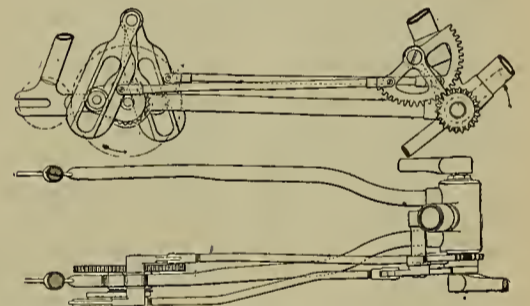
Without tendering the public any exact information concerning the intended usefulness of the invention, K. G. Hiller, Zittau, Germany, patents a canvas cover for inner tubes, this cover to be removable from the outer casing with the tube. It is made in several sections, the ends of which lap each other so that in case of puncture some one section can be pushed back, freeing the rubber surface of the tube sufficiently to allow the repair of the puncture to be made. Whether this casing is supposed to act as the sole retaining jacket of the tire or whether it is to be used on an inner tube fitted into an ordinary casing already supplied with a canvas jacket is not stated by the patentee.

### SEGMENTAL DRIVING GEARS

Designed to Transform Rotary Into Reciprocating Motion for Driving a Bicycle.

The transformation of a continuous rotary motion into a reciprocating movement and the application of the latter to the driving of bicycles is accomplished by J. T. Pederson of New York City by the use of a set of segmental gears and a pair of swinging slotted levers arranged as shown in the illustration.

On the crank axle are secured two half



gears placed side by side with the toothed parts opposite each other. Hung from an axle supported by a light frame projecting from the seat mast are two segmental gears, each having the proper number of teeth to remain in mesh with its corresponding gear on the crank axle for a period equal to one half of a revolution of the latter. Supported above the rear fork tube near the rear end of the frame is an axle from which are pivoted two slotted levers that engage pins on the ends of diametrically opposite cranks attached to the axle of a spur gear driving a pinion that in turn drives a gear on the axle of the rear wheel of the bicycle. Connecting rods join the slotted levers and the segmental gears above the crank hanger. When the teeth of one of the crank axle half pinions are engaging the end teeth of its segmental gear just before separating, the teeth of the other pinion will be engaging the end teeth of the other segmental gear preparatory to giving it a motion equal in duration to a half turn of the crank axle. It will be noticed that in consequence of the gear wheel at the back of the frame moving in the direction indicated by the arrow, the two connecting rods will for the moment move in the same direction. Both sectional gears then move in the same direction as the sectional pinions upon the crank shaft, but the movement in this direction of one of the connecting rods

ceases as soon as its gear passes entirely out of engagement with the driving pinion and is carried in the opposite direction by the movement of the slotted lever, which movement is governed by the cranks attached to the axle of the spur gear driven by the levers. The teeth of the forward sectional gears and pinions are not subjected to heavy concussions or strains which would cause unusual wear because the driving strain is gradually transferred from one gear to the other while the gears are both moving in the same direction as the sectional pinions on the crank shaft.

While the gearing is well designed and combines mechanical principles which are strictly practical, it has the common shortcoming of having more open and unprotected working parts than popular ideas of bicycle mechanisms could tolerate. The gearing is too bulky to be comfortably housed in a gear case, weighs too much to be well liked for use on bicycles, and adds at least an inch to the width of the lower frame of the bicycle and to the tread of the cranks. A better application would be to the slide valve mechanism of a steam engine.

#### To Make Automotive Trucks.

Joseph Leiter has announced that within a week a company will be organized for the operation of auto-trucks in Chicago. The first installment manufactured will be 2,000. The trucks will be operated with compressed air motors and will be built in Chicago. The International Air Power company, which proposes to furnish the motive power for the auto-trucks and compressed air motors in New York and Chicago, was recently incorporated. The capital stock is \$7,000,000. The incorporators are Robert McKenstry, Joseph H. Hoadley, William Knight, Harry Knight of New York, and Edwin F. Glenn of Philadelphia. Mr. Leiter's name does not appear among the incorporators. He, however, owns or controls a majority of the stock. A similar company, known as the New York Auto-Truck company, was also incorporated last Saturday with an authorized capital of \$1,000,000. Richard Croker is at its head. Interested with him are Nathan Straus, Lewis Dixon, Arthur P. Gorman, Joseph H. Hoadley, and Robert McKenstry.

#### German Motor Vehicle Movement.

Every reputable bicycle making concern in Germany is busying itself in motor vehicle construction. Many firms are further ahead in their appreciation of the motorcar than English makers. They have watched French progress carefully, and the moment they touched the point of overproduction in cycles they were prepared to turn to the new work.

#### Motor Vehicles at French Show.

There were 386 stands at the recent French cycle and motor vehicle show held in Paris. Motor vehicles were exhibited in 89 of these, bicycles in 87, tires in 35, motors, materials and tools for automobiles in 20, sporting goods, cycle clothing, etc., in 28, and bicycle parts and sundries in 127.

Some of the French communes have imposed on motor vehicles the same tax that applies to horse drawn vehicles, the rates being as follows: Two-wheeled motor vehicles, \$1.20 per year; three-wheeled, \$1.80 and four-wheeled, \$2.40.

The president of the Bicycle Repairmen's Protective association of Milwaukee has appointed a committee of five to draft a uniform schedule of repair charges.

## LARGE MOTOR VEHICLE DEAL

### ONE THOUSAND FROM EACH FIRM

#### First Reports of Gigantic European Contract for American Vehicles Partially Confirmed.

The preliminary reports of an immensely large order for American motor vehicles of various type and manufacture which were recently published in the daily press throughout the United States, and to which reference has been made in two recent issues of this paper, have been sufficiently confirmed by investigation to place it beyond all doubt that the transaction, while not so incredibly large as first reported, yet constitutes the most important event which has so far marked the development of the American motor vehicle industry.

#### Responsibility Undoubted.

According to the first reports, Count de Jotemps of Paris, president of the American Motor General Agency of Paris, which has a capital of ten million francs, or two million dollars, contracted during a visit to this country with each of the following companies to have delivered one thousand vehicles per year for ten years to the above mentioned Parisian company: The Fischer Equipment Company of Chicago, electric carriages; the Holyoke Motor Works, Holyoke, Mass., gas engine vehicles; the Overman Wheel Company, Chicopee Falls, Mass., gas engine vehicles; the Stanley Company, Newton, Mass., steam engine vehicles.

It was further said that among the stockholders in the Paris company are Albert Geiger, a Boston capitalist, and the Duke of Milton.

Count de Jotemps, it was stated, married a Mrs. Bennett of New Haven, Conn., several years ago, and with his bride acquired an immense fortune.

In regard to the responsibility of the purchasing company no additional direct information has been obtained, but there seems to be little room for doubt on this score. Mr. Geiger, the Boston capitalist, writes upon inquiry that he is not yet a stockholder in any company handling automobiles, but that "it is quite possible that I may take an interest in the business. I leave for Europe to-morrow to determine this proposition."

#### The Correct Figure.

C. E. Woods, the constructor and general manager of the Fischer Equipment Company, states that the contract entered into is not for 1,000 vehicles a year for ten years, but for 1,000 vehicles in all, one hundred to be delivered each year.

The same reduction of the figure probably applies to each of the other companies.

The Stanley brothers, upon inquiry, directly confirm the report as true so far as they are concerned. The Overman company and the Holyoke company do not contradict the report.

From all of this so far, it is pretty certain that the Fischer Equipment company and the Stanley brothers are expecting to make large immediate deliveries of their wagons to the Count de Jotemps' "American Motor General Agency of Paris," that Mr. Geiger has serious thoughts of an investment and that the Victor and Holyoke explosion motor driven wagon makers will be likely to deal with the count's company as soon as they have wagons to deliver.

#### The Moral of the Event.

Now the burning question is, why does the Count de Jotemps come from Paris, the present center of automobile use and construction, and contract for motorcycles

in America, where almost no mechanically driven wagons are in use?

Are we to flatter ourselves that our work is so good for the money, that we already lead the world in motorcycle manufacture? Unquestionably we can build any number of vehicles here which any customer will pay for, and unquestionably the French makers are very slow in making provision for extended automobile manufacture. With, it is said, advance orders covering a year's maximum production, the largest of the French motorcycle producing establishments has only about 600 men in work, and it is possible that this slowness in production of motorcycles at home drove the count to America for a supply of carriages to open his spring trade with in the European capitals.

Whatever the cause of these large contracts for American vehicles, the result is so far extremely gratifying. Undoubtedly the American vehicles will give satisfaction to their purchasers and our motorcycle makers can have the very substantial satisfaction of knowing that if the American public is a little slow in taking up the mechanically propelled wagon, other nations are prompt cash purchasers of American vehicles.

#### Big Order Worries Frenchmen.

The latest French cycling papers discuss at length the \$5,000,000 orders for motor vehicles recently reported to have been placed in Chicago and in the east by Count de Jotemps and throw discredit on the canard, as they call the story. They sneer at the readiness of the Americans to make contracts, but seem to have taken to heart the effectiveness with which American makers of bicycles have in a very few years distanced their European competitors and taken from them even their own home markets, for the papers cautiously say, "Let us not laugh at a people who can make up lost time so quickly. There is nothing impossible in the entering of American motor vehicles on the European markets. Five hundred vehicles a year will not be an extravagant number, so great will be the demand and so prompt the delivery. Perhaps this is the spur that French makers need to make them a little more active. While we hope there is some exaggeration in these figures, yet there must be some truth in them also."

#### Location of Electric Vehicle Co.

The location of the American Electric Vehicle company was inadvertently given in the Chicago cycle show report as Indianapolis. All connection between this company and the Indianapolis firm having been severed, as stated in the published letter from the American Electric Vehicle company, all mail should be addressed to the company's general offices at 1545 Michigan avenue, Chicago.

The Stettin Cycling Club, organized fifteen years ago, is the first wheelmen's club in Germany that has created a special automobile membership. Many of its members own motor bicycles, tricycles and cabs.

Several manufacturers of Bordeaux are building motor cabs for public use in that city. One has completed two such vehicles, and has asked permission to station them in the public thoroughfares.

The municipal council of Vienna has bought a "three-seated tricycle" for use by the firemen, and to be used by the police in urgent cases.

Testimony of general reputation is not admissible to charge a person as a member of a firm.

## We Don't Want a Cent

of your money unless you get value received for it. For that reason we want to show how much better you can do with the every day

# Ariel

You can depend on getting satisfaction for your customer; our lists are popular.

Nine Handsome Models ranging in price from \$40 to \$65 for Chain Wheels; two Models Chainless, \$75; Tandems, \$75 and \$85

The latter price is for our tandem with rear drop and front diamond. Get our catalog, now ready.

**Ariel Cycle Mfg. Company**  
GOSHEN, IND.

THE

# Waverley

## Bicycle for 1899



## Plain Talks on THEY NEVER DISAPPOINT Andrae Cycles

V—Track Racer, Model 42, \$60.

More amateur races have been won on the Andrae than on any other one wheel made.

That's a fact—a recorded fact.

More amateur riders are riding the Andrae than any other wheel.

That's another fact.

But the one, all powerful, money making agency fact, is the fact that the only inducement we offer racing men to ride the Andrae is the wheel itself.

The racing man who usually wins races is smart enough to ride the fastest wheel.

Rigidity and easy draught—Andrae features—are the secrets of speed—and then, Andrae racers weigh only 20½ pounds.

The man who handles the Andrae line of 14 models, can sell the racing models—he needn't give them away.

Many men who do not race ride the Andrae racer, because it runs so easy.

You cannot lose more than a two-cent stamp by writing for our trade prices.

**Julius Andrae & Sons Co.**  
MILWAUKEE, WIS.

Eastern Export Branch: 95 Reade St., New York City.

WE told you last week about the remarkable price the Waverley Bicycle would be sold for in 1899—

# \$40

but there wasn't room to tell you of the quality and improvement in the Waverley itself.

We have been at work on the 1899 model for months, perfecting each detail in the light of past experience, until we know the new Waverley is the best bicycle we have ever built—which is saying much—and are confident it will have few, if any, equals in beauty and satisfaction-giving quality.

The 1899 Waverleys have already been tried and tested during the Autumn months by hundreds of experienced riders, and they say the Waverley is the best and handsomest machine on the market—and they don't make any exceptions.

The Waverley Agency (filled in with our Matchless Ivanhoe line at \$35 and \$25) will be a profitable investment. Write at once.

**INDIANA BICYCLE CO.**  
INDIANAPOLIS, IND.

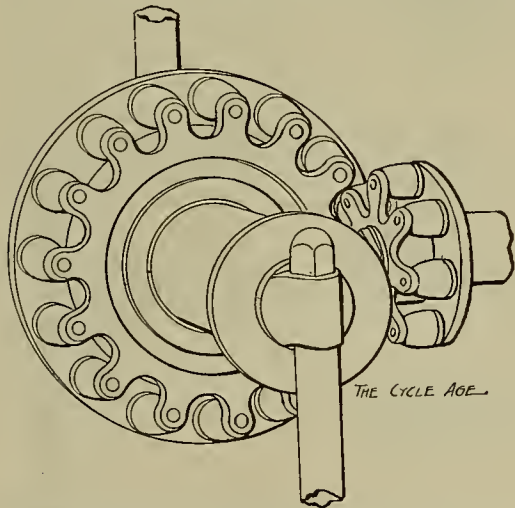
# INFORMATION FOR BUYERS

## THE VICTOR SPIN-ROLLER GEAR.

Until the present season the Overman Wheel company has never been satisfied to place upon the market a substitute for chains on Victor bicycles. One of President Overman's maxims has always been the David Crockett cry: "Be sure you're right, then go ahead," believing this to be better than to be sure you're wrong then stop.

The Victor chainless is constructed with roller gears. The plan is known as the Spin-Roller and is illustrated in the accompanying cut. It consists of two sets of intermeshing, rotary roller teeth, each tooth curving inwardly towards its axis. The rollers are supported at their outer ends by a plate with finger-like projections, which holds the rollers rigidly and prevents them from springing, in the slightest degree, when pressure is placed upon them.

Prof. R. C. Carpenter of Cornell University who made tests has shown the Overman company that the Spin-Roller gear has an efficiency of 97½ percent under heavy load, and that the gear therefore complies with the important requirement of perfect economy of driving power. In order to obviate pulsating sensations in the feet, such as may be caused by spring of the crank hanger if gears intermeshing with line contact are employed, the Spin-Roller is so constructed, that when one roller rolls against another, the working surfaces are in point contact, and for this reason will stand any required degree of deflection. With its simple mechanism the line of pressure is always vertical, upwards at one end of the shaft and downwards at the other. It is stated that the gear is very responsive to the lightest pressure applied to the pedal, that back-lash is extremely small and that no adjustment to take up wear is ever needed. It is unusually durable, entirely protected,



easily taken apart, and in case of accident any part can be quickly replaced at very slight cost. The company expects to show the Spin-Roller with their New York cycle exhibit next week, although machines will not be ready for delivery before March 1.

The Overman Wheel Company this year are making but one Victor model, and are turning out more of this one pattern than ever manufactured before of all patterns combined in any one year. The chainless is to be the same model in all particulars except the Spin-Roller gearing, and this is to be furnished as an option at \$25, making the price of the Victor chainless \$75.

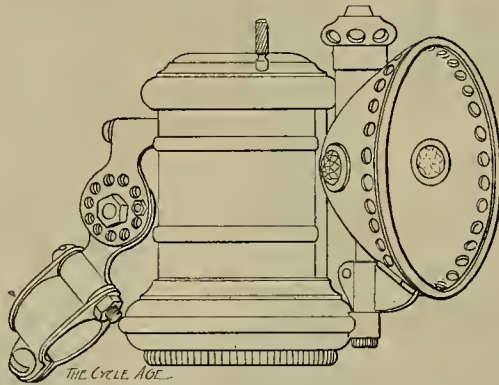
## ARMSTRONG READY REFERENCE SHEET.

The Armstrong Bros. Tool Co., of Chicago, has issued for the benefit and convenience of its customers a large sheet of illustrations showing the many sets of frame fittings made and sold by it. The sheet is in the form of a plain, durable hanger which may be tacked to the wall in some handy place in the repair shop or factory. The illustrations are accurate scale line drawings well marked with all of the specifications and measurements necessary for reference in building up the parts into complete frames. The line of fittings handled by the Armstrong company is large, including several patterns of single machine frames calling for both outside and flush joints and for 28 and 30-inch wheels and for different sizes of tubing and hanger drop. Frame sets for single and double steering tandems and for triplets, quads and quints are also a part of the line. The company is finding a ready sale of its two-piece crank and axle hanger and is also earning popularity with its handle bar attachments for single steering tandems. A very popular set of frame parts are those

for the special track racer with one-inch tubing, 28-inch front and 30-inch rear wheel, and 4½-inch hanger drop.

## THE PAULI ACETYLENE GAS LAMP.

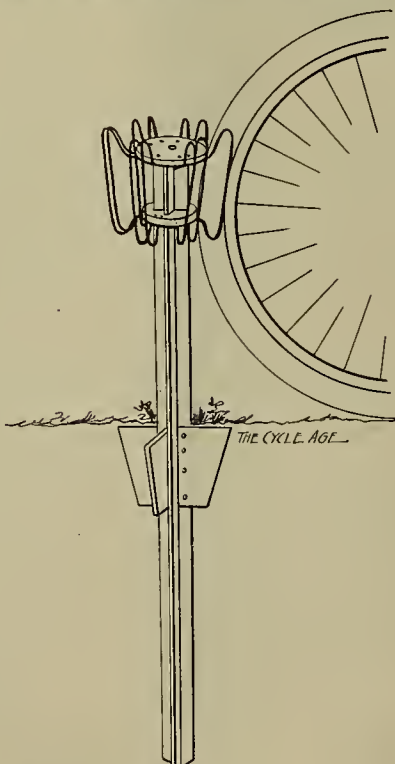
The gas lamp made by the Pauli Lamp Co., 39 Franklin street, Chicago, is automatic in gas generation. It possesses many novel features. It has no screws, no wicks, and only one valve, which is used to keep the water and carbide separated when the lamp is not burning. You open the water valve and leave it open, apply a light to the stack, and the lamp does the rest. It can be



charged in a couple of minutes without removing the lamp from the bicycle. This is a new feature and is of the greatest convenience. It weighs about one pound, is strongly built and mechanically perfect. It has an adjustable swivel bracket which fits any wheel. You can turn your wheel completely over and the lamp remains right side up. While riding, a column of light can be thrown in any direction ahead by shifting the reflector. The packing is an integral portion of the lamp and, while easily replaced, cannot be lost. As the lamp always packs in the same place, the packing is practically indestructible. The tip or burner never carbonizes. It will not blow or jar out under ordinary circumstances. It can be lighted without dismounting by twirling the head of a parlor match just inside the top of the stack.

## LIGHT STANDS FOR LAWN USE.

The production of the bicycle stand for use on lawns, by the Snow Wire Works, of Rochester, N. Y., as here illustrated, is sufficient occasion for a mild sort of surprise that no enterprising manufacturer of specialties or some practical inventor has not



long ago recognized the field of utility for such a device and the opportunity presented for profit in its wide introduction. Everybody who lives in the city has seen bicycles scattered about over the lawns and commons of the park lying flat on the grass or standing against the trees except where

this license is denied by the rules of the park board, and the utility of such a device on private lawns, especially where there are tennis or croquet grounds, in the event of a lawn social or party, is plainly obvious.

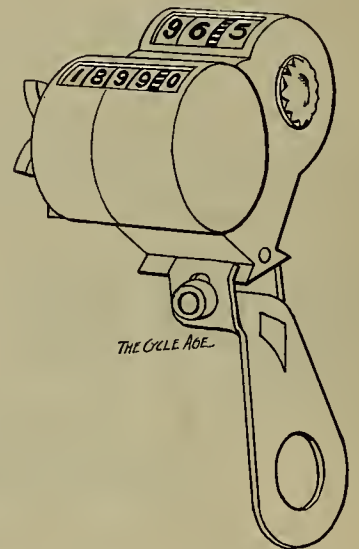
The simplicity of this lawn stand is its chief recommendation. It consists merely of a stout iron post of Y section with three iron plates riveted to the ribs near the middle to anchor it more firmly in the ground. Two circular plates are disposed at the top to hold the wire springs that receive the tire of the rear wheels and hold the machines upright. Each post is designed to hold six or nine bicycles. The entire device is light and unobtrusive, yet it is not liable to breakage or disarrangement. Common appreciation of a "good thing" will make them popular next summer without a doubt.

## THE VEEDER TRIP CYCLOMETER.

The new bicycle mileage recorder gotten out by the Veeder Mfg. Co. of Hartford, Conn., is practically two cyclometers placed side by side. One of them registers up to 10,000 miles and records the total miles traveled, and the figures are of the same size and the mechanism similar to that used in the regular 10,000-mile Veeder cyclometer.

The trip cyclometer is operated from the same mechanism as the total and registers to 100 miles, but can at any time be set back to zero, thus enabling the rider to secure at a glance his daily or hourly mileage. The distance from one town or city to another, or, in fact, the distance from any one spot or place to another, is at once shown without the aid of a pencil and more or less figuring.

To set the trip record to zero all that is necessary is to pull out the knob and turn



the same forward until all the figures become zeros, and then push the knob back into place. When the knob is thus pushed into the case the mechanism is mechanically locked and cannot fail to register or register too much.

All gears are scientifically designed and made with the greatest accuracy, and this, together with the absence of springs, renders the motion of the instrument easy, smooth and uniform. It is no wider than the regular cyclometer and hence is just as free from accidents.

T. H. Cranston & Co., 60 Wabash avenue, Chicago, are western agents for the Veeder cyclometers.

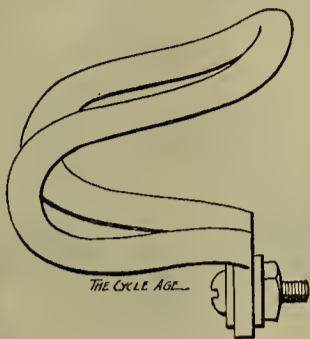
## CLIMAX SPRING WIRE SADDLES.

The Climax wire spring saddle, made by the Climax Mfg. Co., of East Hampton, Conn., has proven so satisfactory in its present form that its maker has not been compelled to make any radical changes in its construction. The saddle, which has been patented in the United States, Canada, Great Britain, France, Spain, Belgium, Italy and Victoria, consists of an endless wire frame covered with a series of spring wire cords secured at each anchorage point in a manner which makes the security of each wire independent of the others, but still renders them all easy of removal should it be desired to replace a worn with a complete new top. The cords are very elastic, conform to the rider and have sufficient elasticity to return to their normal position when the rider dismounts, thus always insuring the same shaped saddle, there being no permanent sag or settling of the top. The wires are covered with a special light ventilated leather top which follows the yielding of

the wire cords under the rider. Three patterns of the saddle are made to suit varying tastes in saddle shapes.

**RUBBER COVERED TOE CLIPS.**

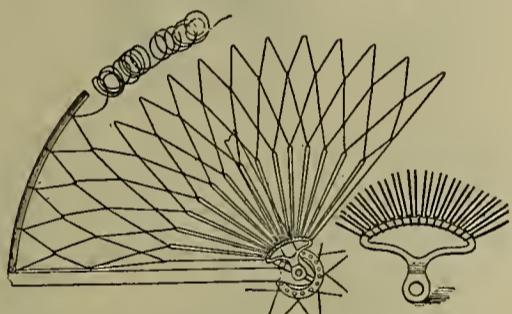
With the double object in view of saving shoe leather and making toe clips more comfortable to tender feet, the White Mfg. Co., of Ithaca, N. Y., is putting out two styles



of clips protected or cushioned with soft rubber. The one here shown is formed of bent spring wire covered with rubber tubing. It is made in two lengths, the ladies' clip being short and broadened somewhat on top. The rubber covering makes it as easy and comfortable to the foot as if no steel entered into its construction. The other style is a flat steel stamped clip bifurcated at the point of the shoe and curving upwardly over the instep. This is simply lined with thin sheet rubber riveted in place. It effectually prevents the usually sharp edges of such clips from chafing the leather of the shoe and also clings to the foot holding it in place without any uncomfortable pressure and rendering the use of side clamps unnecessary.

**TURNER DETACHABLE DRESS GUARD.**

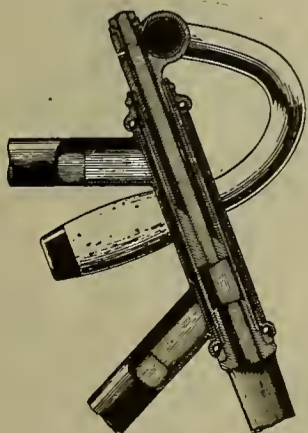
Neat dress guard lacing always adds to the beauty of a lady's bicycle and with view to making it possible for any one to equip machines with tastily laced netting without



having to go to the trouble and expense of slow hand lacing the Ossawan Mills Co., Norwich, Conn., supplies netting in pairs ready laced, leaving only the attachment to the machine for the bicycle assembler to do. Each net is firmly tied to a nickel plated metal bracket bored to fit over the axle of the rear wheel. The work of applying takes but a few minutes it being simply necessary to run the free cord through the eyelets in the guard. The two nets comprising a pair are joined together by a piece of metal so that they need not be separated until needed by the workman. The guards yield to the slight movement of the rear wheel axle in adjusting the chain. Various colors and styles of cords may be had.

**FEATURES OF NATIONAL HANDLE BARS.**

On the fixed handlebars supplied by the National Cycle Mfg. Co., of Bay City, Mich., the one nut on top of the tee controls the



vertical adjustment, while on the adjustable bars the bolt and nut passes through a hollow bolt which controls the sweep of the adjustment. A peculiar and valuable feature

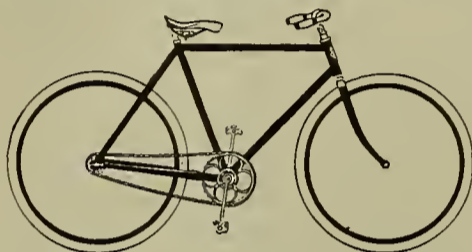
of the adjustable bar is that when the rider desires the drop position the bar is an inch and a half forward of the center; when a raised position is desired the distance back of the center is the same.

**AN ARTISTIC PERPETUAL CALENDAR.**

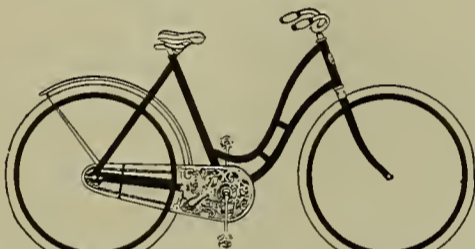
One of the really handsome advertising hangers of the season is the perpetual calendar being sent out by the Standard Varnish Works, of New York, Chicago and London, which makes a complete line of enamels for the bicycle trade. This calendar is in the shape of a cardboard hanger 12 by 19 inches bearing a lithograph in exquisitely delicate colors on stipple paper of a bewitching young woman in stage costume who is caught in the act of tossing four large balls in the air. Each of these balls represents the earth, with different sides showing the continents turned toward the observer, and a section is cut out of the periphery of each exposing letters and figures underneath which designate the month, day of the week and date of month. Revolving these discs upon their central eyelets brings new figures and words into view successively. In four languages the poster announces that these are the largest varnish works in the world.

**SIX THOMAS MODELS.**

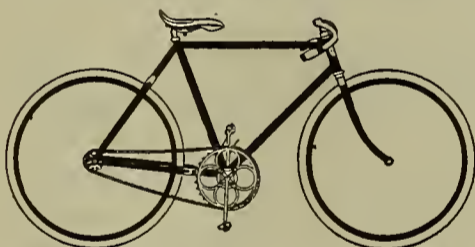
The six models comprising the line of the Thomas Mfg. Co., of Springfield, O., have flush joints throughout and are fitted with



Model 27—Roadster. Weight, 21 lbs. Price, \$50.



Model 28—Ladies'. Weight, 26 lbs. Price, \$50.



Model 29—Road racer. Weight 23 lbs. Price, \$75.

two-piece crank and axle groups. Both of the ladies' models have double curved front frames and chain guards which extend entirely around both sprockets. The guards have ornamental aluminum side panels. Model 29, the \$75 road racer, has a frame of the three-crown pattern. The hanger is of the eccentric type, allowing a drop of from 2 to 3 1/4 inches, with a corresponding variance in frame height. The hubs are disk adjusting and so made that the wheels may be removed from the frame without disturbing the adjustment of the bearings. Kelly or reversible, ram's-horn handle bars are supplied. The \$60 road racer, Model 22, also has disk adjusting hubs, but the hanger is not fitted with the eccentric device. The drop is 3 inches. The head is one-piece, electrically welded and the rear forks and stays are of continuous taper gauge stock. Wheeler and Sager are the regular saddles fitted, and the tire options on the various models include Morgan & Wright, Kokomo, Chase, Hartford, Dunlop, Goodrich and Palmer tires. Black, wine, brown, green and orange are among the finishes offered.

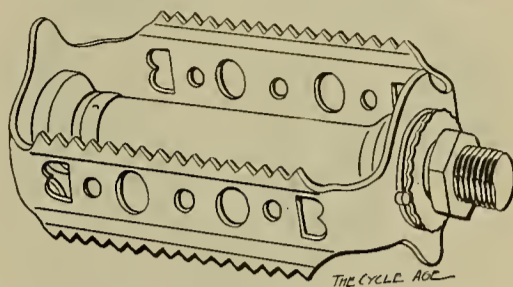
**CAN FILL ORDERS FOR SPAULDING PARTS.**

John R. Keim, who purchased the realty and the entire plant hitherto operated by the Spaulding Machine Screw Co., at Kensington Station, Buffalo, N. Y., will continue to manufacture frame sets complete, hubs, pedals, seat post clusters, etc., under his personal supervision. The plant is replete with the most modern and most effective machinery and is splendidly equipped to manufacture the best product at minimum cost. A new catalogue is in

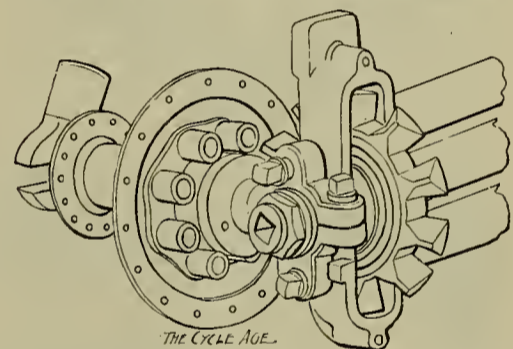
the press and will be distributed at an early date. Mr. Keim is now fully prepared to quote prices, submit samples and receive orders, and gives assurance that in all instances orders will be completed at the time agreed upon.

**IVEN-BRANDENBURG FITTINGS.**

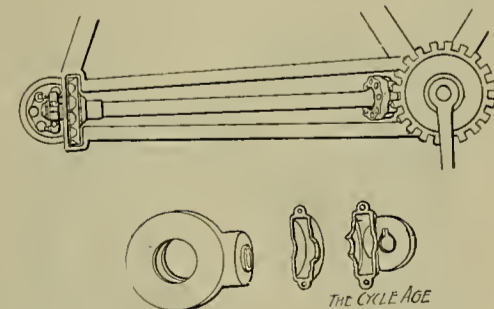
In its latest catalogue the Iven-Brandenburg Co., of Chicago, is showing several new things in the line of fittings and material for which it is United States selling agent.



The well known Thor parts comprise four patterns of hubs and two styles of hangers. Both hangers have the Thor two-piece mechanism, but one is fitted in an eccentric bracket which is distinctive among its kind by reason of the absence of unsightly outside lugs for the clamping of the eccentric. In the Thor perfection hub uniform wear entirely around the cone is aimed at by making the cone of such form that it can screw into the hub barrel and revolve with it. The cup is on the axle. Forged crank brackets accurately machined by the Aurora Automatic Machinery Co., are offered in several patterns, there being brackets for 28 and 30-inch wheeled machines outside and flush joints, and for regular and three-crown frames. Brandenburg pedals are catalogued in several patterns, in some of which, as in that here illustrated, the oiling is done through a hole in the barrel, this hole being closed by a thin spring ring. Thor head fittings and specialties, Sager saddles, Tucker V section wood rims and guards of



same make, Morse-Keefe spokes and nipples and Lefever chains complete the line, with the exception of the Sager roller gear which is also controlled by this firm. The Sager gear is now sold in complete sets, including the gears and pinions, and boxes and rear end frame fittings to match. Either the gears alone or the complete set of fittings may be purchased. Gear cases will be supplied if desired, though it is one of the prominent merits claimed for the gear that its action tends to throw out dirt rather than collect it. The machines used by the colored rider, Major Taylor, in his successful trials against time at Philadelphia, were not fitted with cases, the gears running entirely open. The Iven-Brandenburg Co. also sells the Her-



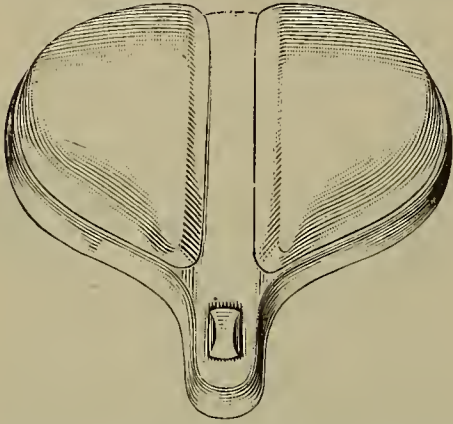
tel motor vehicle which was described in the previous issue of Cycle Age.

**SPALDING CYCLES AND PRICES.**

The Spalding line of bicycles consists of five different models. The chainless has a 22-inch frame, is finished in black enamel, with fine white striping, and has black rims and red band center. The 24-inch chainless is finished in blue enamel, white striped, has blue rims and red band center. These machines are handsome in design and possess many points of mechanical detail which simplify their con-

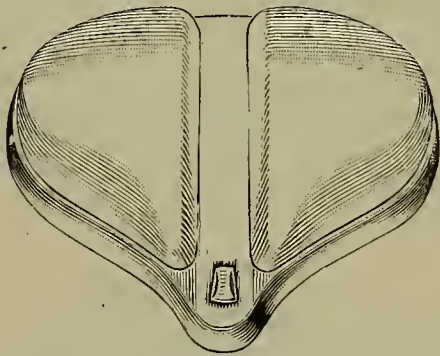
struction and will appeal strongly to the mechanical mind.

The ladies' chainless has a 22-inch frame, and is finished in two styles, one in black enamel, white striping, with guards to match, and rims black with red band center; the other finished in blue enamel, white striped, with guards to match, and rims finished in blue with red band center. The

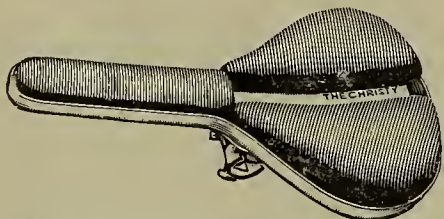


ladies' chainless embodies the same mechanical features found in the men's model. The lines of the frame have been carefully studied, and while exceedingly graceful, afford ample room for free and easy action in riding, and convenience in mounting and dismounting.

There are two models of the Red Head racer, one having a 20-inch frame, the other

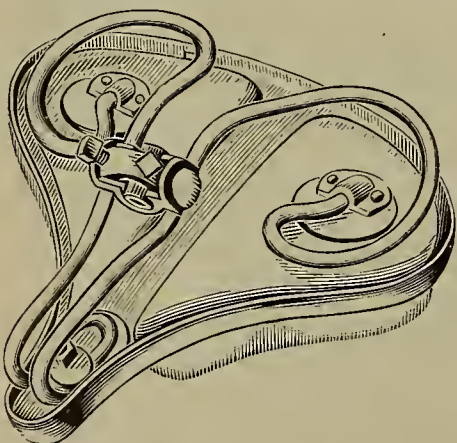


a 22-inch frame. Finish is the same in both models, consisting of blue enameled frame and forks, with red head and fork crowns, blue rims with red band center. The Spalding racer embraces many new features not found in previous models. Every part of its mechanism has been improved wherever possible, and it is said by the maker to be



the best chain bicycle it has ever produced, and in quality and excellence leaves nothing to be desired. The new special finish on this machine is distinctively Spalding, and will appeal strongly to the class of riders who favor this type of machine for road use.

Two models of the Spalding roadster are also offered both in the 22-inch frame, one



finished in black enamel, with black rims and red band center; the other finished in blue enamel, white striped, with blue rims and red band center. This machine is especially constructed as the company's leader for the general trade. In lines and general appearance it resembles the Spalding racer, and all of the parts and fittings re-

ceive the same care and attention as the corresponding parts in the other machines.

The ladies' roadster is made in two models, both in 22-inch frame, one finished in maroon enamel, white striped, with rims and guards to match; the other in blue, with black rims and red band center. This machine is the counterpart of the roadster in quality and workmanship; in mechanical detail the machine has been improved and represents the latest and best in everything that goes to make a ladies' ideal mount.

Sprockets are furnished in the following sizes: 20, 22, 24, 25, or 26 teeth, front; 7, 8, 9, or 10, rear.

The tire equipment consists of the Kangaroo, Goodrich, Hartford, or League, with an additional option of the Palmer tires on the chainless and racer.

Eight different styles of handlebars are given as options, including two adjustable bars.

All models, with the exception of the racer, have 2 1/2 inches drop at crank hanger; racer has 3 inches drop.

Christy saddles will be the regular equipment, with options of other standard makes. The five Christy models give a variation in size and width sufficient to satisfy all demands.

No. 1 is of medium size, with seat 8 1/4 inches wide; No. 2 is of large size, having a seat 9 inches broad; No. 3 is small, being only 7 1/2 inches wide. These are the men's saddles, while Nos. 8 and 9 are for women, the former being the small size with a seat 7 1/2 inches broad, and the latter the large size, two inches wider.

The Christy racing saddle is made with an extra long pommel, to enable the rider to get more "purchase" when sprinting, and is ridden by many of the leading racing men.

The form and method of the coil spring is shown in the last illustration.

**FILLS BUNKER SADDLE ORDERS PROMPTLY.**

In its new five-story brick factory at 65 Milwaukee avenue, Chicago, the Bunker Saddle Co. has ample room for the carrying of a large stock of made-up goods and facilities for making up goods rapidly to fill special and contract orders. Promptness in filling orders and careful attention to details of shipping are characteristic of the methods that have won success for the Bunker line of saddles, belts, tool-bags and similar specialties. Employing only skilled workmen in all branches of its factory, the Bunker company has perfect confidence in the quality of its productions and invites comparison of its popular Rubber Neck saddles with others of domestic or foreign make. The latest design of this saddle is the Rubber Neck Special, suitable for both ladies and gentlemen riders. The soft rubber honeycomb cushion which constitutes the distinctive feature of all Rubber Neck saddles, is molded for the Special with a raised portion on either side and a longitudinal depression in the center after the type of padded hygienic saddles marketed the past year or two. The special is two inches broader than it is long, giving a comfortable seat while riding, yet the surface contour is such that there is no tendency to shift around on the saddle under the jolts incident to car tracks or rough roads.

**CREATED A WRONG IMPRESSION.**

As the recently published decision of the court in the patent suit of the Bridgeport Brass Co. vs. Edward Miller & Co., in which the validity of five of the claims on the Searchlight lamp was sustained, was liable to create an impression that Miller & Co. would be enjoined from using the Searchlight improvements and their customers held liable for possible damages for past sales, the Bridgeport Brass Co. explains that a satisfactory adjustment of profits and damages between the two litigants has been made. Miller & Co. have taken an unrestricted license under all the five Bridgeport patents authorizing them to make and sell bicycle lamps containing each of the improvements embraced therein and their customers are exonerated from past damages and future liability for sales of lamps embodying these features of the Searchlight.

**MAKES TIRE PUMPING EASIER.**

The No. 3 coupling for hand pumps made by the Buescher Mfg. Co. of Elkhart, Ind., is reported to be meeting with a large amount of approval and seems likely to become very popular this year because it saves the time and trouble of screwing the connection into the valve end. It is an instantaneous and effective means of making the connection between pump and tire.

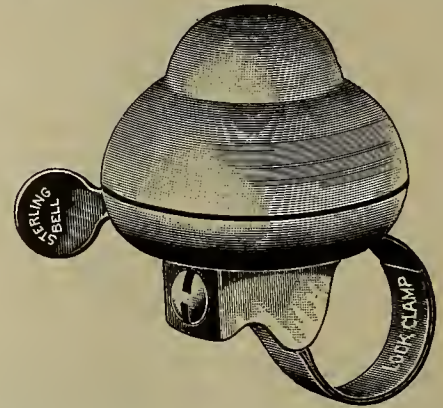
**WHEELER SADDLE PRICES.**

In the Chicago cycle show report in last week's issue of Cycle Age the weights and prices of the Wheeler saddle models on exhibition were wrongly given. The Wheeler Saddle Co., of Detroit, Mich., announces them as follows: Men's Extra, list price \$3.50,

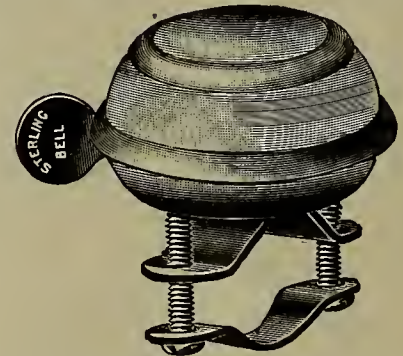
weight 15 ounces; Women's Extra, coil springs, list price \$4, weight 23 ounces; Men's Special, list price \$3.50, weight 14 ounces; Men's Cork Top racer, list price \$3.50, weight 14 ounces.

**STERLING AND DAISY BELLS.**

After ten years of experience in the production of nothing but bells the N. H. Hill Brass Co., of East Hampton, Conn., con-



siders that it is not out of place to invite the confidence of the trade in its complete line of bicycle bells, all of which are manufactured by this company from the raw material at a consequent saving of cost to the dealer and purchaser. All of these bells are cast from the pure bell metal and are warranted to give satisfaction in every



way, the makers claiming that for excellence of castings and finish of workmanship, clearness and resonance of tone its bells cannot be excelled.

The Sterling bells are made in fifteen styles, having the double, quadruple, electric and rotary electric stroke, and are made in plain and beaded patterns and fitted with



screw and lock clamps. In the first illustration herewith presented is shown the dome pattern bell having the rotary electric movement and the lock clamp. Another form called "Our Beauty" is shown in the second cut. It is similar to the other except in shape of the gong and the bead-



ed edge. This one is shown attached to the screw clamp. The "Fleur de Lis" is a more ornate bell of the same type. All of these are made in five sizes, from 1 1/4 to 2 3/4 inches in diameter of gong and fully nickeled. The fourth cut represents the "Continuous Ringing" electric movement bell. It is made in but one size, 2 3/8 inches in diameter. The Trinity Chimes quadruple stroke alarm is



also a product of the Hill factory. The Daisy line of bells is similar in form, stroke and clamping means, but lists at cheaper prices and has steel bases instead of brass bases such as the Sterlings have. All of the bells of both lines are nickel plated and have interchangeable parts.

**CHOICE SELECTION OF SPECIALTIES.**

H. W. Coolidge & Co., manufacturers' agents, at 135 East Lake street, Chicago, have added the Bundy acetylene lamp to their line. This lamp is made by the Frank E. Bundy Lamp Co. of Elmira, N. Y., and is a new lamp which has been introduced on the market on the strength of its superior special construction and the confidence in its selling qualities which its construction inspired. It has been previously described in this paper. Among the other specialties handled by the Coolidge firm are the Kokomo Rubber company's pneumatic tires, Defender, Special, Oxford, and Cloverleaf, Newark Special saddles which, by their exceptionally neat appearance, aluminum base and light weight, have quickly been brought into prominence among low priced saddles, and Oak saddles which are constructed on the popular English Brooks pattern, with option of plain or hygienic top.

**FERRACUTE PRESSES FOR HEAVY WORK.**

A special circular has just been issued by the Ferracuta Machine Co. of Bridgeport, N. J., illustrating and describing the various styles of machine presses which it builds. This will be followed a little later by a complete catalogue of 300 different kinds and sizes of such machines. Its latest designed presses are heavy, massive and accurate machines designed especially for the heavy work required in the regular bicycle factory. The straight-sided or "D" presses are used for cuttings of all kinds, while the punching presses are used for cutting out various parts and for trimming drop forgings. The company makes six to eight sizes of each style and builds the presses either single or double action and with or without gearing.

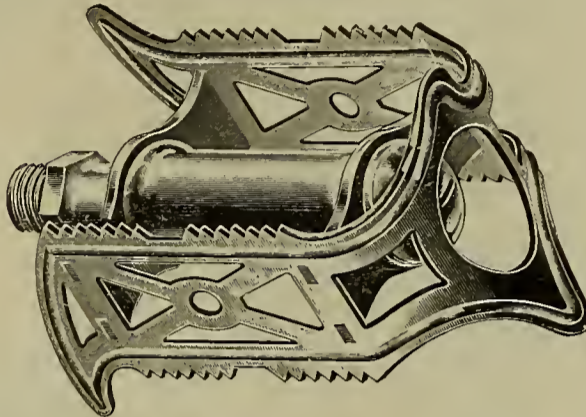
During the three or four years of the boom in the bicycle business the Ferracuta works were run almost entirely on presses for the above line of goods, and the company is still furnishing large numbers of presses to the various bicycle manufacturers over the country, and has recently put in several outfits for making saddles, pedals, toe clips, lamps and other bicycle accesso-

ries and is furnishing a number of presses for the regular bicycle business among its customers who find the Ferracuta presses well adapted for this heavy class of work.

Machinery made by the Ferracuta company is found in most of the large bicycle factories throughout the country and its presses are being constantly sent abroad, a large trade having been secured in England, France and Germany.

**THE KENSINGTON PEDAL.**

The pedal shown in the accompanying illustration is to be placed in the market this season by John R. Keim, successor to the Spaulding Machine Screw Co. of Buffalo. Especial attention is called to the side plates which are made from 18 gauge bright stock



and are strengthened with deep corrugations on the upper and lower edges as shown. The pins and bearings are carefully made and adjusted and the dust cap covering the outer bearing is threaded and fits tightly over the threaded end of the pedal barrel. The manufacture and sale of these pedals and of a full line of bicycle parts are to be pushed throughout the season.

**THE HEARSEY SOUVENIR.**

The H. T. Hearsey Cycle Co., 216 Penn street, Indianapolis, acting as Indiana distributor for the Crescent bicycles, is sending to its trade handsome souvenir calendars, the decorative feature of which is a half tone illustration of three girls on Crescent juve-

nile cycles coasting with interlocked arms down a hill. The picture is well known and is recognized as a very fitting advertisement for the Hearsey company's business, because the original maidens who posed for the picture are Mr. Hearsey's own children. Besides the calendar the company is advertising its bicycle business through the medium of a six-page folder, illustrating the several models of Crescent machines.

**STRAIGHT AND LATTA HANGER SETS.**

The Straight Mfg. Co., of Jamestown, N. Y., manufacturer of crank sets solely, is continuing to offer for this season its well known Straight two-piece set, with improved construction, now known as Model 2. The stability and simplicity of this set has commended its widespread use and it will be found on a large percentage of the medium grade bicycles manufactured by the better class of bicycle makers.

Cranks are furnished in 6½-inch for women's bicycles and 7-inch for men's; sprockets in 20, 22, 24, 26 and 28-tooth sizes, for 3-16 inch chains unless otherwise specified.

The Straight company has added to its line this season its Latta set, a two-piece crank construction invented by E. G. Latta, one of the pioneers in the bicycle industry. The left crank is integral with the axle, which is tapered and flattened on opposite sides at its extremity, and is left threaded adjacent to the tapered end. The right crank is broached through on a taper corresponding to the axle end, and a recess is milled on the inner face of the crank at right angles to the broached hole, leaving a flange all about the face except on that portion adjacent to the carrier boss, where it is open. The sprocket has an internally threaded bushing or hub, by which it is screwed on the axle, and on its outer end is a rim or shoulder adapted to enter the recess in the right crank, in which it will freely rotate.

To assemble the set, it is merely necessary to slip the right crank down over the shoulder of the sprocket hub, and screw the sprocket on the axle. The sprocket will draw the right crank on after it and force the crank to its seat on the axle end. A heavy, taper headed bolt passing through the sprocket screws into the carrier and holds the parts rigidly together. The carrier bolt hole in the sprocket is reamed on a taper to fit the bolt head, thus obtaining a large bearing surface together with compensation for any wear. To take the set apart it is only necessary to remove the carrier bolt

**LABOR-SAVERS**



We all know what tight bearings mean inside the wheel—how about them outside? **The point of contact between tire and ground is just as much a bearing as the point of contact between axle and balls.** In the inside bearing we increase or lessen friction by moving the cone—in the outside bearing, by changing the tire.

Tires made of cheap rubber and fabric increase the friction of riding, run heavily, waste driving power.

**Tires made of fine rubber and fabric—LEAGUE TIRES—cut down the friction, run easily, save labor.**

Your customers are bright men and women; they believe in labor-saving devices—find it pays to use them. What's good for them to buy is good for you to sell. Specify "get there and get back" tires on your wheels.

**LEAGUEKIT**

Only repair tool making both cement repair and plug repair. Simple, quick, certain. The Century Record Holder, John H. Nobre, pronounces it the best kit he ever used.

- New York..... 25 Park Place.
- Boston..... 24 Summer Street.
- Philadelphia..... 308 Chestnut Street.
- St. Louis..... 210 No. 12th Street.
- San Francisco..... 509-511 Market Street.

**WESTERN DISTRIBUTING AGENTS.**

A. G. Spalding & Bros., 147 149 Wabash Ave., Chicago

**NEW ENGLAND DISTRIBUTING AGENTS.**

Geo. F. Kehew & Co., 129 Pearl St., Boston.

**NEW YORK BELTING & PACKING CO. LTD**

Mention The Cycle Age

and back pedal, when the right crank and sprocket will drop off.

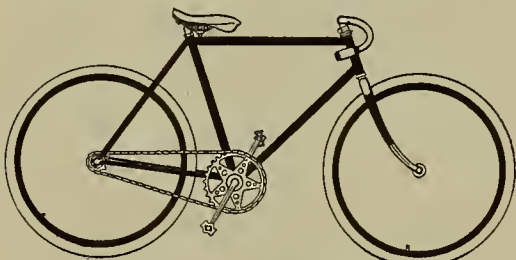
Cranks for the Latta set are furnished in 6½-inch and 7-inch for men, and 6½-inch for women; sprockets in 20, 22, 24, 26 and 28-tooth sizes for 3-16-inch chains unless otherwise specified.

The cranks for both sets are made from high grade steel, and every crank is individually hardened. Drawing is done by pyrometer.

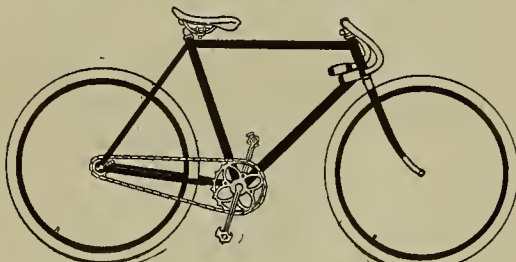
The sprockets for the No. 2 set are high class drop forgings. Those for the Latta set are the well known Parish & Bingham make. No castings or malleables of any sort are used. The factory capacity is 1,000 sets a day, and all inquiries should be addressed to the Geo. L. Thompson Mfg. Co., of Chicago, which is general agent for the manufacturers. No sets sold at retail from the factory.

**ARCADE FILE WORKS' ELK BICYCLES.**

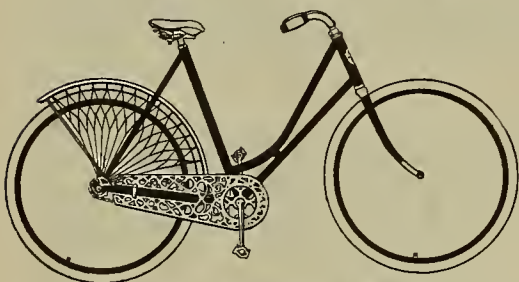
The Arcade File Works of Anderson, Ind., last fall began preparations, among which was the erection of a new factory building, for the manufacture of bicycles. Its line, which is now completed and models of which are ready for delivery, comprises six patterns of Elk cycles selling at \$25, \$40 and \$50. Models 10 and 11, the men's and wo-



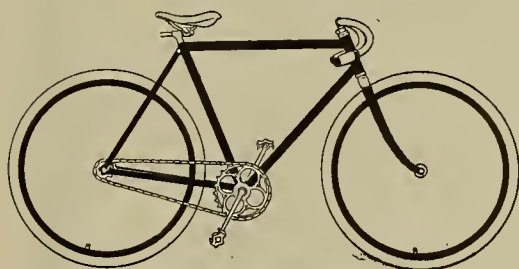
Model 10—Men's roadster. Price, \$50.



Model 20—Men's scorchers. Price, \$40



Model 21—Ladies'. Price, \$40.



Model 30—Men's roadster. Price, \$25.

men's patterns of the \$50 machines, have popular lines, flush joints and Fauber hangers. Black is the regular finish, but an option is allowed of maroon or Empire green enamel. Hartford, Morgan & Wright or Dunlop tires are fitted. The \$40 patterns, Nos. 20 and 21, have flush joints, two-piece hanger groups, and are fitted with Kokomo tires. Models 30 and 31 are similar in appearance to the \$40 patterns, but are offered with a smaller range of options.

**PEERLES MODELS AND CONSTRUCTION.**

The Peerless Mfg. Co., of Cleveland, has issued a complete illustrated catalogue in which the several Peerless and Triumph bicycles are fully described. The mechanical construction which has won prominence for the Peerless is clearly shown so that even the uninitiated may grasp the ideas presented. The Mather hub for straight tangent spokes is now fitted to all Peerless models, and the well known Peerless tubular fork crown and the Peerless reversible seat post are retained as valuable features of the machines. All models are built with 30-inch

wheels if desired. A single or double steering double diamond tandem and a graceful combination tandem complete a line from which almost any customer could select a mount that would satisfy him.

**CLEVELAND'S NEW ROLLER SKATING RINK.**

A company composed of well known citizens of Cleveland, Ohio, have secured for a roller skating rink the Cleveland Grays' armory. The building has been furnished with a new maple floor and is without question the finest rink in the country. It is furnished with 600 pair of Henley's celebrated roller skates, and was opened last Monday evening with a full military band in attendance. Cleveland has always been a popular city for roller skating and this enterprise will undoubtedly prove a complete financial success.

**PIERCE LINE ON EXHIBITION.**

The Pierce bicycles, manufactured by the George N. Pierce Co., of Buffalo, N. Y., will be exhibited at the New York cycle show in sections 60, 61 and 62. The exhibit will consist of their entire line, including the chainless at \$75, cushion frame at \$65 and \$50, racers at \$50 and \$60, tandems, both double diamond and combination, at \$85, and their regular chain models at \$40 and \$50. This company's eastern manager, S. J. Thompson, will be in charge, assisted by the managers of the various branch stores. The cushion frame machine has sprung into great popularity in the metropolis and will be one of the interesting features of the exhibit.

**ORIGINAL IDEAS IN CATALOGUE MAKING.**

Several original and unique features are embodied in the make-up of the recently issued catalogue of the National Sewing Machine Co. of Belvidere, Ill. It is so designed that when the catalogue is folded to go in the pocket the creases in the paper will not cross the half tone illustrations of the various models and spoil their appearance. The ladies' and men's machines of each model appear side by side for ready comparison. The specifications and constructional details are also presented in a more than ordinarily striking manner.

**TYPOGRAPHICAL MISTAKE IN PRICE.**

The advertisement of the Cycle Syndicate, 320 Broadway, New York City, in last week's issue of Cycle Age stated that the syndicate would accept orders for its fire and water proof calcium carbide storage tank and 50 pounds of "Acetalite" deodorized carbide for \$2.50. As will be readily understood this price was much too low and was due to a typographical error. The correct price for the tank and 50 pounds of "Acetalite" is \$12.50.

**WANTS AGENTS EVERYWHERE.**

"Wheel Wisdom" is the title of an eight-page booklet which the Remington Arms Co., of Ilion, N. Y., is sending out to the trade to call attention to the Remington line and distinctive parts, such as the non-stretchable, detachable link chain and double tooth sprocket, one-piece crank and shaft, boltless seat post locking device, etc. This company is seeking to secure a live, reliable agent in every town in the United States.

**DIETZ WALL HANGERS.**

A six-color lithograph hanger is being sent to the trade by the R. E. Dietz Co., of New York, makers of the Dietz bicycle lamps. The design is an amplification of the well known Dietz advertising design, while on the reverse side are printed ten letters from prominent firms and persons testifying to the satisfaction derived from the sale and use of the Dietz lamps.

**CORRESPONDENCE WITH MAKERS SOLICITED.**

L. D. Munger and Fred S. Dickinson are operating as manufacturers' agents in the Mail and Express building, 203 Broadway, New York City. They are desirous of handling bicycles and materials in the east and have room in their line for goods of all descriptions, in which export trade can be secured.

**Egyptian Trade Requirements.**

Houses intending to send circulars to Egypt should print them in French or Italian, as these are the languages most commonly known to importers. It is also necessary to use the weights and measures of the metric system and have price quotations made in terms of the Egyptian tariff piaster, of which 100 are equivalent to \$4.94 of our money. There is a considerable importation of American small machine tools.

# You Can Count Them on your Fingers

We refer to the high class Bicycle Makers who are not equipping our Saddle.



It has been said that a certain well-known tire "Marked the high-grade wheel," and with due apology to that company, we wish to say that the same is most emphatically true of

...THE....

# Hollenbeck

## Rawhide Saddle

Mr. Dealer: Kick hard and you will get them.

# Hollenbeck Saddle Company

Makers, - SYRACUSE, N. Y.

New York Cycle Show, Stand 94, Main Floor

**Progressive  
Agents  
Are  
Barnes  
Agents**

**T**HE reason is simple. A great part of the feat is performed in getting the sale of a wheel possessing abundance of style and superior quality.

It has evidently been whispered around a little that the Barnes line for 1899 is better than ever before, for new applications are coming in fast, and nearly all former agents are with us for another year.

Let us hear from you.

**The Barnes Cycle Company**  
Syracuse, N. Y.

Mention The Cycle Age

# Everything for Bicycle Builders and Dealers

We are Western Agents for the following:

Aurora Automatic Machine Screw Co.

G. L. Thompson Mfg. Co.

Chicago Handle Bar Co.

Bevin Bros. Mfg. Co.

India Rubber Co.

Excelsior Needle Co.

Brown & Wales

Winona Wood Rim Co.

Edw. Miller Mfg. Co.

Butterfield & Co.

Write for our  
'99 Catalogue and Prices.

Established 1876.

## Excelsior Supply Co., Chicago

## CYCLING IN FLORIDA

### A Sportman's Paradise Where Cycling is Limited to Sea Shore and Cycle Paths.

About fifty miles down the coast from St. Augustine, the Halifax river becomes a charming series of landlocked salt water sounds, which bound the east coast of Florida for more than 175 miles, affording an inside passage through the tranquil stretches of the Indian River, St. Lucie Sound and Lake Worth, and it is near the head of this river where Ormond, the delight of Northern tourists, and the first prominent winter resort south of St. Augustine, is situated. Nothing can be seen of its beauties from the railroad station; a sandy waste is indeed labelled Or-

mond run back to Ormond was made comfortably at about an eight-mile gait.

#### Little Chance for Cyclist

Investigation proved that there was very little cycling at this point outside of the beach, and, as Daytona lay six miles down the river and was connected with Ormond by an excellent cycle path, the scribe was soon speeding over its rolling surface, now through a grove of palmettos, again startling a flock of wild ducks or crossing a little bayou in which the 'gator and the mud turtle sunned them-

fruit in the world can compare with it for sweetness and lusciousness of pulp. The East Coast train backs down a little spur to the river, and your correspondent mounted his wheel just as the afternoon sun was beginning to cast long shadows and to lose its fervor. The road, of coquina shell rock, wound along the picturesque bank of the river, overshadowed by tall palmettos. Its hard surface did not last long, however, so the rider soon took to the path, and, passing through an open gate, rode through an orange grove until the end of the path showed a sloping rock on which he stood and regaled the sense of sight with the beautiful expanse of the Indian river, on which wild duck were swimming, while mullet were leaping. In the distance lay Merritt's Island, famous for its orange groves and its immunity from frost.

#### Sportsman's Paradise.

There is, as yet, very little opportunity for the wheel at Rockledge, but the road is building to Coquina, three miles south,



mond Golf Club, but to no one except the enthusiasts of this game could it appear attractive. A good shell road, however, leads from the station to the river, and the road across the bridge brought your correspondent to the hotel nestling among the pines on the banks of the Halifax.

#### Photographs a Wreck.

It was a warm, bright day, and to get the full benefit of the sea breeze, your correspondent continued a half mile further to the coast, and was soon enjoying a good dinner at the Hotel Coquina, whose broad verandas extend over the beach. The tide was out, the sand hard and level and the wind blowing hard from the South. Two miles down the coast could be seen the dismantled form of a wreck, and to investigate this, as well as to test the power of the wind on the return, the writer struggled down the beach in a series of short tacks, the fine dry sand blowing like sheets of snow against the wheel. The wreck proved to be that of a large coasting schooner, the "Nathan E. Cobb," and after photographing it and the shore, the wheel was turned to the north and the slight impetus given it as your correspondent swung into the saddle, and with feet over the bars the

self. It is said that seven-tenths of the population of Daytona own bicycles, and this is not difficult to believe, as one rolls over the beautiful shell streets to be found everywhere. Daytona reminded your correspondent of Ocean Grove. The residences are well separated, the streets are beautifully shaded, and an atmosphere of prosperity pervades the whole. At this point another bridge crosses the Halifax River, connecting with the coast.

It would be a critical pleasure seeker who could not find contentment at Ormond by the sea. Cycling, driving, golf, hunting, fishing and yachting, and the varied delights of surf and still water are all here at his command. It seemed impossible to believe that anything more beautiful could be found, but it was soon discovered that the magical touch of the tropics had not opened nature's heart at Ormond as it had at Palm Beach and Miami.

It is a novel and pleasant experience to allay the thirst for which wheelmen are famous by plucking a juicy orange from amid the dark, glossy leaves and sucking or eating it on the spot.

At Rockledge the Indian river orange is at its best, and no other citrus

and is fine as far as Coquina, an equal distance up the river. Next winter visiting wheelmen are promised a path to Titusville, and doubtless another season will find Ormond and Rockledge connected by a series of excellent cycle trails, affording seventy-five miles of straightaway riding through one of the most picturesque sections of Florida. Rockledge is an excellent stopping place for the sportsman. The Indian river abounds in sea trout, cavalli, grouper, bass and mullet, and is covered during the winter season with flocks of wild duck, including mallard, pintail and widgeon. Across the river, in a large swamp, may be found plenty of alligators, which are often lassoed and taken alive to Rockledge. Three miles back from the village the hammock abounds in quail, and the large-mouthed bass can be caught in the small fresh water lakes which dot the region.

The cultivation of oranges in southern Florida is beginning to revive after the severe frosts of '93 and '96, and it is most sincerely to be hoped that in the near future the Northern market will be once again generously supplied with oranges, lemons and grape fruit from the state which alone produces them in perfection.



Use good judgment and secure the agency for the

# Monarch Line

before your competitor gets it. We propose to have an agent in every city, town and hamlet.

- Monarch Roadsters.....\$50.00
  - Defiance Roadsters..... 35.00
  - King and Queen Roadsters..... 25.00
- Show us a \$25 wheel that beats it.

## Monarch Chainless, \$75

Every model exceptional value for the money. Write us for agency proposition and catalogue.

“RIDE A MONARCH AND KEEP IN FRONT.”

Monarch Cycle Mfg. Co., Lake, Halsted and Fulton Streets, Chicago.  
NEW YORK. LONDON. HAMBURG.

THESE DISTRIBUTORS of



# Allen Rotary Tire Bells

are selling them *because they have seen the 1899 samples and know the Allen is the best 50-cent Bell in the market*

Hartley & Graham, New York.  
The H. W. Peabody Co., New York.  
H. B. Shattuck & Son, Boston.  
Horace Partridge & Co., Boston.  
Wright & Ditson, Boston.  
John P. Lovell Arms Co., Boston.  
Boston Cycle Supply Co., Boston.  
Albany Hardware Co., Albany.  
Benns & Visscher, Schenectady.  
Clark Horrock & Co., Utica.  
Spalding & Co., Syracuse.  
Shone-Hanna Mfg. Co., Rochester.  
Hall-Shone Co., Rochester.  
S. B. Roby & Co., Rochester.  
Angell, Sumner & Co., Buffalo.  
Buffalo Cycle Component Co., Buffalo.

Supplee Hardware Co., Philadelphia.  
Geo. W. Nock, Philadelphia.  
Wash. Cycle Sup. Co., Washington, D. C.  
Logan Gregg Hardware Co., Pittsburgh.  
Justice Cycle Co., Pittsburgh.  
Bindley Hardware Co., Pittsburgh.  
Pickering Hardware Co., Cincinnati.  
J. E. Poorman, Jr., Cincinnati.  
Van Camp Hardware Co., Indianapolis.  
C. G. Fisher & Co., Indianapolis.  
Levy & Stearn, Cleveland.  
Collister & Sayle, Cleveland.  
H. W. Leutkemyer & Son, Cleveland.  
A. J. Rummel Arms Co., Toledo.  
Geo. Hilsendegen, Detroit.  
W. E. Lindsay & Co., Milwaukee.

J. Andrae Sons & Co., Milwaukee.  
Simmons Hardware Co., St. Louis.  
Neustadt Cycle Supply Co., St. Louis.  
Nor. Cycle Supply Co., Minneapolis.  
Janney, Semple & Co., Minneapolis.  
Colorado Cycle Supply Co., Denver.  
The Beckley-Ralston Co., Chicago.  
Morley Bros., Saginaw.  
Baker & Hamilton, San Francisco.  
Eaton, Chase & Co., Norwich, Conn.  
Henry Horton, New Haven, Conn.  
Foster Cycle Depot, Providence, R. I.  
Barker, Rose & Clinton, Elmira, N. Y.  
W. A. Chenoweth, Birmingham, Ala.  
Ira Abbott, New York City.

This list is growing.

Our stock of bells is growing.

Our pay roll is growing.

The Geo. Sweet Manufacturing Company.....

DANVILLE, N. Y.

# THE PASTIME AND SPORT

## ELKES DEFEATS McDUFFIE

**Bostonian Ridden to a Standstill in 25-Mile Match—Elkes Calls for More Pace.**

New York City, Jan. 16.—Harry Elkes displayed his remarkable supremacy in middle distance racing last Thursday night in his twenty-five-mile match with E. A. McDuffie, whom he defeated by thirteen laps in 52:34 on the Madison Square Garden ten-lap track. McDuffie sought the match, and now he is a sadder but a wiser man. Before the start of the race he demanded payment of a disputed account of \$500 before making his appearance on the track and as a result the race was delayed for almost an hour until finally the money was paid to him.

Last year's middle distance champion took the lead in the first mile and gained slightly on the Glens Falls youth, but in the second mile the latter cut his time for the mile down to 1:55, taking all the pace he could get and calling for more, while the Bostonian had trouble hanging on to what was given him. After the first mile Elkes gained steadily on McDuffie and at five miles was 31 3-5 seconds in the lead. At ten miles he led by 1:01; at fifteen by 1:24 3-5; at twenty by 2:18 2-5, and at twenty-five by 4:25 2-5.

After the fifteenth mile the Bostonian loafed around the track in a most abject manner and was so clearly outclassed that many of the spectators, disgusted by the long preliminary wait and owing to the lateness of the hour, left the building before the end of the race. Each contestant had seven tandem teams, five of McDuffie's being teams formerly retained by Elkes.

## Racing Men Going to California.

The largest party of racing cyclists that ever crossed the continent will leave New York Friday for San Francisco to take part in the indoor racing that begins there February 11. An eight-lap board track has been laid in Mechanics' pavilion for the occasion. The first two days will be devoted to sprint racing, then a six days' race begins on February 14, and the following week is to be given up to middle distance events. About thirty riders will comprise the trans-continental party, which will include, among others, Harry Elkes, Jay Eaton, Fred Hoyt, Frank Waller and trainer, King Ryan, Teddy Hale, Oscar Julius, John Lawson, Oscar Aaronson, Louis Gimm, Frederick the Swiss, J. W. Nawn, Burns Pierce, Frank Alberts, Ed Stevens, John Chapman, Tom Barnaby, Charles Turville, Henry Pilkington, W. D. Elkes, Charles Ashinger and others. Charles Miller and his trainer John West will join the party at Chicago, and Jimmy Michael and Al Weinig, his new trainer, both of whom are now in New Orleans following the horse racing, will meet them in San Francisco, while E. C. Bald, accompanied by Tod Sloan, will be there to welcome the crowd. There is a large party of sprinters already in training on the coast, including Floyd McFarland, Orlando Stevens, Howard Freeman, Charles Wells, Clinton Couler and Bob Terrill.

## Prince Promoting Texas Circuit.

Jack Prince has been in Texas trying to interest the capitalists and riders there in his southern circuit plans and has apparently met with encouragement. He proposes to build fine race tracks in

Galveston and Houston, and would include in his circuit, besides these two cities, San Antonio, Austin, Waco, Ft. Worth and Dallas. The circuit is to start in New Orleans about the 22d, when a big meet is to be given, and the route is to be covered two or three times, after which some of the riders will continue on to the Pacific coast to enter the spring races there. All the races on the circuit are to be held under the sanction of the Southern Cyclist Association, and it is Prince's intention to secure the presence of many of the best sprint riders in New York, including Earl Kiser, Arthur Gardiner, H. Steenson, Bob Walthour, Henry Eckert, Wallace Anderson, Ben Munroe, George Quinn, Tom and Nat Butler, the Kraemer brothers, Frank Starbuck, Will and Jack Coburn and Tom Cooper.

## LEAGUE POLITICAL AFFAIRS

**Sams Agrees Not to Run for Presidency—Mott Will Decline Reappointment.**

Baltimore, Jan. 16.—Thomas J. Keenan, Conway Sams and Albert Mott were in conference here last week and when the meeting was over it was announced that Sams had agreed to withdraw his opposition to Keenan's candidacy for the presidency of the League and would himself retire as the candidate of the Potter element. After carefully estimating the strength of each, Keenan and Sams found their support nearly equal, with one section in doubt. A joint telegram was sent to this place and the answer was favorable to Keenan, which decided the question of which was to retire.

It has been rumored that an agreement was also entered into at this meeting whereby Mott was to be reappointed to the chairmanship of the racing board, but on the following day "Uncle Jerry" positively declined to be a candidate for reappointment, saying that the duties of the office, added to his private affairs, have injured his health.

Keenan favors the appointment to the national racing board of men who are in close touch with racing interests. From remarks he has made it is inferred the chairman will be a man who understands the whims of riders and one in whom the outlaws can have confidence. Keenan hopes by finding such a man to make the way easy for the return of the outlaws. The committee which was appointed a year ago to consider the advisability of the League transferring the control of racing to another body will report at the Providence assembly that, since there is no association competent to take control, the League should retain it. For the appointment to the chairmanship of the racing board six men are prominently mentioned. They are: Fred Gerlach, Chicago; H. Robinson, Boston; W. R. Pitman, G. L. McCarthy and John Barnett, New York, and C. W. Mears, Cleveland.

No less than three amendments, from the representatives of as many different divisions, will be offered at Providence looking to the admission of professionals to membership, and should either of these amendments be adopted, which seems probable at this writing, one of the strongest cards of the anti-Leaguers will have been trumped.

The latest report of the French minister of finance shows that there are 534,000 cyclists in France.

## THE AUSTRAL WHEEL MEET

**Melbourne Mechanic Wins the Great Handicap of the Antipodes—Thirty Thousand Spectators.**

Sydney, Dec. 19.—The great Austral Wheel race three days' meet was concluded December 10 at Melbourne. Nearly 30,000 persons were present to witness the final of the Austral. The gate receipts for the three days amounted to more than \$12,500. The racing throughout the day was brilliant and exceptionally fast for a grass track.

The most important event was the final of the Austral, for which sixteen riders had qualified the Saturday previous. The first prize was \$1,200, second \$600 and third \$200. The race was a brilliant one all through. The limit men got together early in the race and pacing alternately defied the back markers to catch them. The final struggle was one of the best finishes yet seen at a cycling meet. T. S. Finnigan won after leading for the last three laps, W. Middleton was second, MacGibbon third, a foot behind Middleton, and Matthews fourth, half a yard back. When the field entered the last lap Finnigan rushed to the front at a terrific pace, with Matthews hanging on, and gradually they gained two lengths on the bunch of half a dozen following. Matthews tackled Finnigan half a length from home, but the latter shook him off and appeared to have the race won, when Middleton made a wonderful rush and came up with Finnigan. A great race ensued. Middleton's wheel once or twice showed in front, but he got pocketed and bumped, which spoiled his chance. Finnigan with a mighty effort landed the race by a foot. Relph, the Englishman, who started favorite, finished last. Time, 4:30 4-5.

Finnigan is employed as a cycle mechanic in Melbourne and rode a Canadian machine.

Walne won the ten-mile scratch race by two lengths from Miller and Forbes. There were thirty-eight starters.

The Victoria mile race was taken by Crisp of Tasmania from forty yards, while Campbell won the flying stakes. Ken Lewis fell and broke his collar bone.

The summaries are as follows:

Two-mile Austral handicap—T. S. Finnigan, 220 yards, first; W. Middleton, 190 yards, second; G. MacGibbon, 230 yards, third; W. Matthews, 260 yards, fourth. W. C. Jackson, T. Relph, J. B. A. Gargurevich, A. E. Tame, W. B. Taylor, E. E. Fontaine, W. L. Clinton, T. Amos, J. Brooker, W. Stapleton and A. W. Bennet also started. Time, 4:30 4-5.

Ten-mile scratch—R. H. Walne, first; C. E. Miller, second; A. C. Forbes, third. Time, 24:35.

One-mile Victoria handicap—A. B. Crisp, 40 yards, first; A. J. Berry, 65 yards, second; S. E. Gordon, 90 yards, third. Time, 2:11.

Half-mile flying stakes, final heat—J. Campbell, 50 yards, first; P. Bazely, 65 yards, second; J. Esler, 50 yards, third. Time, 1:02 4-5.

## First Popular Good Roads Vote.

Complete returns of the Minnesota state election show that the state aid amendment to the constitution has been passed by the people by a vote of 70,043 to 38,017. This is the first time that a popular vote has ever been taken in any state upon the good roads question and the result is a most emphatic indorsement of state aid as its solution. The constitutional amendment was introduced at the 1897 session of the Minnesota legislature by A. B. Choate of Minneapolis, as representative of the L. A. W., and its passage by that body was the result of his persistent and diplomatic work

# ..Orient Light Roadster..

**\$50**

Weight, with regular equipment, 22½ lbs.



Like  
All Orients

It's Graceful, Speedy  
and Mechanically  
Correct.

"THEY ALL RIDE THE ORIENT"

**Waltham Mfg. Company** 315 CRESCENT PARK  
WALTHAM, MASS.

SEE US AT THE NEW YORK SHOW, SPACES 143-151.

## Eclipse

CYCLES

ONE GRADE—ONE PRICE

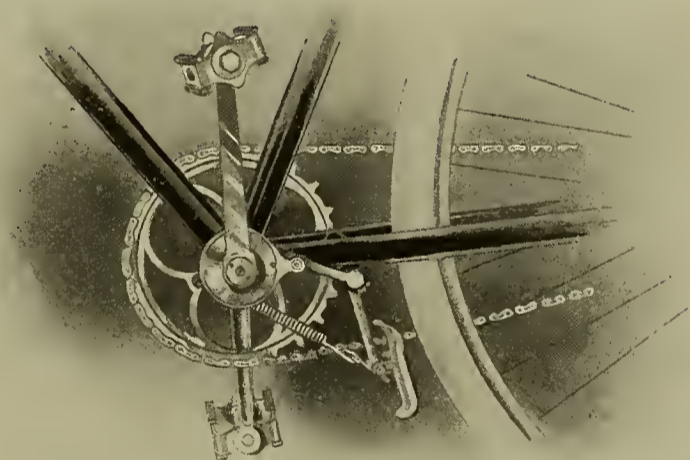
**\$50.00**

## Waldorf

CYCLES

ONE GRADE—ONE PRICE

**\$35.00**



THAT'S  
IT...



Fitted with the Morrow Automatic Coaster and Brake

Mr. Agent—They will put you in a position to control the trade in your city. Secure the Agency. Write for quotations to-day.

**Eclipse Bicycle Company, Elmira, N. Y.**

in behalf of the measure. This left it to be submitted to popular vote for its final passage. A strong educational campaign for good roads was carried on by the L. A. W. throughout Minnesota during the past summer and fall with the active assistance of the Bureau of Road Inquiry at Washington and the press of Minnesota. The Minnesota legislature will now take the necessary steps to put a system of state aid in operation such as is now in force in New Jersey and in New York. Farmers especially will appreciate this, as it will enable them to obtain durable highways without being obliged to bear the entire expense, as they do at present.

**Algerians Cheer the "Flying Yankee."**

George Banker, popularly called the "Flying Yankee" by the Frenchmen, was the star attraction at the big meeting in the city of Algiers on January 1, which was attended by a large and cosmopolitan crowd of spectators. Grogna, Banker and Tommaselli qualified in the three heats of the handicap race. The final was a regular scratch race. The three loafed for the first half lap, but the crowd began to hiss and Banker went to the front, where he staid until the finish, resisting every effort of the others. Four heats of the Algerian championship race were won by Grogna, Banker, Tommaselli and Guignard, Banker winning his heat by thirty meters. The final was to have been run January 8.

**Rebellion Dying Out in Colorado.**

The Denver Wheel Club has sent in applications for membership in the L. A. W., and a Denver daily paper states that the League will assume control of racing affairs in Colorado next spring. The disaffection last summer was due, it says, to a small but powerful combination of Denver cyclists, and gradually the sentiment against secession and separate control has gained ground until there remain in Colorado few sympathizers with the cause of rebellion.

**NEWS IN BRIEF.**

Arrangements are being made for a four-days' indoor race meet in Baltimore to be run the last part of January.

G. G. Webber of Toledo is credited with having won the Century Road Club mileage for last year, having ridden 37,500 miles, which is far in advance of that made by any other rider.

Wisconsin wheelmen will ask the state legislature at the present session to pass a special statute providing a penalty of six months to two years imprisonment for bicycle stealing.

George Gideon, ex-chairman of the League racing board, denies that he favors W. R. Pitman for chairman of that board, and says that he thought the suggestion was one of Pitman's jokes.

Councilman Bell of Tacoma has prepared a bill for presentation to the Washington state legislature authorizing the cities to regulate and license the riding of bicycles and use of other vehicles and to build cycle paths.

A bicyclist who had just ridden 108 miles in eight hours died at Binghamton, N. Y., recently. An autopsy disclosed the fact that the victim's organs were all in a perfect condition. It was simply a case of exhaustion.

D. R. McLachlan went for the amateur paced records at Johannesburg, South Africa, December 3, and did the quarter-mile in :24 1-5 and the mile in 1:52 2-5. The American quarter-mile record is held at :24 by E. A. Morass, made in Detroit in November, 1897, and the one-mile at 1:43 2-5, made by H. G. Gardiner, at Willow Grove, September 11, 1898.

Harry Leo of Sioux Falls, S. D., rode into New York city last Friday, having made the round trip from New York to San Francisco and back since June 1. He said he reached the Golden Gate September 4, having broken the New York to Denver record en route,

the trip having been made in fifty-one days. He started on his return ride from the coast on September 6.

Mrs. George Bunker of Chicago has won the Century Road Club mileage for women riders for 1898, having ridden 18,458 miles during the year.

Joe Downey of Boston is the first person to apply to the National Cycling Association for recognition of a racing record. He filed a claim with A. G. Batchelder, chairman of the board of control, for his amateur paced half-mile of :59 2-5 made December 31 last.

Major Taylor is vacillating on the question of going to Europe next spring. He has had a longing to go ever since his phenomenal work on the national circuit, but has been deterred by various considerations, one of the chief of which is the fact that most of the big race meets take place on Sunday in France. While in Chicago last week, however, Major Taylor said he would go into training as soon as the New York cycle show is over if the weather permits and will leave for Europe when he gets in good form. Upon arriving he will train another two or three weeks and then go for European mile and kilometer records from the quarter-mile and third-kilometer to the hour. His chief ambition is to defeat Bourillon in an open race or match event. He will return to America in time to compete at the world championships in Montreal.

**MISCELLANEOUS.**

Advertisements under this head 5 cents per word first insertion, 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received.

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**WANTED**—From manufacturers and jobbers, the lowest prices and the best terms on all bicycle parts, tubing, sundries and small bicycle tools to fit up a first-class supply house; answer by mail. P. DEWARD, 885 21st Place, Chicago.

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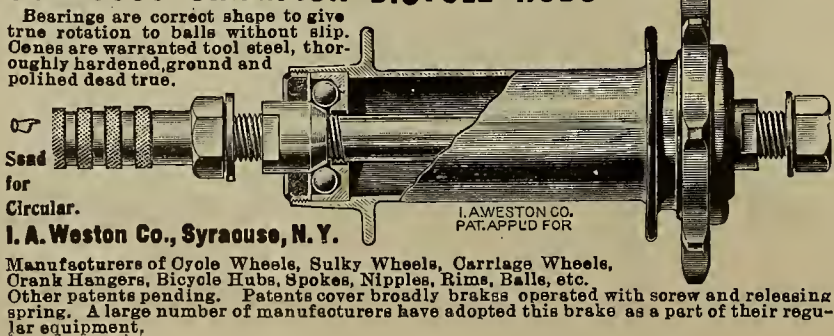
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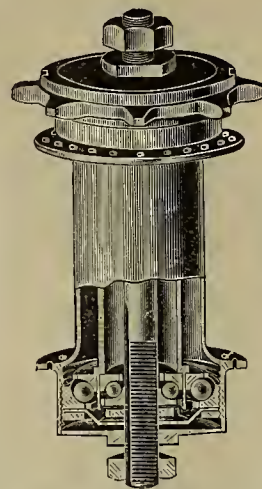


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Manufacturers of Cycle Wheels, Sulky Wheels, Carriage Wheels, Orank Hangers, Bicycle Hubs, Spokes, Nipples, Rims, Balls, etc. Other patents pending. Patents cover broadly brakes operated with screw and releasing spring. A large number of manufacturers have adopted this brake as a part of their regular equipment.

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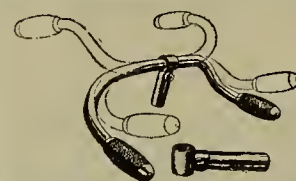
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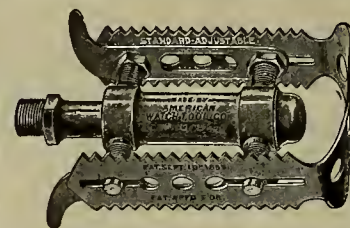


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# THE CYCLE AGE

## AND TRADE REVIEW

VOL. XXII—No 13.

CHICAGO, JANUARY 26, 1899.

NEW SERIES No. 62.

### HUMBER COMPANY IN COURT PETITION FOR RECEIVER FILED

#### Goodrich Company Charges Fraud and Secures Injunction—E. T. Hooley Brings Suit.

The final chapter in the affairs of the Humber Company, Limited, of Westboro, Mass., is being enacted in the courts of Massachusetts, which have been petitioned by the B. F. Goodrich company, one of the largest creditors, to appoint a receiver for the concern, and in which three separate suits have been brought against the company and its manager by the Revere Rubber company, William Allen & Sons and E. Terah Hooley. The property of the defendant company was attached by the sheriff January 17 at the instance of the Revere Rubber company; and Albert E. Hawksley, and Charles T. and Arthur H. Russell were enjoined upon the petition of the Goodrich company from transferring the property and selling the stock of the Humber company and from collecting on the claims against the company.

#### Suit Has Many Respondents.

The Goodrich bill in equity was filed in the Superior Court January 17 against Humber & Company, America (Limited), with Arthur R. Marten and Frederick Goddard, trustees, under the head of Humber & Company; Albert E. Hawksley, First National Bank of Westboro, Charles T. Russell, Arthur H. Russell and Thomas H. Russell, named as the other respondents. It is claimed in the bill that Albert E. Hawksley, who recently came over from England in the interests of the English capitalists who own the concern, and who is now active manager of the company, has taken possession of the assets of the company, claiming to represent Marten and Goddard, the trustees. The Humber Company is indebted to the B. F. Goodrich company in the sum of \$2,272 for goods furnished and delivered, as claimed.

#### Charges Fraudulent Transfers.

The petitioner alleges that a deed of indenture or declaration of trust upon the property of the defendant is claimed to have been executed between the Humber company and the defendants, Marten and Goddard, to secure the payment of 250 bonds for £100 each, 25,000 English pounds sterling. The Goodrich company states further that the execution was never authorized by Humber & Company; that no bonds were given, and that the instrument is a part of a scheme devised to protect the English stockholders of Humber & Company at the expense of the creditors. The shares of Humber & Company, America, are all held by persons in England.

It is alleged in addition by the Goodrich company that Elliott Burris, general manager of the company previously, has been removed from his position, that the attitude of the company towards the creditors has suddenly changed, and that payment of all indebtedness has suddenly stopped. The property is being sold and converted into money, and all outstanding indebtedness to the defendant company is being collected, for the purpose of taking the same out of the jurisdiction of the courts, as is claimed.

The Goodrich company believes that Mr. Hawksley has fraudulently prevented the creditors from obtaining possession of the assets, and has deposited money in the First National Bank of Westboro, and assigned the same to Charles T. Russell and Arthur H. Russell, of Boston.

The plaintiff prays that the court declare the mortgage or deed of trust null and void, and that a receiver be appointed to settle the affairs of the concern for the benefit of the creditors.

#### Company Promoter Sues for Commission.

Hooley's suit is brought in the same court against Elliott Burris to recover commission which he alleges is due him for the floating of the scheme of the Humber company before the English capitalists. Mr. Hooley claims that this commission, which was agreed upon, has never been paid to him by Mr. Burris.

Mr. Hooley has brought another suit for commission, and the members of the company itself, according to statement of counsel, have turned the tables and sued him for return from the sale of the stock of the company among the English speculators, which they claim is still due from him on account. The amount at stake is from \$5,000 to \$10,000.

The Revere Rubber company is another plaintiff who is suing the Humber company for materials delivered. The property of the defendant company held in the name of Arthur R. Marten and Frederick Goddard was attached in the sum of \$1,000.

### THE RIGHTS OF CREDITORS

#### BANKRUPTCY ACT DECISIONS

#### New Law Leaves Affairs of Bankrupt in Creditors' Hands With Referee in Charge.

Buffalo, Jan. 23.—In an address to the Credit Men's Association of this city, at a meeting held last week, Referee in Bankruptcy Hotchkiss cited the following recent decisions handed down by the courts bearing on the new bankruptcy law on general assignments. The intention was to show that the effect of the law is to favor the creditors.

The decisions of three federal judges, in districts in New York, Missouri and Virginia, he said, were all in favor of the creditors, and go to show that they, backed up by the bankruptcy law, can set aside a general assignment, and handle the debtor's affairs, with fairness to all concerned. These facts are important to the credit men of the country, and these decisions will undoubtedly cause general satisfaction among them.

#### Opinions of New York Judges.

Judge Cox, of the northern district of New York, holds the following opinion on the subject:

While the state assignment law allows the property of the debtor to remain practically in the charge of the assignee and his attorney, the bankruptcy law leaves the affairs of the bankrupt in the hands of the creditors, looked after, of course, by the referee in bankruptcy.

Judge Brown, of the southern district of New York, in a recent decision has the following to say:

Upon such an assignment, creditors are authorized to proceed instantly against the debtor as under the old law. Careful provisions are made in the present statute for these involuntary features, and for preserving this right of procedure; and if, notwithstanding these provisions, a voluntary assignment could stand valid as against the trustees in bankruptcy afterwards appointed, the whole object of declaring such an assignment to be an act of bankruptcy would be nullified. In that case, though the creditors invoking this express provision might immediately put the debtor into bankruptcy, they would thereby gain no control of any assets nor derive the least benefit from the bankruptcy proceedings; and while thus subjecting themselves to expense in the pursuit of their illusory rights, the only result would be to benefit the bankrupt by giving him a discharge for nothing.

Up to the 1st of January 500 cases have gone into the bankruptcy court of the northern district of New York state, and of that number less than half a dozen were identified with the cycle trade. This augurs well for the bicycle industries of this district, which embraces forty-seven counties, and in which territory is included Buffalo, Syracuse, Albany, Rochester and several other places where bicycles are made.

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## BRAZING BY IMMERSION

### Portable Furnace — Fire Regulation Semi = Automatic— Gradual Heating of Work—Boy Helper's Function

A dip-brazing furnace of a type different from those previously illustrated in Cycle Age is shown in operation in the large illustration below. The furnace is that made by the Chicago Brazing Furnace Construction Company and the view was taken in a brazing room in which the furnace is in constant use.

#### Grate Shakers Employed.

Two of the fundamental ideas actuating the builder of the furnace are that

work rests comprises the bottom of the fire box and holds the grates. The latter, instead of being of usual boiler or furnace construction, are arranged in pairs, which may be dumped to clean the fire from ashes and clinkers. The dumpings fall down through two square, box-like openings below the grates. The dumping facilities comprise segmental gears, one of which is secured to the hanging shaft of each grate section. The two gears of each pair of grates mesh with each other,

which allow cold air to strike the fire from above, and the work of cleaning out the fire and recoaling necessitates hardly a pause in the brazing operations. The absence of doors obviously does away with the possible danger of cracked door castings.

#### Replacement of Crucible.

The crucible rests on the end walls of the furnace and is also supported underneath at its center by buttress projections from the side walls. It is not cemented in place with fire clay, but is merely placed in position on its supports and left there until it is worn out; and replacement requires no work other than the removal of the old and the laying in place of the new crucible. The builder claims the further advantage in leaving the crucible unrestrained by fire clay or cement that this disposition allows the crucible end play for expansion under the action of heat, and he states that



"CHICAGO" BRAZING FURNACE IN OPERATION—BRUSH WHEEL FOR REMOVING SUPERFLUOUS SVELTER AT THE RIGHT.

a dip-brazing furnace should be so constructed that it may be moved without tearing down and that the furnace complete should not weigh enough to bar its usage on light upper floors of factory buildings. Accordingly, this furnace is built upon an iron table which gives it the general aspect of a portable forge, and it weighs not more than 900 pounds. There is no iron jacket inclosing the furnace, cast parts being used only in places where there is no strain, the intention of such disposition of the metal fittings being to avoid cracked and spoiled castings. The top of the leg-supported table upon which the firebrick

thus making it possible for the operator to shake both sides of each grate by manipulating the handle of either segmental gear. The coal is fed to the fires through openings in the side walls of the furnace, these openings being fronted by hoppers. The hopper is loaded with coal, which the operator then pushes down into the fire box by means of a poker.

The use of grate shakers instead of a poker for the purpose of cleaning out the fire removes the necessity of doors in the furnace walls. Removal of the lid of the hopper when it is desired to add coal to the fire thus affords the only occasions

this expansion amounts to about one-half inch over its original size.

A long single piece tile about four inches thick is used to cover flame passage at each side of the crucible and force the heat laterally across the top of the spelter.

#### The Blast Arrangement.

As will be noticed from the large illustration, the draft inlet pipe is divided into two branches, which enter the furnace at the side, one branch leading to each end of the fire. The blast strikes a fire of good depth, the crucible at its lowest point being about five inches above the grates. The regulator is the

ordinary cut-off slide. An ordinary fan blower, fifteen to nineteen inches in diameter, will give the proper blast for the furnace.

The particular furnace illustrated in operation is used for brazing crank-hangers which are built up of several

brazers. The vigorous brushing thus quickly given the bottom of the hanger, to which the largest bulk of the superfluous spelter has naturally run, leaves the brazed part free from lumps and clots of spelter and with a thin, even film of brass over its entire surface.

hand. A plate of iron is kept over the central part of the crucible, resting on the cover-tiles and leaving only the ends of the crucible entirely open. On the iron plate the boy keeps at all times about six or seven hangers which the heat and flame rising about the iron plate heat to a temperature which, while it is not a brazing heat, is still sufficient to protect the hangers against the possibly injurious effects of plunging absolutely cold metal into the molten spelter, and to prevent the spelter from losing heat through the introduction of cold parts. As soon as the boy has taken one hanger from the plate and floated it upon the material in the crucible, he replaces it with a cold one, and thus has constantly on hand a stock of warmed hangers. The time occupied by the boy in supplying heated hangers is about equal to that consumed by the brazer in dipping the parts, so that the work goes on very regularly and without lost time on the part of either operator or helper.

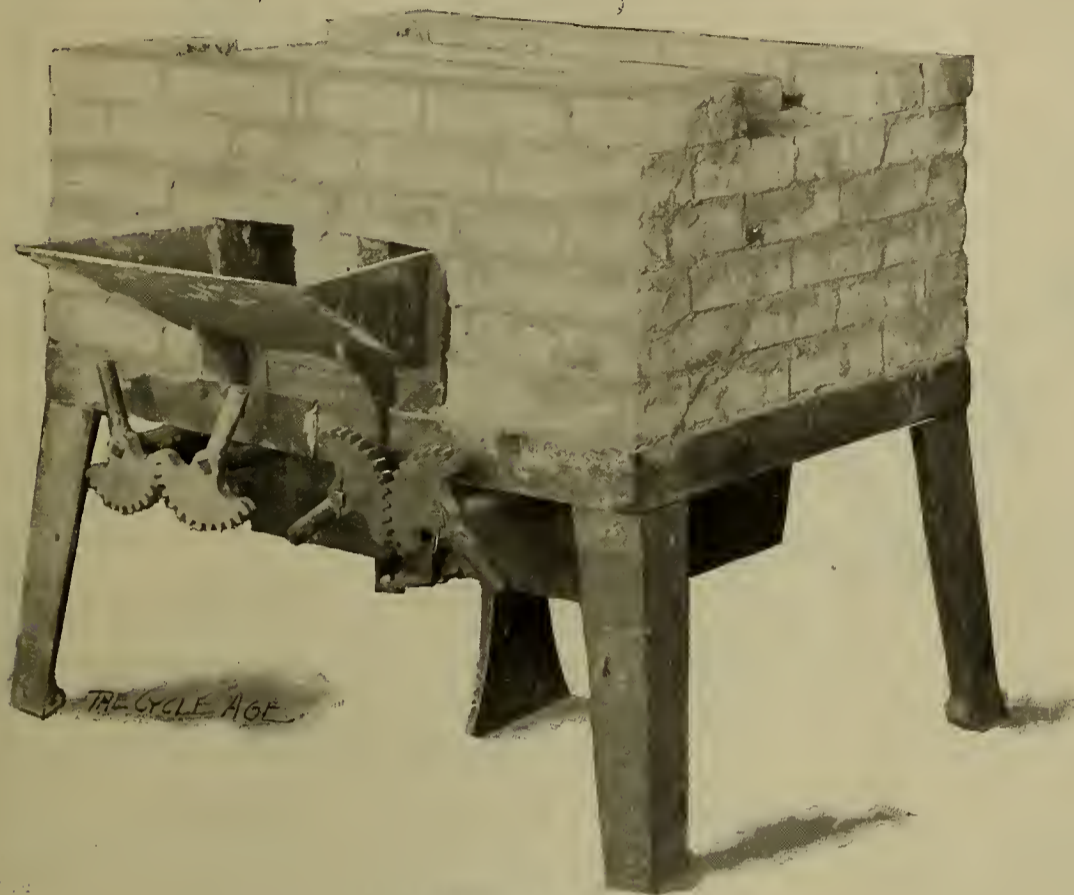
Good anthracite coal is recommended for use in the furnace in preference to coke, as it is said that the latter, while it gives a very satisfactory fire, tends to burn out the grate bars more rapidly than coal.

#### Canadians Will Not Exhibit.

The Canadian manufacturers of bicycles and bicycle sundries have decided not to make any exhibits at the World's cycle show, as the exhibition to be held in Montreal under the auspices of the World's Championships Club is called.

#### Frontenac Company Reorganized.

At a meeting of the stockholders of the Frontenac Mfg. Co., of Syracuse, N. Y., held last week, the company was reorganized and several of the original stockholders retired, new parties having acquired their stock. One of the largest stockholders is now George M. Barnes, who was elected president for the ensuing year. The other officers are Austin R. Dickinson, vice-president and general



FURNACE ASSEMBLED READY FOR USE.

pieces and brazed together before assembling into frames.

The brazing of these parts by the immersion process is highly advantageous, even without taking into consideration the matter of economy. The stamped pieces which compose the hanger give what a brazer using the flame method would call a "hard job," and one requiring much care that all of the parts may be thoroughly brazed. With the immersion furnace the work becomes as easy and sure as though the joint were the simplest lug connection.

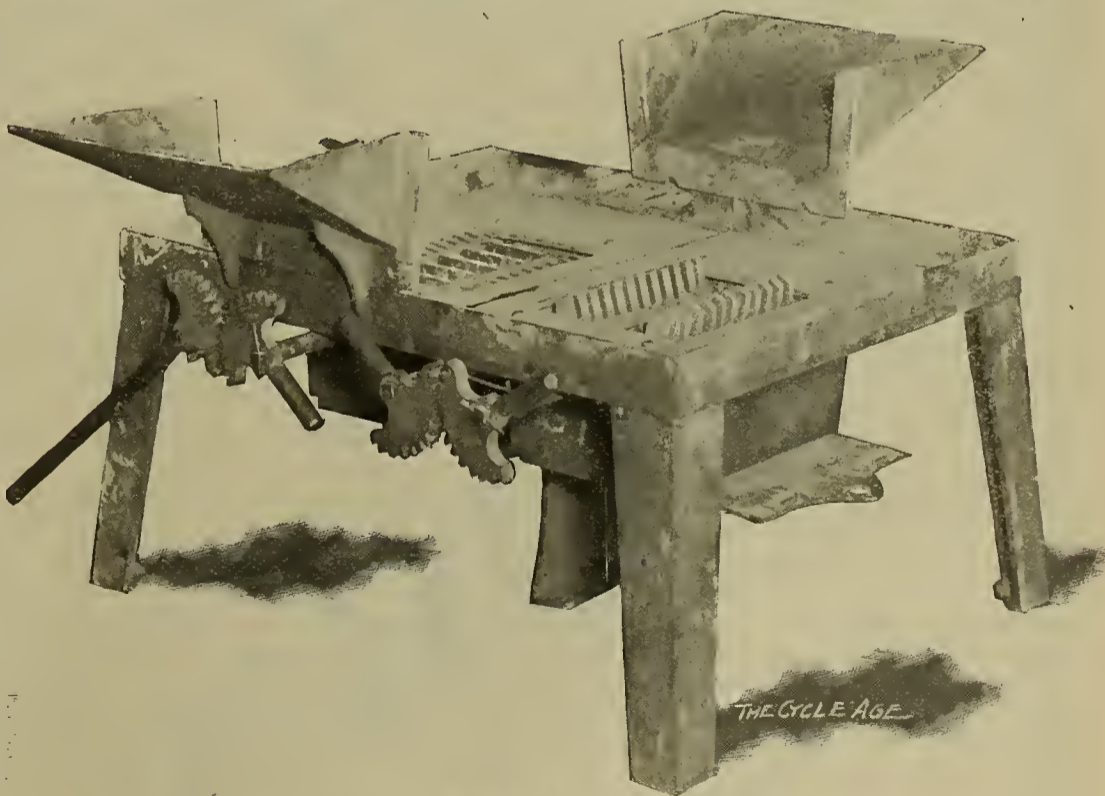
#### Duration of Dip Shortened.

While the work may be done by one man, the operators of this particular furnace have devised a plan by which the work may be sped and its quality improved by the employment of a boy helper. His duty is to stand at the end of the crucible opposite to the brazer and place in a floating position one hanger at a time upon the surface layer of flux above the molten spelter. He pushes the hanger he has floated on the flux toward the opposite end of the crucible, where the operator grasps it with a pair of long tongs, the jaws of which catch the hanger by the seat mast lug. The operator then slowly and steadily lowers the hanger till it is properly immersed in the spelter and as slowly withdraws it, allowing it to remain in the brass for a few seconds only.

#### Cleaning by Steel Brush.

After tipping it in various directions to allow as much of the adhering spelter as possible to drip back into the crucible, the brazer performs an operation on the hanger which is not common shop practice, but which is very effective and which requires only a very few seconds of time. The operation consists simply in holding the still heated hanger against a rapidly revolving steel brush wheel mounted on a regular grinding wheel arbor and placed in close proximity to the

The revolution of the brush wheel is in such a direction that the brass brushed from the hanger will be thrown upward and away from the operator and against a metal screen purposely erected to stop the spelter thus thrown off by the wheel. The brushing wheel is easily recognizable in the large illustration.



CAST IRON FRAME FOR "CHICAGO" FURNACE.

After brushing, the hanger is laid aside to cool, and is ready to have the coating of brass removed.

#### Regular Progress of Work.

The boy who floats the hangers onto the contents of the crucible does not take his parts directly from the cold stock at

manager; E. D. Dickinson, treasurer, and C. C. Barnes, secretary. The board of directors is composed of the same men, with Hendrick S. Holden as a fifth director. The capital of the company, \$75,000, is to be fully paid up with increased capital, and the business is to be vigorously pushed and extended.

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**HUNT**

**BROWN**



**Good!**

Good Tires  
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 Good Leather  
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 Good Contour  
 Good Workmanship  
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# THE CYCLE AGE

## AND TRADE REVIEW

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### COMPRESSED AIR VEHICLES

The bicycle and motorcycle industries are naturally watching with much interest and anxiety the sky-rocket display of syndicate formation for exploiting condensed air motors, which is at present attracting popular attention, and of which an account is given on another page of this paper. Although the convenient corporation laws of New Jersey seem to be much in requisition in order to swell the nominal capitalization of the projected monopoly and other indications are not lacking to show that eventual greatness is being freely discounted in advance, there is yet sufficient solid substance in the schemes to suggest careful examination of the possibilities of compressed air motors for use in motor vehicles and their probable influence to assist or retard the manufacture and sale of electric, steam and gas engine carriages.

From the description given of the compressed air motor it is at once apparent that vehicles propelled by such motors are of much more limited range than any of the three other forms. They depend upon supply stations to such an extent that makers of steam and gas engine vehicles may feel assured of their absolute safety against competition from this new source. In so far as the compressed air vehicles are intended to be operated on common streets and highways without the necessity of rails, they will, in proportion to the favor which they may gain, serve to popularize the automobile idea in general, and by their evident limitations will force the demand for automobile vehicles in the direction of those driven by steam or gas whose range of travel is practically unlimited.

With regard to electric vehicles the case is somewhat different, as these depend upon supply stations for their driving power. But a very essential factor in favor of the electric system for most styles of carriages is observed. The compressed air motor requires for operation not only a plentiful supply of air bottles, which under an internal pressure of 4,000 pounds to the square inch are not quite exempt from the possibility of explosion, but also a reservoir holding water which is heated, under pressure, to 400 degrees and which, however well protected against loss of heat by radiation, gradually cools until a temperature is reached with which the motor cannot be successfully operated. In other words, the power stored in a compressed air carriage must be used within a given time after charging. If it is not, the reheater must be supplied with superheated water again.

Evidently this new limitation removes the compressed air motor from consideration as a competitor with all electric vehicles which are not designed to run on schedule time.

For private carriages and for cabs, which must await their chance for hire, the electric system has nothing to fear from condensed air until the necessity for reheating the air shall be removed.

It seems likely, of course, that the reheating is an economical as well as a mechanical requirement, but at the present stage of general information intrinsic evidence points to the need of reheating not only for the purpose of securing additional expansion of the air but also for that emulation of oil in the air which the nature of air motors seems to require. The projectors of compressed air schemes would hardly incur their

machines with the reheater if they saw any manner of avoiding it, even at increased operating cost.

The sum of considerations which may be urged in favor of condensed air—with the most liberal allowance or the substantial character of the multi-million companies which are being formed—seems to settle the position of compressed air motors, commercially and mechanically, as one that involves possibly a very strong competition with all other systems for operating street railway cars, bus lines and schedule traffic in general, and, further, one of great promise for heavy trucking within the yards of large manufacturing establishments, in railway freight yards and at docks and quays; but, on the other hand, one which contains no vestige of danger to the development of other branches of automobile industry and may materially assist in popularizing electric carriages as well as steam and gas engine vehicles for private use and for cab service in cities.

### LOCAL SHOWS ONLY

From reports at hand it is evident that the managers of the New York cycle show have been equally as incapable of maintaining the character of a National exhibition as the Chicago people, and this in spite of the most favorable opportunities in regard to the housing of the affair and the co-operation of prominent bicycle manufacturers who thought the occasion suitable for displaying motor vehicles.

At both shows the automobiles have proved the drawing card and to them has been given nearly all the publicity that Chicago and New York papers have accorded the two enterprises.

Measured in column space in daily papers, the advertising which the trade in its entirety has received through the shows has been about one-twentieth of that given at shows in former years, and measured in value as a stimulant for purchase of bicycles by the public this stinted publicity may have done more harm than good, by showing to all who cared to read right that the newspaper reporters are unable to find anything in bicycles on which to build up an article of popular, readable interest.

Considered as local shows both occasions, however, have had their meed of success, if by a local show is meant a sort of bazaar where manufacturers may place themselves in touch with the local retail trade. But it still remains very doubtful whether the other object of local shows has been attained, viz., that of laying a foundation for better local retail trade than could be secured by other, perhaps more economical, means.

So long as this point remains doubtful it seems clear that local shows which may be arranged in other cities between now and the opening of the riding season, should under all circumstances be managed on such a plan that the promoters and the exhibitors take equal chances on arousing that interest in the public which finds its expression in gate receipts. Where the exhibitors are practically also the managers as at the impending Philadelphia show, this is cleverly effected by auctioning off the spaces. And at the projected Denver show, it is understood that spaces will be free for exhibitors.

Against such inducements the one-sided arrangements which have been in vogue in New York and Chicago and by which the trade has borne all risks while guaranteeing the show managers a profit before doors were opened, have been made impossible for the future.

Thus it may be considered the upshot of all efforts which have been made for reviving national cycle shows, that the trade at large has realized their futility, and that henceforth local shows will alone be supported.

Further than this, local shows must be supported chiefly by the public at large through gate receipts and not by the trade through space rent. If they should fail to prove profitable with gate receipts as the only source of revenue for the show managers, the trade will abandon them.

### CREDIT IN FOREIGN LANDS

If a retail dealer in a foreign country, who desires to carry American bicycle goods, were to go to his local bank in order to borrow money wherewith to pay the American manufacturer or exporter the cash usually demanded in American export trade, he would as a rule have no available security to offer. According to ordinary banking methods, his note would not be accepted without substantial en-

dorsement. The stock of American goods for which he is negotiating cannot be used as security, partly because it has frequently not arrived when the money is required, and partly because a chattel mortgage on retail stock is a prejudicious instrument under which no self-respecting merchant desires to operate.

Under these circumstances it is plainly the most probable result that the foreign dealer either abandons his desire to carry American goods or chooses to purchase them from the English or German importing house which is prepared to allow him credit. It matters not to him that the English or German seller immediately negotiates his paper with the local bank. The fact that the seller is capable of negotiating the paper is what brings him the trade; and the fact that the American manufacturer or importer who attempts to deal directly is unable to negotiate the paper with a local bank is the chief reason why direct American export is handicapped and limited to transactions with foreign jobbers and dealers of the first magnitude who are prepared to advance cash of their own resources.

In this condition of affairs, which applies with the greatest force to trade with Southern Europe, South America and Mexico, and all of Asia and Africa, there is of course an element of conservatism which protects our exporters against losses which might arise from failure to collect accounts, but it works, as is now well known, as a heavy embargo on the American manufacturer by taking his export trade out of his own control and making the foreign middleman the master of the situation, not only in regard to the quantity of trade but also largely in regard to prices.

If foreign local banks were in the habit of purchasing accounts outright without recourse to the seller in case of trouble in collecting, American firms might undoubtedly make satisfactory arrangements. But such is not the case. They act chiefly as collecting agencies, getting their security for money advanced on the local collaterals, through confidential relations with European banks to whom the standing of the seller is known.

If they maintained similar relations to American banks and were imbued with confidence in American financial institutions, the principal difficulty would be removed, and American export trade could then progress on a more profitable basis and especially with greater assurance of regularity than it does now. To continue it and broaden it, as in the bicycle and allied industries, with low prices as the principal inducement, is a hazardous system which tends towards constant whittling down of profits.

How much longer this system can be followed appears at present very problematic. From all sides, and especially from American consuls abroad, comes the constant cry for credit, longer credits and direct dealings, notwithstanding the fact that the total absence of American banking facilities in Southern Europe, South America and nearly all colonial countries makes the extension of credits extremely inadvisable at the present time.

It seems sometimes as if the consuls and others who never tire of repeating this demand for longer credits fail to realize how impossible it must be to comply with it until the local banking institutions in all parts of the world where we desire to trade shall have made fiduciary connections with some American bank of international reputation which, in turn, shall be prepared to assume a moral or real responsibility for the exporter's business methods.

Unless some readier method is devised for bringing about this result than the proposed establishment of large exchange banks operated with American capital and located in the various cities of foreign trade, it is to be feared that it will take a long time before our manufacturers will be enabled to give credit to foreign buyers.

United States has too recently stepped out from the ranks of colonial countries herself to have much capital available for foreign banking enterprises and our manufacturers are not so well capitalized that they can afford to carry large credits with non-negotiable papers.

\* \* \* \*

The closer the margin of profit in bicycle production becomes, the greater is the need of a cool business capacity of the

first order at the head of each concern and of perfect subordination to his designs in its internal economy. It is this necessity which has always wrought havoc with co-operative concerns when their aim was profit. Business discipline is foreign to co-operation, but necessary for economical and capable management. There has never been a purely co-operative concern whose head became its master by natural selection, if he became its master at all. But it is by the process of natural selection that men and institutions go to the wall or climb to success. It would be a miracle if the co-operative bicycle factory planned by President Mulholland, of the International Union of Bicycle Workers, should be an exception. It is likely to crumble by its own weight before it is started going. Its officers would of necessity be labor agitators instead of business men. Its lease of life would be determined only by the time which it would require to eat up the capital to be contributed for its support. Mulholland does not propose to sell bicycles very cheaply, but will rely on the patronage and patience of "three million organized laborers" for obtaining a good selling price, offering in return the assurance that only good material and good workmanship will be employed. He offers his intentions of dealing fairly as a substitute for capacity to deal intelligently, but there is nothing in the past history of co-operative work to indicate that this ingenuous offer will be accepted.

\* \* \* \*

It is comparatively easy to obtain statistic information in regard to the numbers, styles and grades of bicycles which are sold each year by manufacturers of the first and second rank, but to ascertain the quantity and description of bicycles which issue from the small builders' shops, baffles the most assiduous efforts. In the discrepancy which thus arises between sales known and sales actually made, lies the explanation of several confused theories that have been propounded with much assurance. It was said that tandem riding was on the decline, but it has been all but proved that tandems have been built during 1898 on a very large scale for local trade, and dealers generally contend that tandem riding is on the increase, but that those who buy tandems prefer to have them made to order under their own supervision. Bicycle manufacturers on the other hand maintain more and more that tandem building interferes too seriously with the more profitable routine work in their factories.

\* \* \* \*

Another "fact" gleaned from available statistics has it that the increase in the production of women's machines for the 1898 market amounted to nearly forty per cent—out of all proportion to the increase in production of men's bicycles. The explanation is probably the same as that applied to tandems, although it may not hold good to the same degree. But, undoubtedly, drop frames are sold over the counter almost exclusively, while a considerable percentage of men riders showed a preference for the local maker's product during the past year. In the future it is, of course, most probable that the lower prevailing prices will materially reduce the local builder's output; but he is not at the end of his rope yet. With the aid of the parts maker and by refraining from employing hired help, he may yet give the large maker a tussle for existence for some time, and the observation which is of interest in connection with his struggle is just that which refers to the preponderance of men's bicycles and tandems in his output. It seems to point to the advisability for the large manufacturer of allowing a larger increase in his production of drop frames than he ordinarily would figure on and of devoting more than usual attention to their equipment, so that he may overcome competition in that branch which shows the largest sales.





# OUR BEVEL GEAR CHAINLESS BICYCLES

are the result of actual experience and practical use in 1897 and 1898, and previous years of experimenting. Our '98 models proved satisfactory and servicable. We have improved them at many points. Their weight has been reduced without sacrificing strength, and we are convinced that they are the best adapted of all bicycles for use at any time, on any road, and under any conditions.

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NEW TESTIMONIALS EACH WEEK.

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Pneumatic

Resilient



Single Tube

Easy Riding

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PRESENTING TESTIMONIALS.

MILWAUKEE, WISCONSIN, Nov. 28, 1898  
MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen—I purchased one of your tires July 17, 1898, and have ridden it constantly, averaging twenty miles per day. I find the tread of your tire perfect in construction and far superior to anything I have ever used, and highly recommend it to the Cycling World. Respectfully,  
(Signed) GEO. A. WILLISTON.

FRANK G. VILLA, Manufacturer of "THE MARS" BICYCLES.  
WINONA, MINN., June 7, 1898.  
MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen—I have sold several pairs of your tires among the better class of riders here, and can say that everyone without exception is more than pleased with them.  
I put a pair on my own wheel and filled a board with lath nails, points up, projecting through the board 3/4 of an inch and have ridden over it continuously since April 1st and have not punctured them yet. Yours truly,  
(Signed) FRANK G. VILLA.

Representatives Wanted. Write for Prices and Other Information.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.

## NO FEAR FOR GERMAN TRADE

### Causes Expected to Nullify Efforts of German Makers to Kill American Competition

American bicycle manufacturers are very little concerned over the latest move of the German makers to stifle the trade in American bicycles in the Fatherland. The general opinion seems to be that the 100 manufacturers comprising the German Bicycle Manufacturers' Association have, by unanimously deciding to refuse further credit to dealers in Germany who persist in handling bicycles made in the United States, simply given further evidence of the fear with which they view the competition of American machines with the German in the home market of the latter—a confession that implies the superiority of the American product at prices as low as those of the native made goods, or lower. The German manufacturers seem not to have taken into consideration the important fact that such an admission on their part will tend to increase the demand of the public for the American goods, and that what the public wants it will have. All the agitation against New World bicycles and the efforts made to diminish the number imported have apparently had no effect whatever, our exports to Germany at the present time being larger than to any other country and having increased from \$1,147,776 for the first eleven months of 1897 to \$1,411,961 for the same period of 1898.

#### Dealers Likely to Resent Coercion.

Another factor to be reckoned with is the independence of the German dealers and the natural antipathy of man to be coerced. German dealers are accustomed to purchase stock from the United States for cash against bills of lading, and while the refusal of credit from the German makers may cripple their capacity for a large volume of business temporarily, the effect may reasonably be expected to be that some of the dealers at least will conclude to do all their business with foreign makers and supply their customers with goods that are in great demand. These will be substantial tradesmen, with ready capital to invest, and the American makers will benefit directly from such action.

Some bicycles made in the United States are shipped to German jobbers who put their own name-plates on them and dispose of them to dealers who ask no questions as to where they are manufactured. German makers would find it difficult to trace the source of these goods and to place the dealers handling them on their list of credit ineligible.

#### Agreement Will Soon be Broken.

All this is presupposing that the German manufacturers can successfully maintain their agreement. Where competition is so keen the tendency to surreptitiously take advantage of the compact and seek increased trade by offering inducements denied by the others is very great, and experience has shown that agreements of this sort are seldom adhered to long.

The opinions of some of the leading manufacturing companies of the United States on the subject and the effect the action is expected to have on their export business are given in the following letters:

#### Action Admits American Superiority.

The action taken by bicycle makers in Germany admits on the face that German bicycle makers are unhorsed—that they are

floundering about and know not which way to turn. They are beside themselves and have done that which lays them open to attack from the enemy. Their action admits that although the American bicycle must travel 4,000 miles, that although it is made with more expensive labor, and is handicapped by all of the insurance, boxing, brokerage, customs and other expenses necessary to put it upon the German market, the Germans are afraid to compete with it. This is on its merits. The German people want the best they can get for their money.

OVERMAN WHEEL Co.

#### German Makers Will Break Agreement.

The course that is being taken by the German bicycle makers has been carefully noted by us and after duly considering the matter we cannot see anything about it that is at all serious or that is apt to hamper the American manufacturers in the least. We enjoy a very satisfactory trade with both Germany and Austria and would dislike very much to have anything come up that would interfere with it, but we do not believe that any combination of German makers can prevent bicycle dealers in Germany from handling American goods if it pays them to do so. In the first place an arbitrary stand of that kind on the part of the makers will be certain to result in their losing the respect and patronage of the dealers. The average dealer in this or any other country cannot be coerced in any such high handed manner. Another reason why such a thing in our opinion will fail to accomplish anything is because no such agreement among makers will be sustained. We do not believe that the manufacturers in Germany are any different from those in this country, and we are quite satisfied that no such arrangement could be maintained among manufacturers in the United States. Just as soon as any such agreement was formed there would always be some ready to take advantage of the situation and break the agreement to their own profit. As soon as the others found it out they would all break and run for the business, with the result that competition would be sharper than before. These kind of things look very serious on paper, but in reality we do not think they ever amount to anything or accomplish in the slightest degree the object sought. An increased tariff on American bicycles shipped into Germany would certainly be felt heavily by all American makers of trade connections in Germany, but we do not think that the German makers can in any way interfere to any great extent with the sale of American bicycles in Germany through any trade combination or agreement.

NATIONAL SEWING MACHINE Co.

#### Public Will Demand American Bicycles.

While on the face of it the action of the German bicycle manufacturers to stop the importation of American wheels into that country may appear to be one which will prevent any German retailer from handling American goods, we do not think it will have this effect, as the bicycles made in this country are so superior to those of any other country that the public will get them in one way or another; and from what we have learned through your valuable paper and otherwise, we believe export orders for German territory are coming in at the usual rate. It has not so far had any effect on our business nor do we anticipate any serious falling off in our German orders.

KEATING WHEEL Co.

#### Action Will Prove a Boomerang.

We have your favor of the 20th inst., in reference to the restrictions placed upon the bicycle dealers in Germany by the home manufacturers. In our opinion the policy of the German bicycle manufacturer will place the independent dealer with capital to back him in a position to sell larger quantities of American bicycles than before and will create a prejudice against the home industry among their own people. It seems to us that the German manufacturers have vainly fought against progress and competition and are now trying to protect themselves with a Chinese wall as a last resort. We do not believe that they will win, but on the contrary we are convinced that they will be beaten.

LEAGUE CYCLE WORKS.

#### Dealers' Independence Should Assert Itself.

We were cognizant of the action proposed by the German cycle manufacturers, but are hardly prepared to prophesy as to the effect which their decree will have on the Ameri-

can trade in Germany. From our individual standpoint we do not believe it will affect us to any extent. We do a good, healthy business with several large German customers and do not expect that there will be any falling off in their orders. We do not know, of course, just how the German cycle dealer will look upon this matter, but if the American manufacturers in any line resorted to such methods to shut out German products we firmly believe that the spirit of independence which prevails in this country would increase the German trade rather than retard it. We hope that the composition of the German cycle dealers is of the same stuff and that they will make it so unpleasant for the German manufacturers as to compel the annulling of the decree.

WALTHAM MFG Co.

#### Jobbers Can Extend Credit.

We are very little concerned regarding the action of the German bicycle manufacturers, as we do not believe any such action could be effective in any manner. The trade we have reached in Germany has been about three-fourths jobbers, and of the machines we have exported the other one-fourth has gone to German manufacturers themselves, who have put our machines out under their own name plates. We do not conceive that in this latter case this action will amount to anything. In the case of the jobbers, the conditions in Germany are very much as they are here. The jobbers put out the machines we manufacture under their own name plates and the manufacturers are not known in the transaction between the jobber and retailer at all. It would seem to us that it would require a special detective force on the part of German manufacturers to ascertain whether or not any number of dealers were handling American bicycles. If the jobber extends the retailer credit, the manufacturer would be out of the game anyhow. The reported action has not interfered with our shipments to date.

BEEBE MFG. Co.

#### Quality Will Count in the End.

We can easily see how the attitude of the German manufacturers will result in shutting out a good many American made bicycles, although we are confident that the superiority of American goods over the German will more than offset the effect of the embargo. We do not see how American manufacturers can grant a system of credits to foreign dealers when the source of information in regard to financial standing of these dealers is so meager and hard to get. We adopted the policy ourselves of not allowing anything to go out of the country until it was paid for, and always in making foreign shipments to arrange for payments in New York against bills of lading. The large manufacturers who have regular established agencies on the other side can of course keep as close watch of local affairs as they can at home. We do not see how smaller manufacturers can do other than we are doing and be safe.

COLTON CYCLE Co.

#### Dealers Can Get Along Without Credit.

We would be of the opinion that the action of the German government would have no very serious effect on American trade in that country. If American bicycles are enough in advance of German made machines to sell in that market, we would think that a dealer might survive without a line of credit from German manufacturers.

ROYAL CYCLE WORKS.

#### Dealers Will Not be Dictated To.

We have noted carefully the action of the members of the German Bicycle Manufacturers' Association, in refusing credit to all retail dealers in Germany who handle American bicycles. We do not think that this will have the effect that the German Bicycle Manufacturers' Association intends it shall, as we do not believe the small dealers will be dictated to by the manufacturers in this manner. We expect to sell more bicycles in Germany this season than ever.

AMES & FROST Co.

#### Not Concerned by the Action.

What trade we have had in Germany has been on a cash basis, and we do not anticipate that the action of the German manufacturers will hurt us to any great extent. The demand there being almost entirely for cheap machines, we have never made any special effort for their trade, as we do not manufacture anything in that line.

DAVIS SEWING MACHINE Co.

#### American Makers Should Combine Also.

We think if American manufacturers would combine as the Germans have in regard to business done in that country, they would be very successful in competing with them on their own ground. American manufacturers have got to be sure that the people with whom they do business are entitled to a line of credit before making shipments of their goods.

THE OLIVE WHEEL Co.

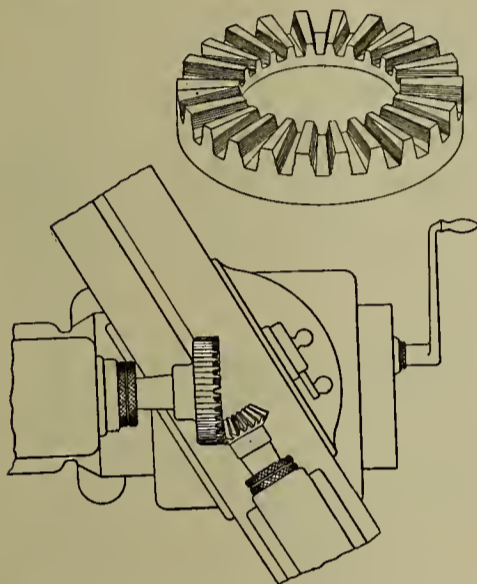


**RAPID BEVEL GEAR CUTTER****BROWN & SHARPE'S PATENT****Radial Crown Gears Generate Bevel Gears of Any Angle by Automatic Planing and Abrading.**

Patents have been recently granted to Oscar J. Beale, of Providence, R. I., on gear cutting devices which are specially intended for cutting accurate bevel gears and pinions such as are used in bevel gear chainless bicycles. The patents are assigned to the Brown & Sharpe Mfg. Co.

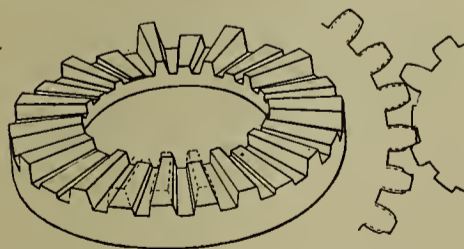
**Intermittent Removal of Stock.**

The main feature of the cutting device is a generator in the form of a gear having the teeth scored, mutilated, or with portions removed to form edges or points arranged in varying relation to the pitch



surface so that they will remove the surplus stock from the surfaces of the blank teeth by merely rolling the pitch surfaces together without slip. In the application of the invention to the manufacture of bevel gearing the generator is preferably in the form of a crown gear, as such a gear may be conveniently cut and the gears or pinions formed by such a generator will run accurately with each other and form interchangeable sets.

The upper figure in the first illustration shows a preferred form of generator. The cutting surfaces of the generating teeth are roughened like files and will act to abrade or cut away the surplus stock of the blank by an action similar to that of a file. It will be noticed that the file corrugations are in-



clined one way on one tooth and in the opposite direction on the next, and so on around the generator. This arrangement of the cutting edges makes it impossible for any portion of the pitch surface of the blank teeth to be missed.

**Works on a Milling Machine.**

The lower figure in the same illustration shows the generator at work on a milling machine.

In the lower illustration another form of generator, in which the cutting edges of the generating teeth are formed by mutilating the several teeth differently so that one tooth takes away surplus stock

at one point on the blank tooth and another at a different point, and so on, is shown. The other sketch in this illustration indicates the operation of this form of cutter, though the principle, for sake of clearer illustration, is indicated as if applied to a spur gear generator.

**Subject of Importance to Exporters.**

The well known firm of Brown Brothers, Limited, of London, extensive dealers in cycle fittings and sundries, write to the editor, stating that three-quarters of the letters they receive from American houses bringing parts and sundries to their notice are insufficiently stamped so that the firm has to pay from 6 to 18 cents on each letter for postage due, the charge being double the amount of the insufficiency. Of late the firm has, for this reason, been returning unopened many American letters, being very properly unwilling to pay postage on them. Attention has been repeatedly called to this small but very important matter by American consuls, without any appreciable effect, but this advice from Brown Brothers shows such a direct possibility of loss to the senders of such letters that they will probably do more than dismiss the subject with a passing thought.

**Local Show for Washington.**

Washington, D. C., Jan. 23.—Cycle dealers here are taking much interest in the cycle show to be held during the week beginning February 27 under the auspices of the Bicycle Show company, composed of the representative local tradesmen, who elected officers as follows: L. B. Graves, president; J. D. Lasley, secretary; W. J. Foss, treasurer; John Woerner, manager, and Rudolph Jose, assistant manager. Practically all of the local dealers have closed contracts for exhibition space, and there are some out-of-town firms represented as well. Pope Mfg. Co., Overman Wheel company, and Duryea Mfg. company have signified their intention of exhibiting motor vehicles.

**Enjoined from Selling Factory.**

The litigation over the affairs of the Worcester Cycle Mfg. Company continues to drag out its weary length. The latest move is an injunction secured by the Central Trust Company of New York in the United States circuit court at Boston to prevent the proposed sale of the Worcester factory building by the mortgagee, the Worcester County Institution for Savings, to satisfy an account of \$80,000 due on first mortgage. The Central Trust Company holds a third mortgage on the real estate and property of the cycle company.

**Want Rex Co. Declared Bankrupt.**

Louis A. Levin, of Philadelphia, and W. T. Trowbridge, of Chicago, have filed in the United States district court a petition to have the Rex Cycle company of Chicago declared bankrupt. It is alleged that the concern committed an act of bankruptcy by favoring certain creditors.

**Relay Company Elects New Officers.**

At the recent annual meeting of the stockholders of the Relay Mfg. Co., of Reading, Pa., the present directors were re-elected for the year. They reorganized with the following officers: President, John R. Miller; secretary, Keyser Fry; treasurer, J. W. Minnig.

A new impulse has been given the cycle trade of Leesburg, Fla., owing to the extension of the clay road system comprising twenty-five miles of paved highways leading out of town in all directions.

**NIGHT WORK OF LITTLE VALUE****ONLY TWO ADVANTAGES GAINED****Profits Offset by Lower Working Capacity of Men and Poorer Quality of Workmanship.**

At the present time many of the manufacturing establishments of this country are compelled to work overtime. In some instances the extra work is performed by the day force during two or three hours in the evening; in others the pressure is so great as to require two separate gangs—one for day and one for night.

**Trade Retained by Fulfilling Contracts.**

There are practically only two advantages in overtime work—namely, getting the job done on time and thereby fulfilling the terms of the contract, and keeping the good will and trade of a customer, says Iron Age. A reputation for punctuality in the execution of an order is exceedingly hard to earn and far more difficult to keep, yet when once attained it represents good will of the greatest value. The second advantage has been illustrated forcibly in England during the past few months. The inability of the machine tool builders of that country to make deliveries when wanted diverted the trade abroad, especially to the United States.

**Overwork is Mostly Glory Work.**

Whether or not any advantage is secured in the form of increased profits through night work and its added output is a question to be answered differently in different lines. In some industries the profit is larger than it would otherwise be; but in others the augmented cost of producing is sufficient to wipe out the gains made during the day, and if this point alone is taken into consideration, the manufacturer has conducted his business for the glory and not for the cash there may be in it. Works running day and night may or may not be in the flood of prosperity—it depends essentially upon the kind of work turned out.

**Working Conditions Bad at Night.**

Inquiry among machine men shows a wide divergence of opinion upon this question. Its mechanical side is most diversified and interesting. The output is less, hour for hour, during the night. Perhaps the only exception to this is when the work is performed almost entirely by strictly automatic machinery, or when the work is of such a character that the operator becomes, by reason of constant repetition, an animated machine of the automatic type. In the ordinary machine shop, where the work is more or less varied, the output is invariably less at night. The conditions are different; the light is poorer, even in the best shops, and the man himself is tired and does not possess the vim and energy he displayed during the day. Some shops will not even attempt to do work at night which requires close measurement. Bench work of all kinds is less satisfactory at night, its very nature requiring the hours of the day for its proper performance.

**Comparative Working Capacity.**

It has been ascertained by more than one manufacturer that two gangs of men, equal in every respect, will not perform the same duty day and night. The superiority is always found on the side of those working during the daytime. This holds good in machine shops equipped with every modern appliance for doing work, and in shops in every way behind the time. The mechanical man is not a nocturnal animal—he is at his best only during daylight.

## NEW YORK CYCLE SHOW

### Suffers by Comparison With Former Exhibitions—Public Seeks Novelties—Review of Displays

New York City, Jan. 23.—As a spectacle intended to convince the public that the cycle industry is not in a state of decay, the show now in progress in this city—with its 107 exhibitors—is not of such a forceful character as to summarily arrest the growth of that evil opinion, if it be existent. For the function is meant in comparison with like exhibitions of other years, though a brave effort has been made to cheat the senses and compel a different belief by means of a generous use of theatrical properties. The attendance, which regularly is large in the evenings, in a measure atones for this.

As a mart of trade, where makers could secure orders from agents, the show betrays those people who fixed their hopes upon it. Though agents are by no means repelled by the exhibition, yet they are not powerfully attracted to it. The dealers of the metropolitan district are met with frequency in the show building, but it is seldom that buyers from remote parts are encountered, although a few have journeyed hither from the western parts of New York, Pennsylvania, the New England states, and a couple of the five southern states which are accounted profitable fields of work for bicycle makers.

#### Local Character Criticized.

Competent critics assert that the show is like its precursor in Chicago—local in character and influence. The few firms which undertook to give some of the old-time magnificence to the booths are put out of countenance at observing their propinquity to the rather shabby displays made by rivals. The crowds plunge in the direction of the exhibits which feed their curiosity. A new driving gear, any of the varieties, always provokes attention. The visitors are in attendance merely to be amused. Only the automobiles are seriously taken.

Following is a summary of the exhibits:

#### Acme Mfg. Co., Reading, Pa.

Many features peculiar to the equipment of Stormer bicycles are now found in the Pennants. The firm has recently decided to enlarge its line by the addition of a chainless model which will be fitted with the Sager gear.

Model.	Style.	Retail Price.	Wt. lbs.
Pennant, men	Chain	\$35	26
Pennant, women	Chain	35	26½
Stormer, men	Chain	40	24
Stormer, women	Chain	40	25½
Mars, 27	Chain	25	26
Mars, 28	Chain	25	27
1 and 2	Chain	20	..
3 and 4	Chain	25	..
Chainless, men	Sager gear	..	26
Chainless, women	Sager gear	..	27½

#### American Bicycle Chain Cleaner Co., New York.

This firm exhibits a device for cleaning the chain of a bicycle. The chain is first passed through kerosene, then through a hot water bath, and eventually through tallow.

#### Alpha Lamp Co., New York City.

The characteristic features of the Alpha acetylene gas lamp are: it has no tube for alimentation, no taps, no valves, is inodorous, and does not require cleaning. The contact between the water and the calcium carbide is produced by unscrewing a metallic cork. The drip is automatically regulated. The reflector has no lens, a feature which is common

to the gas lamps used in France. It is made in one pattern for cycle use and is handled by Edmond A. Dreyfus, 123 Liberty street.

Model.	Style.	Retail Price.	Wt. oz.
Cycle lamp	Gas	\$3.75	16
Carriage lamp, per pair	Gas	20.00	..
House lamp	Gas	4.00 up	..

#### Badger Brass Mfg. Co., Kenosha, Wis.

The familiar general lines of the Solar acetylene gas lamp are maintained in the improved patterns. It is much lighter in weight and slightly smaller, has an improved bracket, an instantaneously removable tip holder, a straight wick tube and new valve, which permits the lamp to be instantly lighted, besides many minor improvements, all of which will be greatly appreciated. The Badger Brass people have been making gas lamps exclusively for two years, and may with propriety lay claim to such skill in gas lamp construction, as so long an apprenticeship and experience implies.

Model.	Style.	Retail Price.	Wt. lbs.
Solar cycle lamp	Acetylene	\$3.50	..
Solar coach lamp	Acetylene	15.00 pair.	..
Solar dash'b'd lamp	Acetylene	9.00 pair.	..

#### Barkeley & Kent, New York City.

The business of this firm is largely that of a saddle exchange. It exhibits also Smith's two-roller seat post, sprocket-rims and lubricants.

#### Beckley-Ralston Co., Chicago.

This concern shows Gordon saddles. They are all padded but the wood base patterns. As makers' agents, the firm handles wrenches, hangers and hubs of the Park City Mfg. Co. and D. & J. hangers. They job the Waterbury Mfg. Co.'s pumps, the Manhattan Brass Co.'s lamps, the Badger Brass Mfg. Co.'s lamps, and the goods of the Schumacher Acetylene Lamp Co., the Pony Headlight, a gas lamp weighing, with bracket, 8 ounces; the G. L. Thompson fittings, the Hotelling brazing compounds, the Velox pedal, Crown chains and Singer hubs.

Model.	Style.	Retail Price.	Wt. oz.
Gordon extra wide	Padded	\$3.00	17
Gordon regular	Padded	2.50	15
Gordon	Wood base	2.50	15
Gordon Expert	Padded	1.50	15
Gordon Alpine	Padded	1.20	14
Gordon 14	Padded	1.00	13
Gordon Favorite	Rigid padded	.80	16

#### W. E. Blaisdell, Brooklyn.

The latest and by no means least desirable addition to the list of free pedal devices is shown. It is known as the Safety brake and coaster and possesses the merit of being applicable to any machine. The brake holder is clamped to the lower rear forks and the brake itself clamped to a rod connected with the operating device is made part of the sprocket. Inside of the sprocket rim is a second rim, on the inside of which are a series of notches in which, as the thrust is applied, a dog engages. Back-peddalling slightly releases the dog and allows the wheel to run freely; heavier backward pressure operates on a hinge in the brake rod and applies the brake to the rear wheel.

#### Black Mfg. Co., Erie, Pa.

The quality of the goods made by this house is never challenged. On this account, however, the firm does not refuse to refine its manufacture from year to

year, a fact which is plainly evident from observation of its models. Whatever success may be in store for those who manufacture 30-inch wheels, it is pretty generally conceded that the Black company will, from its pioneer aid in connection with the movement, reap much of the anticipated advantages. All models are fitted with the recently patented internal expanders for fastening bar and seat post, both of which devices are to the credit of Mr. L. B. Saylor, vice-president and general manager of this concern.

Model.	Style.	Retail Price.	Wt. lbs.
Men, 40	Chain	\$40	23
Women, 41	Chain	40	25
Men, 42	Chain	50	22½
Women, 43	Chain	50	24½
Men, 44	30-in. wheels	50	23½
Racer	Chain	75	19½
Men, 460	30-in. wheels	75	22
Tandem	..	100	37
Triplet	..	100	58

#### Hermann Boker & Co., New York City.

With a varied and extensive line this house makes an interesting display. In cycles its attention is confined to the Imperial. The line of lamps is, perhaps, the most comprehensive in the show, embracing the products of four makers. To the Solar reference is made elsewhere. Other acetylene lamps are the Crescent and Breckenridge, the former listed at the popular price of \$2.50 and weighing 12 ounces. The Breckenridge is also made for oil. The Fonto electric completes the list. The Baldwin brake is given space, as is a suitable show of M. & W. tires.

Model.	Style.	Retail Price.	Wt. lbs.
Imperial 100, men 30-in.	Chain	\$55	25
Imperial 90 men	Chain	50	24
Imperial 91 women	Chain	50	24
Imperial 80, men	Chain	35	24
Imperial 81, women	Chain	35	24

Model.	Style.	Retail Price.	Wt. oz.
Breckenridge lamp	Acetylene	\$3.50	14
Light Weight lamp	Oil	1.00	14

#### E. A. Brecher & Co., New York City.

Two frame patterns are shown by this firm. One, the Perfection, has drop forged lugs and seamless tubing, with Thor hangers, rear fork ends and expanders. The other, the New Century, has seamless tubing, a Fauber hanger and Thor expanders. Peter Forg's forged sprockets and a general line of fittings are also displayed.

#### Bridgeport Brass Co., Bridgeport, Conn.

This firm exhibits Search Light oil and gas lamps, aluminum pumps, a new pump with patented expander or plunger, and oiler for home use. The new Search Light gas lamp will retail for \$5. In it the water is placed below the carbide and fed up through a wick. The flow of the water and consequent height of flame are under easy control. The water supply is automatic. The oil Search Light will retail at \$3.50.

#### Bridgeport Gun Implement Co., Bridgeport.

The exhibit consists of a sample of each article made, embracing the following: Ray saddle, aluminum base, the feature of which is an opening on each side, bridged over with leather, on which the pelvic bones rest; weight, 18 ounces; retail price, \$3.50; Star pedals, price \$3.50; Bridgeport pedals, price \$3; Echo call, Universal whistle, B. G. I. screwdrivers, Brooklyn, Simplicity and Biped stands, golf outfits.

#### Brown Lipe Gear Co., Rochester.

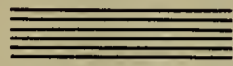
The changeable gear made by this firm is exhibited upon a Cleveland bicycle. A display is also made of the handy tool which the company makes for the repair of tires.

#### Bullis Ball Gear Co., Rochester.

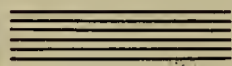
The Bullis ball gear escapes the requirements for great accuracy of gear adjustment and frame alignment of the bevel gear by having the axes of all roll-



TRADE MARK



# 65



MANUFACTURERS ARE FURNISHING



## Dunlop Detachable Tires



On their wheels AT NO EXTRA COST, either wholesale or retail. Agents should see that the manufacturers whom they represent are among this number. Write us about it.



1899 IS GOING TO BE A DUNLOP YEAR.



### The American Dunlop Tire Company



134 Lake Street, Chicago.

Belleville, (North Newark) N. J.

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TRADE MARK



# THE STERLING

"BUILT LIKE A WATCH"

## QUALITY MAINTAINED

RADICAL CHANGES.  
PLEASING FEATURES.  
HIGH GRADE EQUIPMENT.  
SUPERIOR RUNNING QUALITIES.



IF YOU ARE  
IN LINE FOR THE AGENCY  
OF AN  
ALL-THE-YEAR-ROUND  
BICYCLE

## BUILT TO ENDURE

WE WILL BE  
GLAD TO SUBMIT TO YOU  
OUR PROPOSITION

# STERLING CYCLE WORKS, KENOSHA, WIS.

ers at an angle somewhere near 45 degrees with the pinion shaft. The rollers are in the form of steel balls mounted to revolve on pins. The balls of one pinion engage the balls of the other pinion, and both balls in engagement accommodate themselves by rotation on their journal pins to the requirements of the gear motion. The contact is always at a single point on both balls, but the rotation causes this point to travel over both balls in an S-shaped line, thereby distributing the wear which, on account of the purely rolling contact, is very insignificant. Side thrust is eliminated very largely by shaping each pinion with scalloped edges and mounting the balls in the scallops; thus the ball rollers of one pinion reach deeply into the engaging pinion, and the driving force is exerted in an approximately vertical line without any tendency to push the two pinions apart at point of engagement. The intermeshing is continuous without back lash. This gear will be handled in the west and south by the Excelsior Supply Co., of Chicago.

**Frank E. Bundy Lamp Co., Elmira, N. Y.**

In the Bundy lamp, which has been perfected after two years of experimentation and trial, all the objections which have been lodged against gas lamps have been overcome, and its makers declare it perfect. In such matters as efficiency in use, ease of charging, certainty of operation, control of water supply, and even generation of pure dry gas, the lamp fulfills all requirements. All its parts are interchangeable. It is adapted for cycle, carriage or house use. A neat physician's gas lamp is exhibited and should find a ready sale at the hands of dealers. It is intended to aid in the examination of the throat, eye or ear, or in any of the surgical operations where artificial light is needed.

Model.	Style.	Retail Price.	Wt., oz.
Cycle lamp	Gas	\$3.50	20
Physician's lamp	Gas	5.00	..
Fireman's lamp	Gas	3.50 up	..

**Claus Handle Bar Mfg. Co., Milwaukee.**

The Claus bars have become too well known to need detailed description. Attention is due, however, to an expansion stem, one of the latest of the company's devices for the insurance of convenience and comfort. It is claimed that in many of the expanding devices commonly used the point of contact of the expander with the lug or tubing is so small as to be inefficient. To overcome this the Claus company cuts its post in two at an angle of about 90 degrees, runs a rod down through and connects with the bottom, and, by means of a nut at the top, draws it upward. The result is contact between the post and the tubing extending over the entire length of the post. No wrench is required on any of the Claus bars, yet they are almost instantly adjustable to any desired position.

**G. W. Cole & Co., New York City.**

"3-in-one" cycle oil long ago became a fixture in the cycle trade. Energetic handling and adaptability to the trade's requirements have made it a fixture. Puncture healing fluids, chain lubricant, toe clips, luggage carriers, nipple wrenches and other small articles are also exhibited.

**Crawford Mfg. Co., Hagerstown, Md.**

Each year this firm aims to add to its line in order that customers may not complain on the score of incompleteness. Crawford machines are built for service. They lack nothing which can aid the dealer in effecting sales.

Model.	Style.	Retail Price.	Wt., lbs.
Tandem	Double diamond	\$75	48
Chainless, women	Bevel gear	65	29
Chainless, men	Bevel gear	65	28
Men (3)	Chain	35	22½
Women (2)	Chain	35	25

Juvenile, boys	20-in. wheels	20	13½
Juvenile	20-in. wheels	20	13½
Juvenile, boys	24-in. wheels	25	23½
Juvenile, girls	24-in. wheels	25	23½
Juvenile, boys	26-in. wheels	30	23½
Juvenile, girls	26-in. wheels	30	23½
Men (3)	Chain	25	25
Women (2)	Chain	25	26
Women (2)	Chain	50	25
Men (3)	Chain	50	22½

**Cushman & Denison, New York City.**

Oilers, standard articles which have been before the trade for many years, are the sole feature with these exhibitors, who have applied themselves to doing one thing and doing it well. There are four patterns, the Perfect, Star, Leader, and Gem, ranging in price from 25 cents for the first to 5 cents for the last named.

**Davis Sewing Machine Co., Dayton, O.**

The Dayton is shown in conjunction with the Tinkham exhibit. The Hussey hub, made a feature of the latest models, is the point of interest. The advantages claimed are lightness, increased strength, the impossibility in the absence of flanges of the spokes pulling out, and general cleanliness in and about the hubs and hangers.

Model.	Style.	Retail Price.	Wt., lbs.
Dayton road racer 32	Chain	\$75	22
Dayton racer 33	Chain	75	20
Dayton ladies 31	Chain	75	24
Dayton men 35	Chain	50	24
Dayton ladies 36	Chain	50	22
Victor mens 43	Chain	50	23½

**S. B. Davega, New York City.**

For \$2 a week this firm offers to sell Monarch, Columbia, Crawford, Pierce, Defiance, Iver Johnson, Tiger, Orient, Hartford, Vedette and Featherstone bicycles until the full purchase price is paid.

**Defender Cycle Co., New York City.**

No less than a score of models are offered by this firm. Most prominently displayed is the Sager geared chainless model.

Model.	Style.	Retail Price.	Wt., lbs.
Men, A	Chain	\$65	20
Tandem, B	Double diamond	115	36
Men, C 1	Chain	65	22
Men, C 2	30-in. wheels	70	24
Women, D	Chain	65	23
Tandem, E	Double diamond	110	38
Tandem, F	Combination	110	38
Men, G 31	Chain	55	21
Men G 4	30-in. wheels	60	24
Women, H	Chain	55	24
Tandem, I	Double diamond	90	37
Tandem, J	Combination	90	38
Men, K 5	Chain	45	22
Men, K 6	30-in. wheels	50	24
Women, L	Chain	\$45	..
Men, M 7	Chain	35	23
Men, M 8	30-in. wheels	35	24
Women, N	Chain	35	22
Men	Sager gear chainless	85	24

**Diamond Rubber Co., Akron, O.**

The woven fabric used by this firm in the construction of its single tube tires for bicycles is also employed in the construction of its vehicle tires, which are made in cross diameters from 5 inches down to 1¼ inches, and in weights from 35 pounds apiece down to 2 pounds apiece for use on sulkies. The vehicle tire fabric is from three to twelve ply.

Model.	Style.	Retail Price.	Wt., lbs.
Clipper	Single tube	\$6	4
Antelope	Single tube	6	4
Crown Prince	Single tube	6	4
Diamond A	Single tube	8	4
Diamond B	Single tube	7	4
Vehicle tire		7	35

**William Diebel, Philadelphia.**

Swinging pedals with a single bearing are the specialty of this exhibitor, who also shows a bell operated by contact with the tire and the Quaker City toe clip.

**Jos. Dixon Crucible Co., Jersey City, N. J.**

A graphite crucible employed in brazing by immersion attracts unusual interest. The firm reports that there is a constantly increasing demand for special information which will enable bicycle manufacturers to proceed intelligently in the

work of dip brazing. Special crucibles, always made of graphite, are occasionally demanded, some orders having recently been received for circular pots such as are in common use in brass foundries.

**Empire Rubber Co., New York City.**

Referee, Eureka and Hercules tires are shown by this firm. A cure for porous tires is also exhibited.

Model.	Style.	Retail Price.
Referee	Single tube	\$8.00
Eureka	Single tube	6.00
Hercules	Single tube	4.00

**Eureka Trading Co., New York City.**

Three models for jobbers, on which no retail prices are given, comprise this firm's line. All are of standard equipment, with no departure from accepted lines.

Model	Style.	Wt., lbs.
Day, men	Chain	22
Day, women	Chain	25
Cosmopolitan, men	Chain	22
Cosmopolitan, women	Chain	25
Eureka, men	Chain	22
Eureka, women	Chain	25

**W. H. Fauber, Chicago.**

The Fauber exhibit is practically a duplicate of the Chicago display. One point causes comment, viz., a comparative statement of the volume of business transacted in Fauber hangers during the past five years. A portion of a triplet frame, prominently displayed and decorated with small incandescent lamps, shows the applicability of the hanger to multicycle construction. An exaggerated hanger is used for purposes of demonstration of its mechanical principles.

**A. Featherstone & Co.**

All Featherstone models are finished with extreme neatness, particularly at the head and seat post cluster. Their crank axle construction is extremely simple. A racer is exhibited for the first time. The policy of the house is to meet the demand of agents for a complete line of machines at popular prices and which can be retailed at a good margin of profit.

Model.	Style.	Retail Price.	Wt., lbs.
Model A	30-in. wheels	\$50	26½
Racer	Chain	50	22
Model C, men	Chain	40	25
Model D, women	Chain	40	26
Model E, men	Chain	30	26
Model F, women	Chain	30	27
Special E, men	Chain	25	26
Special F, women	Chain	25	27

**Frontenac Mfg. Co., Syracuse.**

A neatly designed 30-inch model is shown by this firm. Throughout the line the well known Frontenac front fork crown construction is in evidence.

Model.	Style.	Retail Price.	Wt., lbs.
Roadster, A	Chain	\$50	23½
Racer, B	Chain	65	22
Women, G	Diamond	50	22
Women, C	Drop frame	50	26
Roadster, E	30-in. wheels	60	26
Chainless, men	Sager gear	75	26

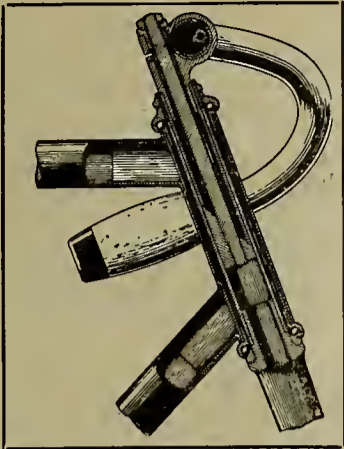
**E. P. Gleason Mfg. Co., New York City.**

The goods which this firm displays consist of foot pumps, nipples, valves, gauges, regulators and pump fittings. The most interesting of the exhibits is an electrically driven triple cylinder pump for high pressure. Quick service pumps for storage and direct use and triple cylinder pumps for power are also shown.

Model.	Style.	Retail Price.
Gleason Special	Foot	\$0.75
Gleason Special	Foot	.55
Tandem Special	Foot	1.25
Seneca	Foot	1.75
Young America	Foot	3.00
Quick Service	Hand lever	6.00
Power pump		22.50
Triple cylinder	Power	35.00

**Peter A. Frasse & Co., New York City.**

This firm aims to supply complete outfits of machinery and tools for repairmen. In addition to such articles as



It is one of those

# National New Ideas

which you find only on National Bicycles and on '99 Nationals you get it with all of the improvements which its use has developed. It is the original internal handle bar binder; first produced by us in 1896.

**Still the Simplest and Best.**  
**Positive in its hold. Neat in Appearance.**  
**Sure to release when you want it to.**

Our catalog is a readable, sensible, plain business talk worth reading by a dealer who wants to do a satisfactory business.  
Get it for the asking.

**National Cycle Mfg. Co.**  
Bay City, Mich.

What you get for your money is as important as the amount you pay.

# Plain Talks on Andrae Cycles

VI—Track Racer, Model 42, \$60.

The Andrae Track Racer costs \$60.

To professionals, amateurs, anybody.

The Andrae is ridden by more professionals than any other wheel they must pay for.

It pays to ride an Andrae even though you must pay for it and ride without a salary.

First prizes usually amount to more than salaries.

Riders of other wheels get salaries, riders of the Andrae get first prizes.

The racing men of your town are not the only men to whom you can sell the Andrae racer.

There are many others who want the fleetest bicycle made.

Write for trade prices on the Andrae line of 15 models.

Send us your name and address for our monthly paper, "The Andrae Agent."

**ANDRAE CYCLES NEVER DISAPPOINT.**

**Julius Andrae & Sons Co.**  
MILWAUKEE, WIS.

Eastern Export Branch: 95 Reade St., New York City.

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8  
9  
9



Swinging

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New Year

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Vigor

**W**E propose to do business in 1899—we want to help our thousands of agents to do business—profitable business. So we have put all the brains and energy of our vast establishment into making the Waverley better than ever, and have fixed purse-tempting prices that will make bicycle-selling a picnic:

# Waverley BICYCLES \$40

IVANHOE SPECIALS, - - - \$35  
IVANHOE BICYCLES, - \$25 and \$26

**W**E don't make any exceptions when we say the Waverley Line is the strongest, handsomest and fastest selling line of bicycles on the market. If you are not representing or riding the Waverley we want a chance to talk to you. Write.

**INDIANA BICYCLE CO.**  
INDIANAPOLIS, IND.

lathes, brazing stands, gasoline forges, vises, drills, taps, reamers, etc., the firm handles tubes, forks, and rear stays made by the Shelby Steel Tube Company, Snow chains, Walker & Ehrman tandem fittings, Hauber hangers, Drake rims, Mel-link expanders, Hotelling Bros.' brazing compounds, Crosby & Mayer's fittings, White Sewing Machine Company's pedals, electrically welded fittings, and the hubs made by the Cleveland Hub Company.

**B. F. Goodrich Co., Akron, O.**

Samples of all the tires mentioned in the appended table are exhibited. They comprise the entire line of the concern.

Model.	Style.	Retail Price.	Wt. lbs.
Palmer	Quad	\$16.00	
Palmer	Tandem	15.00	
Palmer	Plank road	15.00	
Palmer	Road	12.00	
Palmer	Light racer	12.00	
Palmer	Mexican	15.00	
Goodrich	Road	10.00	
Goodrich	Semi-road	10.00	
Goodrich	Tandem	15.00	
Goodrich (999)	Quad	14.00	
Goodrich	Triplet	14.00	
Goodrich	Tandem	14.00	
Goodrich	Road	9.00	
G. & J. (detachable)	Heavy tread	11.00	
G. & J. (detachable)	Tandem	11.50	
G. & J. (detachable)	Road	10.00	
Goodrich (M. & W.)	Road	9.00	
Buckeye (detachable)	Sulky	10.00	
Bailey (non-slipping)	Road	10.00	

**Grand Rapids Cycle Co., Grand Rapids.**

This company shows samples of a splendid line from juveniles to the best grades, of which nothing more may be said than that they are "built for business."

Model.	Style.	Retail Price.	Wt. lbs.
Garnet, men	Chain	\$25	24
Garnet, women	Chain	25	24 1/2
Men, 50	Chain	35	24
Women, 51	Chain	35	24 1/2
Special, men	Chain	50	24
Special, men	30-in. wheels	50	25
Special, women	Chain	50	24 1/2
Special, men	Chain	60	21 1/2
Chainless, men	Bevel gear	75	26
Chainless, women	Bevel gear	75	27

**Green & Haskell, New York City.**

This firm is the selling agent for the gas lamps made by the Electro Lamp Company. The lamp possesses the advantage of being small and so constructed as to generate gas from loose calcium carbide or prepared charges of it.

Model.	Style.	Retail Price.	Wt. oz.
Electro lamp	Gas	\$3.50	14

**Hartford Rubber Works Co.**

Tires for motor vehicles are strikingly in evidence at this booth. Their construction is similar to the well known single tube construction peculiar to this firm. They are made in 56-inch size and vary in cross diameters from 1 3/4 inches to 5 inches. The other five patterns shown are as follows:

Model.	Style.	Retail Price.	Wt. lbs.
Pattern 70	Road	\$ 8	4
Pattern 80	Light Road	10	4
Pattern 75	Racing	10	2
Pattern 77	Regular Road	10	4
Pattern 77 H	Tandem	10	4 1/2
Juvenile Patterns.			

**Hollenbeck Saddle Co., Syracuse.**

For a combination of reasonable price, quality and comfort, the Hollenbeck rawhide saddle, now in its third season, is commendable. The strength of the material makes it possible to produce a durable article without the usual base, hence lightness and flexibility are secured. The Hollenbeck weighs but twelve ounces and retails at \$2.

**Heinz & Munschauer, Buffalo.**

Eight models of Heinz bicycles afford liberal choice in style and price, two of the models being fitted with 30-inch wheels. The H. & M. one-piece crank hanger and the Charles O. Barnes coaster and brake are the exhibits outside of the bicycles. The coaster is obtained by a

slight back pressure on the pedals, which releases a sprocket clutch and allows the wheels to run independently. Back pedalling sets the brake, which has no contact with the tire, its mechanism being clustered at the crank hanger; forward pedaling releases it.

Model.	Style.	Retail Price.	Wt. lbs.
Heinz 26, men	30-in. wheels	\$60	25 1/2
Heinz 24, men	Chain	55	23
Heinz 20, 3 crown	30-in. wheels	50	27 1/2
Heinz 14, men	3 crown	45	26
Heinz 18, men	Chain	40	25 1/2
Heinz 22, men	Chain	35	26
Heinz 19, women	Chain	50	27 1/2
Heinz 23, women	Chain	35	27 1/2

**Howard & Pike, New York City.**

This concern has an exhibit of interest to cyclists who ride the year round, consisting of paper waistcoats designed for protective purposes in winter.

**Thomas B. Inness, New York City.**

The bicycle locking and checking devices formerly manufactured by the Cycle Checking Lock Company are on exhibition in this booth.

**R. H. Ingersoll & Bro., New York City.**

This firm is exhibiting regularly constructed bicycles, as well as a 30-inch model, a full line of frame sets and electrically welded fittings made by the Geo. L. Thompson Mfg. Co. and the Standard Tool Co., Lobdell rims, Excelsior spokes, Lerch saddles, Yankee lamps, pedals, hubs and pumps. The Lerch saddles are shown in three models, one in the Brown pattern and the other two anatomical.

Model.	Style.	Retail Price.	Wt. lbs.
Ingersoll, men	Chain	\$35	23
Ingersoll, women	Chain	35	23
Ingersoll	30-in. wheels	40	25

**International Cycle Fittings Co., New York.**

This house shows frame sets, built up bicycles and frames. All frame connections are made from drop forgings. The bicycles are fitted with Sunbeam spokes. The International and Criterion hubs are the company's own line and it jobs Thames and Baldwin chains, National pedals and numerous sundries.

**Iven-Brandenburg Co., Chicago.**

Thor hangers, hubs, frame connections, etc., are exhibited in conjunction with Lefever chains, Morse Keefer Co.'s spokes with nipples, Tucker rims and wood guards, and Chicago Drop Forge Co.'s goods. The Iven-Brandenburg Co. is acting as selling agent in the United States for Sager chainless gears and saddles.

**Iver Johnson's Arms & Cycle Works, Fitchburg.**

At a time when the majority of bicycle makers are busy exploiting the serviceability of sheet steel stampings, this firm finds particular satisfaction in stating that in its models drop forgings are used at all of the connections. The distinguishing feature of the higher priced models is the new design in front fork crown, which is arched and open, giving in structural effect and appearance the advantages which are contained in both implied forms of crown construction.

Model.	Style.	Retail Price.	Wt. lbs.
Men, 47	Chain	\$60	20
Men, 48	Chain	60	22
Men, 49	Chain	60	29
Men, 50	Chain	50	24
Women, 51	Chain	50	26
Men, 53	Chain	40	24
Women, 54	Chain	40	26
Men, 55	Chain	75	26
Women, 56	Chain	75	27

**Jamieson Mfg. Co., Rochester.**

The Spinroller gear exhibited by this concern consists of two sets of intermeshing rotary roller teeth, each tooth curving towards its axis. The rollers are supported at their outer ends by a finger-like plate, which supports them rigidly and prevents them from springing the slightest degree when pressure is placed

upon them. The studs on which the rollers are mounted are accurately spaced, and the rollers are ground to a thousandth of an inch. The Spinroller gear is so constructed that when one roller rolls against the other, the working surface is in point contact, and for this reason will stand a considerable degree of deflection. A study of the mechanism shows that the line of pressure is always vertical, upwards at one end of the shaft and downwards at the other. The result is that the Spinroller gear machine starts off with wonderful life the moment pressure of the foot is applied to the pedal.

**L. C. Jandorf & Co., New York City.**

This firm will soon occupy the whole of a large building, situated at 5 West Fourteenth street, as a retail establishment and for repairing and carrying on a general jobbing business. Its exhibits are as follows:

Model.	Style.	Retail Price.	Wt. lbs.
Waverley, men	Chain	\$40	23
Waverley, women	Chain	40	24
Ivanhoe, men	Chain	25-	24
Ivanhoe, women	Chain	26	24
Lynnewood, men, A	Chain	40	23
Lynnewood, women, B	Chain	40	23
Lynnewood, men, C	Chain	35	23
Lynnewood, women, D	Chain	35	23
Lynnewood, men, E	Chain	50	19-21
Lynnewood, women, F	Chain	50	19-21
Crown, men (2)	Chain	30	23
Crown, women (2)	Chain	40	23

**G. R. Johnson Co., New York City.**

The bicycles exhibited by this firm consist of the complete lines made by the National Cycle Mfg. Co., the Reading Cycle Co., and the Keystone Cycle Co. Fittings are also shown from the factory of the Reading Cycle Mfg. Co., chains and spokes from the factory of the Reading Screw Co., mother-of-pearl grips, in a variety of designs, mounted with nickel-plated cap and ferrule, made by Feddersen & Feldmeyer, of Newark, N. J., and Deitz lamps.

Model.	Style.	Retail Price.	Wt. lbs.
National 25, men	Chain	\$60	..
National 26, women	Chain	60	..
National 27	30-in. wheels	65	..
National racer	Chain	75	21
Keystone road racer	30-in. wheels	50	..
Keystone road racer	28-in. wheels	40	..
Keystone special	Chain	35	..
Keystone, women	Chain	40	..
Keystone, boys'	20, 22, 24, 26 in. wheels	25-35	..
Keystone, girls'	20, 22, 24, 26 in. wheels	25-35	..
Keystone tandem	Double diamond	60	..
Keystone tandem	Combination	60	..
Keystone tandem	Single steering	60	..
Vindex Chainless	Gentry Gear	..	..
Vindex light roadster	Chain	50	..
Vindex, men	Chain	40	..
Vindex, women	Chain	40	..
Simplex, men	Chain	35	..
Simplex, women	Chain	35	..
Dietz automobile lamp	Tubular	3.50	..
Dietz cycle lamp	Oil	2.50	..
Dietz cycle lamp	gas	..	..

**Judd Leland & Stevens, Clifton Springs, N. Y.**

This firm exhibits Cyclone and Tornado hand, foot, floor and shop pumps.

Model.	Style.	Retail Price.
Cyclone 3	Foot	\$1.00
Cyclone 3 A	Foot	.75
Cyclone 4	Foot	.75
Cyclone 10	Foot	.50
Cyclone 16	Foot	.25
Cyclone 40	Foot	.50
Cyclone 40 A	Foot	.40
Cyclone 50	Foot	.60
Cyclone 50 A	Foot	.30
Cyclone 15	Lever	3.50
Cyclone 55	Floor	2.50
Tornado 3	Floor	2.00
Tornado 4	Floor	1.75
Tornado 5	Floor	1.25
Tornado 6	Floor	1.00

**Kelly Handlebar Co., Cleveland, O.**

This company will soon use a new clamping device which it is confidently predicted will outlaw many of the devices now in use and shame them in the mat-

ter of simplicity of construction. The No. 3 handle bar pattern has a range of 25 positions. No. 2 for women, No. 3 which is special, and No. 4, which is the racing pattern, round out the line. The finish of the goods is ample evidence of the care taken in the manufacture.

**Kells Mfg. Co., Cleveland, O.**

The fixed aim of this concern is to give a full seat without inconveniencing the rider. The aluminum base of the anatomical pattern is perforated. All the anatomical patterns are fitted with coil springs.

Model.	Style.	Retail Price.	Wt., lbs.
Men, 11	Coil spring, padded	\$2.50	
Women, 12	Padded	2.50	
Men, 14	Flat spring, padded	2.00	
Anatomical, 60			
.....Aluminum base, coil spring		2.00	
Anatomical, 70		2.00	

**Kirk Mfg. Co., Toledo.**

The retention of the Yale flush yoke in the special models made by The Kirk Mfg. Co. is ample evidence of the strength of its tubular construction, which has now been in active service for two years. The eccentric chain adjuster on the special models is a feature highly valued by the makers. The two-piece crank used in these models makes use of the principle of locking the free crank by means of the sprocket wheel. Perfect registration between the holes in the sprocket ring and those in the spider is secured by means of an original and ingenious device.

Model.	Style.	Retail Price.	Wt., lbs.
Yale racer	Chain	\$60	21
Yale special, men	Chain	50	24
Yale special, women	Chain	50	24
.....Diamond frame		50	..
Yale special	.....30-in. wheels	60	26
Yale roadster, men	Chain	35	24
Yale roadster, women	Chain	35	24

**Kokomo Rubber Co., Kokomo, Ind.**

A neat exhibit is made of the various tires made by the house. They range from a \$5 unguaranteed tire to the highest grade.

Model.	Style.	Retail Price.	Wt., lbs.
Defender Special	Road	\$7.50	4
Clover Leaf	Road	9.00	3 3/4
Oxford	Road	5.00	4
Defender	Cactus	8.00	4 1/4
Defender	Tandem	8.50	4 1/2
Clover Leaf	Tandem	11.00	4
Clover Leaf	Racer	9.00	3 1/2

**Lenape Cycle Works, Doylestown, Pa.**

This firm exhibits seven models retailing at popular prices. Their design and construction is typical of that class of bicycles which are built to secure trade and play their part in the retaining of it. The crank hanger construction is of one piece. On the bottom bracket there are three lugs for the frame tubes.

Model.	Style.	Retail Price.	Wt., lbs.
Lenape, 31	.....30-in. wheels	\$50	25
Lenape, men, 32	Chain	45	23
Lenape, women, 32	Chain	45	23
Lenape, men, 34	Chain	40	23
Lenape, women, 34	Chain	40	23
Juvenile, boys	.....24 and 26-in. wheels	29	18
Juvenile, girls	.....24 and 26-in. wheels	29	18

**Lever Hillclimber Co., New York City.**

This firm exhibits a device by which an increase in crank leverage is obtained by artificial lengthening of the crank without increasing the diameter of the stroke of the pedal.

**John S. Leng's Son & Co., New York City.**

This concern handles about 3,000 different articles suited for the cycle trade. Its principal lines are as follows: Weldless steel tubing made in England, Morgan & Wright's tires, Indianapolis Chain & Stamping Company's goods, Plymouth wood rims, Crosby & Mayer's sheet steel stampings, Fiber Buckskin grips, Brennan adjustable handle bars, Snell bicy-

cles, Springfield Drop Forging company's goods, Independent Supply company's expanders, Forsyth Mfg. company's pedals, brakes and metal chain guards, and Butler & Ward's saddles.

Model.	Style.	Retail Price.	Wt., lbs.
Ensign, men	Chain	\$25	24
Ensign, women	Chain	25	24
Snell, men	Chain	50	24
Snell, women	Chain	50	24
Snell Special, men	Chain	60	24
Snell Special, women	Chain	60	24
Snell Special	.....30-in. wheels	60	28
B. & W. Saddle 704	.....Felt padded	3.00	24
B. & W. saddle 614	.....Padded	1.20	20
B. & W. saddle 698	.....Wood base	1.50	20
B. & W. saddle 699	.....Wood base, padded	1.60	24
B. & W. saddle 684	.....Wood base	1.80	20
B. & W. saddle 685	.....Wood base, padded	1.90	24
B. & W. saddle 616	.....Hard	1.90	24
B. & W. saddle 699 C	.....Wood base	1.70	20
B. & W. saddle 686	.....Wood base	2.00	20
B. & W. saddle 695	.....Padded	1.30	24
B. & W. saddle 694	.....Padded	1.20	24

**Liberty Cycle Co., Bridgeport, Conn.**

This firm probably manufactures more models than any concern engaged in cycle manufacture, and justifies this policy by declaring that few riders sit on their machines alike. Consequently Liberty models are raked at the seat mast and constructed with varying lengths of top rails. Notwithstanding this, the variation in wheel base length is very slight.

Model.	Style.	Retail Price.	Wt., lbs.
Men (3)	Chain	\$50	24
Men (2)	Chain	60	21
Men (3)	Chain	50	24
Men (2)	Chain	50	26
Women (3)	Chain	50	26
Tandem (2)	.....Double Diamond	75	..
Tandem (2)	.....Combination	75	..

**H. A. Lozier & Co., Cleveland.**

The dress and chain guard fitted to the women's patterns of Cleveland bicycles is one of a number of minor improvements which are noticeable in the product of the Lozier factory. The firm is making a specialty of a finely finished and well constructed light model for women and confidently anticipates that before the end of the forthcoming season that it will have demonstrated the wisdom of building light bicycles for the fair sex. The Lozier people do not attempt to defend the practice of putting weight in women's machines, particularly when they are sold at a stiff price. The firm has decided to build chainless bicycles fitted with the Sager gear.

Model.	Style.	Retail Price.	Wt., lbs.
Men, 61	Chain	\$50	24
Women, 62	Chain	50	25
Men, 64	Chain	75	21
Women, 65	Chain	75	21
Men, 66	Chain	75	24
Women, 67	Chain	75	25
Men, 68	Chain	75	19
Men, 69	.....30-in. wheels	75	27
Chainless, men	.....Sager gear	75	26
Chainless, women	.....Sager gear	75	27
Westfield, men	Chain	35	25
Westfield, women	Chain	35	26

**Manhattan Bicycle & Sporting Goods Co., New York.**

This firm is exhibiting as agents for the Columbia, Liberty, Orient and Defender bicycles. A bicycle canopy with roller shade, and a self-instructing cycle riding device with upright attachments, are also shown.

**Manhattan Shoe Co., New York City.**

This firm jobs the Rice & Hutchins bicycle shoes, which are designed to give ease to the feet and ankles while pedaling, extra fullness being allowed over the toes to relieve the pressure.

**Manhattan Brass Co., New York City.**

Acetylene lamps in two styles are the result of this firm's two years' experience in the manufacture of lamps of that description. They embrace only those features which have been thoroughly tested and found valuable. Extreme simplicity of handling and detachment of the parts

characterize the line, the weights, sizes and prices of which will satisfy all classes of purchasers. In oil lamps the company show the Queen, which opens like a watch case, and the Frontlight. Ideal hand and foot pumps are also shown.

Model.	Style.	Retail Price.	Wt., oz.
Brilliant	.....Gas	\$3.50	18
Gem	.....Gas	2.00	11
Queen	.....Oil	1.50	11
Frontlight	.....Oil	2.50	13

**Manhattan Storage Co., New York City.**

The Manhattan chainless, fitted with the Gentry gear, has lately been added to his company's line and is therefore prominently displayed. The retail price is \$55. Other machines are the Manhattan Three Crown and the Manhattan. In the matter of sundries and equipment of all sorts the supplies are almost inexhaustible. This embraces nearly all the standard articles. The catalogue, intended for trade distribution only, is worthy of a place in every agent's office.

**Manson Cycle Co., Chicago.**

Manson bicycles without their characteristic feature of three crown frame construction are now being manufactured, but at lower prices than the models which have this familiar construction. The frame connections are made both from forgings and sheet metal.

Model.	Style.	Retail Price.	Wt., lbs.
3 Crown racer	Chain	\$60	20
3 Crown, women	Chain	50	25
2 Crown roadster	Chain	40	24 1/2
2 Crown, women	Chain	40	25
Women, 31	Chain	30	24
Men, 31	Chain	30	23

**Marcotte & Co., New York City.**

Samples of the enameling work done by the use of the applied enamels made by John W. Masury & Son are shown by this firm.

**A. D. Melselbach, North Milwaukee.**

This firm exhibits Earl models in two grades and machines for juveniles. The methods of manufacture which influence buyers are displayed without reserve in such parts of the machine as are commonly employed for that purpose.

Model.	Style.
Earl A, men	.....Flush joint.
Earl A, women	.....Flush joint.
Earl B, men	.....Outside joint.
Earl B, women	.....Outside joint.
Earl, boys	.....20-in. wheels.
Earl, girls	.....20-in. wheels.
Earl, boys	.....24-in. wheels.
Earl, girls	.....24-in. wheels.

**W. B. Miller's Sons, Brooklyn.**

This firm exhibits Excelsior lubricants for bicycle chains and also for bearings and for chainless bicycle gears.

**J. G. Moomy, Erie, Pa.**

The Moomy chainless bicycle of bevel gear type is exhibited in conjunction with the X-Ray plugger for tire repairs, Leak Nit cement, Ives valves, and Little Marvel cyclometers. In the chainless machine the crank gear and front pinion of the driving rod are both carried by double bearings mounted in the same hanger. It is claimed for this construction that it is impossible to spring the gears out of proper relation to each other. The rear gears are both supported by double ball bearings enclosed in a rigid bracket. The hub of the wheel is internally screw threaded at one end and is screwed into a projection extending from the rear gear. A flange nut is screwed on the outward surface of the hub, the thread having the opposite pitch to that on the gear, the effect of which is to lock the gear with the rear wheel. The axle extends through the rear gear and is screwed into the bracket which carries the driving gears. To remove the rear wheel the axle is unscrewed and taken out, which loosens the flange nut from the hub, and the wheel can be unscrewed

from the rear driving gear. The object of placing the gears in double bearings is to insure their positive alignment.

**Monarch Cycle Mfg. Co., Chicago.**

Considerable attention has been paid to the improvement of the appearance of Monarch bicycles at the seat post cluster and rear forks. The handle bar expander is of new construction. A double diamond tandem is made so as to be readily convertible from double to single steering. The company has decided to manufacture chainless models of the bevel gear type.

Model.	Style.	Retail Price.	Wt., lbs.
Defiance, women	Chain	\$35	25
Defiance, men	Chain	35	25
Monarch, women	Chain	50	25
Monarch, men	Chain	50	25
King	Chain	..	25
Queen	Chain	..	25
Cooper special	Chain	60	19-21
Tandem, men	Chain	75	43
Chainless, men	Bevel gear	75	..
Chainless, women	Bevel gear	75	..

**National Cement & Rubber Co., Toledo.**

This firm exhibits enameling ovens, brazing torches and cements. A double wall, dust-proof, four-frame enameling oven is the only oven shown, though the company makes them in all sizes. The No. 2 brazing forge is new. It has three burners working on a swivel. The brazer burner has five chambers and gives a rotary scope around the burner, allowing no escape. Model 1/2 retails at \$14, Model 1 at \$18, and Model 2 at \$22.50. The vulcanizers retail at \$5.40 each, both for the hot air and steam. The No. 2 torch is a brazer burner on the principle of the No. 2 forge and retails at \$3. Jifoid, a new cement, makes a plug of itself, and is put up in a tube with a puncture point ready for use as it stands. Enamels and graphites are also shown. The company will devote much attention this season to the export trade.

**National India Rubber Co., New York City.**

This company shows tires constructed for various uses in one general style—the Kangaroo. The goods are made in sizes and weights to suit all requirements. The retail price of the tires is \$10.

**National Slot Machine Co., New York City.**

A penny dropped in the slot of a machine exhibited by this firm releases a three-foot hand lever, which requires but a few strokes to inflate the tire.

**National Sewing Machine Co., Belvidere, Ill.**

One of the very few machines with 30-inch wheels for women is a noticeable feature of the firm's line; a 20-inch diamond frame machine for women is another. In the matter of mechanical features the eccentric hanger, with 4-inch drop, permits regulation to the extent of three-quarters of an inch. In other respects the line, well known in the trade by reason of mechanical excellence, is familiar to every painstaking agent.

Model.	Style.	Retail Price.	Wt., lbs.
Men, 25	30-in. wheels	\$60	26
Women, 25	30-in. wheels	60	26
Men, 30	Chain	50	24
Women, 30	Chain	50	24
Ladies' Diamond	Chain	50	22
Eldredge Special	Chain	50	21
Belvidere, 10, men	Chain	40	26
Belvidere, women	Chain	40	26

**New York Sporting Goods Co., New York City.**

The Nassau Special and Patee Crest machines are handled by this firm, together with a line of sundries and Dietz lamps. The prominent feature of the exhibit is the Patee Crest, whose combination of modern construction and popular price seems likely to secure for it a full share of eastern business.

**New England Cycle Supply Co., Keene, N. H.**

The stand of this firm is a veritable paradise for the intelligent repairman,

whose every need seems to be anticipated. Wheel assembling chucks, semi-automatic rim drills, repair jacks, truing stands, enameling stands, tube straighteners, rim spacers, emery grinders and axle straighteners are among the old products of the company, but to these have recently been added a tree, for sundries, at \$2.50; a hand-operated repair jack, adjustable to almost any position, at \$5; a display stand, at \$5, and a new truing stand at \$4.

**Niles Tool Co., New York City.**

The Woods patent elastic polishing wheel, shown by this firm, is made up of two disks or flanges, one keyed fast to the shaft and the other free to slide on a feather. These flanges are connected at their edges by a flat rubber belt held in place by clamping rings. Over this belt is placed an endless leather belt for polishing. When the machine is in rapid motion the centrifugal force acting on the rubber tends to expand and increase its diameter, the disk that slides on the shaft being by this centrifugal action drawn towards its mate. As is well known, the high points of a hard wheel do all the work, and hence there is uneven effect on the material to be polished. The Woods wheel being in effect an elastic polishing belt running automatically true, offers just the amount of resistance required. By means of a special fixture bicycle hubs can be applied to the machine and polished ready for plating at a rate of fifty or more an hour. Pedal plates can be polished at the rate of 200 an hour.

**Oakman Motor Vehicle Co., Greenfield, Mass.**

The Hertel motor carriage and package delivery wagon recently brought out by this concern are apparently very light and simply constructed vehicles. The carriage is easily controlled. The company is prepared to deliver vehicles at once and turn out any quantity that may be required. The carriage for two people weighs about 475 pounds.

**M. G. Oppenheim, New York City.**

Handle bars made entirely by a cold process by the Morgan Machine Works are the leading feature at this stand. Many of them are provided with an internal locking device. The Faultless roller brake of the Sundry Company of Baltimore is shown, as are toe clips, pedals, grips, clamps and other sundries made by the Sidway Mfg. Co., of Chicago.

**Overman Wheel Co., Chicopee, Mass.**

It is openly said by the makers of the Victor that the last vestige of old stock was cleaned out of the factory last fall, and as a result they are enabled to claim that the improved models are new in the enlarged trade sense of that word. Many of the parts of the women's model are interchangeable with the model for men.

Model.	Style.	Retail Price.	Wt., lbs.
Victor, men	Chain	\$50	25 1/2
Victoria, women	Chain	50	24
Chainless	Spinroller	75	25 1/2

**Pope Mfg. Co., (Bicycles).**

The Columbia bevel gear machines have been vastly improved both in external appearance and structural form. The main frame tubes are of 1 1/4 inch diameter; internal expanders are found at head and seat post; the gear covers are smaller; rear forks and hubs narrower. The forward gear mechanism which last year was assembled directly into the crank bracket itself is now placed in an independent bushing or sleeve, which is inserted in the bracket and clamped in position. The gear adjustments have been made entirely independent of the bearing adjustments, both front and rear. All of the gears bear directly in the lines of thrust, the ball races of the several

bearings supporting the gears forming a part of the gears themselves. The crank shaft bearing on the gear side has been carried to the periphery of the main driving or master gear. By these changes in the bearings all danger of springing the gears out of perfect mesh is avoided. The early chainless machines made by this firm will this year sell at \$65.

Model.	Style.	Retail Price.	Wt., lbs.
Model 59, men	Chainless	\$75	26
Model 60, women	Chainless	75	26 1/2
Model 50, men	Chainless	65	26
Model 51, women	Chainless	65	26 1/2
Columbia, men, 57	Chain	50	23 1/2
Columbia, women, 58	Chain	50	24
Racer	Chain	40	22
Columbia 61	30-in. wheels	60	24
Hartford, men	Chain	35	24
Hartford, women	Chain	36	25
Vedette, men	Chain	25	25
Vedette, women	Chain	26	26
Columbia tandem	Chain	75	..
.....	Double Diamond	75	..
Columbia tandem	Combination	75	....

**Penn Mfg. Co., Erie, Pa.**

Ever since this firm engaged in cycle manufacture it has held fast to three-piece hanger construction, outside joints and a flat fork crown in its high-priced goods. Now, however, in order to meet a demand for medium priced machines, it has decided to make half of the frame joints flush and to fit these models with two-piece hanger construction and arched crowns.

Model.	Style.	Retail Price.	Wt., lbs.
Men, M	Chain	\$40	23
Women, M	Chain	40	23
Men, C	Chain	50	23
Women, C	Chain	50	23
Men, C	30-in. wheels	60	24
Special	Chain	65	19
Tandem	Double diamond	100	40
Tandem	Combination	100	40

**Peters & Drake, New York City.**

A new hand lever pump, which can also be operated by dynamo or water power, and for which a patent has just been issued, is the special feature of the display made by this concern. The pump can be affixed to a wall or bench.

Model.	Style.	Retail Price.
No. 5	Hand	\$0.25
No. 46	Foot	.35
No. 2	Telescope	.75
No. 3	Foot	1.00
No. 4	Foot	1.25
No. 22	Floor	1.50
No. 6	Floor	2.25
No. 7	Floor	3.50
No. 43	Lever	6.00
No. 54	Hand lever	2.00
No. 55	Hand lever	3.50
No. 56	Hand lever	4.50

**Geo. N. Pierce Co., Buffalo.**

To a very complete line of bicycles this firm has added machines constructed with a cushion frame. The Morrow brake is fitted upon demand at a charge of \$10 extra. The Pierce line is finished in good taste and presents a very attractive appearance.

Model.	Style.	Retail Price.	Wt., lbs.
Men	Cushion frame	\$65	25
Women	Cushion frame	65	26
Tandem (2)	Double diamond	85	42
Tandems (2)	Combination	85	45
Men	Bevel gear	75	26
Chainless, women	Bevel gear	75	24
Men (3)	Chain	40	24
Women	Chain	40	25
Men (2)	Cushion frame	50	26
Women	Cushion frame	50	26
Men (2)	Chain	50	24
Men (3)	Chain	50	23
Women (3)	Chain	50	24
Men (3)	Chain	60	21

**Plew Saddle Co., Chicago.**

It is due to the excellence of this company's saddle and methods of pushing it that the trade recognizes as a household word the maxim that "its nose is soft." The firm's endeavor from the outset—and it has been successful in a marked degree—has been to satisfy all the requirements of a hygienic seat combined with that freedom of action which conduces to speed. Following up its early successes, the company has introduced the Plew hub and offers it at a price



which, it claims, cannot be duplicated. In addition to its own manufactures, the Pley company handles Peru rims and guards, Colmer hubs, Eli and Elyria pedals, Duthie and Indiana chains, Brown saddle, India tires and miscellaneous small articles.

Model.	Style.	Wt., oz.
Plew, men	Truss spring, padded	18
Plew, men	Coil spring, padded	18
Plew, women	Coil spring, padded	20
Plew, racing	Truss spring	16

**Pope Mfg. Co., (Motor Vehicles).**

A peculiarity in the construction of the electrically propelled phaeton is that its frame is made of steel tubing. The frames of all the Pope vehicles are rigidly braced and extremely strong, although as light as possible. It is the intention of the company to supply gasoline-driven vehicles upon demand. In the phaeton power is transmitted by double reduction; the other vehicles are driven direct.

Model.	Style.	Retail Price.	Wt., lbs.
Doctor's phaeton	Electric	\$2,500	2,000
Dos-a-dos	Electric	2,750	2,600
Surrey	Electric	3,000	3,000
Package carrier	Gasoline	750	850
Delivery wagon	Electric	2,250	3,500

**Ramsay Swinging Pedal Co., Philadelphia.**

Five models of the Ramsay swinging pedal, and toe clips suited for use with them, are shown by this house.

Model.	Style.	Retail Price.
A		\$3.50
B	Rat trap	3.50
C		3.50
D	Rat trap	3.50
E	Rat trap	3.50

**C. M. Rice Co., New York City.**

The goods exhibited by this firm are as follows: Armstrong Brothers' Tool Company's products, New Brunswick tires, Fauber complete bottom brackets, Sunbeam spokes, Thor hubs and bottom brackets, Cleveland glue, the original Keene rims, Rosenblatt saddles, complete frame sets and complete wheels.

**Riker Electric Motor Co., Brooklyn.**

Riker automobiles are constructed for pleasure service, delivery work, for short or long distances, and for city or suburban use. The firm is prepared to supply any style of vehicle desired.

Model.	Style.	Retail Price.	Wt., lbs.
Stanhope phaeton	Electric	\$2,000	2,000
Dos-a-dos	Electric	2,200	2,500
Surrey	Electric	2,300	2,700
Tricycle	Electric	1,000	800
Delivery wagon	Electric	2,250	3,500

**W. R. Rollins Mfg. Co., Chicago.**

This firm is exhibiting a three-crown jobbing machine made with 28 or 30-inch wheels; also a special export machine fitted with metal guards, rims and brakes.

**Rose Mfg. Co., Philadelphia.**

The Neverout lamp for cycles and carriages is exhibited. It burns kerosene, has a patent insulated reservoir and a glass-covered German silver reflector. The experience of the makers leads them to claim that the lamp is the nearest approach to a perfect article known to the trade. The retail price is \$2.70.

**Safety Oiler Co., New York City.**

Bicycle oilers in plain form and in combination with match safes, as well as oilers for machinery, are exhibited by this firm.

**Sager Gear Co., Rochester.**

The Sager roller gear is exhibited in Iver Johnson, Cleveland, Ariel, Orient, Wolff-American, Hampshire and Defender bicycles. Formerly the pins in the Sager gear were soft and the rollers were hardened; now the pins and roller blanks are both hardened. Formerly the gears were open; now they are enclosed in aluminum casings. Riders can get gears

of 82 or 92. Taylor, the racing man, had gears of 108 and 114. Eighteen patterns of Sager saddles are also exhibited, the leader among which is the Flexible, so-called because its base is not made of wood or metal, but of sole leather, and built up with felt.

Model.	Style.	Retail Price.	Wt., oz.
Flexible saddle, men		\$4.00	..
Flexible saddle, women		4.00	..
Sager, men, 1	Semi-flexible	3.50	..
Sager, men, 12			..
..... Loop spring, hair padded		3 00	..
Sager, women, 15			..
..... Coil spring, hair padded		3.50	..
Sager racing (with clip)	Hard top	2.50	15

**N. Schroder, New York City.**

This concern exhibits various models of the Rusch saddles. The saddle for women is designed with care. Its nose is short; it is wide enough for comfort. The racing man's pattern is resilient without being soft.

Model.	Style.	Retail Price.
No. 7	Lateral coil	\$1.75
No. 8	Flat springs, padded	2.50
No. 9, women	Flat springs	2.50
No. 10, racing	Wire springs, hard	1.75
No. 11, road	Wire springs, padded	2.50

**Thomas L. Smith & Co., New York City.**

This company manufactures a jobbing line and endeavors to emulate the work of the better class of makers.

Model.	Style.	Retail Price.	Wt., lbs.
Men, A 1	Chain	\$65	23
Men, A 2	Chain	65	23
Women, B 1	Chain	50	25
Women, B 2	Chain	50	25
Princeton, men	Chain	25	24
Princeton, women	Chain	25	25

**H. P. Snyder & Co., Little Falls, N. Y.**

This concern is exhibiting bicycles for the jobbing trade. Such features as are the first to attract the attention of buyers are enumerated in the following table:

Model	Style.	Wt., lbs.
Men, A	Chain	24
Men, B	30-in. wheels	24
Women, B	Chain	24
Juvenile, boys	24 or 26-in. wheels	21
Juvenile, girls	24 or 26-in. wheels	21
Men, E	Chain	24
Men, E	30-in. wheels	24
Women, F	Chain	24
Chainless	Sager gear	25

**A. G. Spalding & Bros.**

The Spalding chain bicycle models show new designs in sprockets. The pedals are faced with lead, instead of rubber, in order to resist wear. There is half an inch less drop in the hanger than in former patterns. A racing tandem, the first made by this firm, is also exhibited. The construction of the juvenile models appeals to those who appreciate high class construction. Christy saddles are also on exhibition.

Model.	Style.	Retail Price.	Wt., lbs.
Model 2122, men	Bevel Gear	\$75	..
Model 2022, women	Bevel Gear	75	..
Racer	Chain	60	..
Roadster, men	Chain	50	..
Roadster, women	Chain	50	..
Juvenile, boys'	20-in. wheels	25	17
Juvenile, boys'	22-in. wheels	25	19
Juvenile, boys'	24-in. wheels	30	21
Juvenile, boys'	26-in. wheels	30	22
Juvenile, girls'	22-in. wheels	25	19
Juvenile, girls'	24-in. wheels	30	21
Juvenile, girls'	26-in. wheels	30	22
Nyack, men (3)	Chain	30	23
Nyack, women (3)	Chain	30	23
Christy saddle, men	3/4-in. wide	..	..
Christy saddle, men	9 in. wide	..	..
Christy saddle, men	7 1/2 in. wide	..	..
Christy saddle, women	9 in. wide	..	..
Christy saddle, women	7 1/2 in. wide	..	..

**Stockton Mfg. Co., Newark, N. J.**

The Gem pedal exhibited by this concern has a cone with notched flange, the notches intersecting with a heavy V steel washer, which fits in the groove of the pin and thus prevents the cone from turning in either direction. The pedal is made in rat-trap and combination styles for men and women. The Stahl detach-

able chain sells at 35 cents a foot, which is a plain indication of its grade. A break in it can be repaired in a minute by the use of a penknife. The Gem and Leader hubs gave such satisfaction last season that the firm has not found it necessary to make any alterations in their design.

**E. C. Stearns & Co., Syracuse.**

Here is another concern which is pushing cushion frame bicycle construction to the front. Morrow brakes are fitted at an extra charge of \$10 and New Departure brakes at a charge of \$1. The graceful frame lines which long have characterized Stearns models are still in evidence.

Model.	Style.	Retail Price.	Wt., lbs.
Men, E	Chain	\$50	24
Women, F	Chain	50	25
Chainless, men	Bevel gear	75	26 1/2
Chainless, women	Bevel gear	75	27 1/2
Cushion, men		65	22 1/2
Cushion, women	Chain	65	23 1/2
Special, men	Chain	60	21 1/2
Special, men	30-in. wheels	60	22 1/2
Special, women	30-in. wheels	65	24
Racer	Chain	60	20
Tandem	Combination	75	45
Tandem	Double diamond	75	43

**Straus Tire Co., New York City.**

A close woven fabric is used in the construction of the tires made by this firm. A display is also made of pedal rubbers, which can be snapped on the foot, and of repair plugs which are curved on their base in order to conform to the inner surface of the tire when drawn into position.

Model.	Style.	Retail Price.
Straus	Single tube	\$8.00
American	Single tube	6.00
Goodyear	Single tube	4.50
S. & R.	Detachable	10.00

**E. E. Stone & Co., Spencer, Mass.**

The Dunbar foot and plunger brakes and the Dunbar folding bicycle crate are exhibited by this firm. The crate resembles the ordinary pattern, but has its parts strongly hinged and riveted. In placing a machine in the Dunbar crate it is only necessary to remove the pedals.

**The Tinkham Co., New York City.**

In addition to the Stearns and Dayton, for which it holds the New York agency, the Tinkham company makes a machine of its own for men and women at \$25. The principal feature on the stand, however, is a motor tricycle, with drop frame, the whole of the mechanism of which is controlled by two levers alongside the saddle post. The Tinkham company makes a specialty of carriers and invalid chairs.

**Translucent Window Sign Co., New York.**

This firm exhibits translucent window signs applied to the inside of glass in store doors or windows.

**Twentieth Century Mfg. Co., New York City.**

Three hundred and fifty lamps, equally divided between gas and oil, are being distributed by the Twentieth Century Mfg. Co. free of charge at the show. Every catalogue distributed bears a number and each evening a drawing is held. The winning numbers are posted conspicuously on a card in front of the stand. In the equipment of the space Mr. Castle has embodied one or two ideas new to American shows, one of the results of his observations abroad.

Model.	Style.	Retail Price.	Wt., oz.
Twentieth Century	Oil	\$2.50	
Twentieth Century	Gas	3.50	16

**United States Battery Co., New York City.**

This is one of the few concerns which has brought a wireless lamp, devoid of complications and of reasonable weight, within the range of commercial possibility. It burns from ten to twelve hours,

weighs twenty ounces, and costs about 1½ cents per hour in operation. Originally the batteries cost 50 cents per pair; when exhausted they are exchanged for new ones for 15 cents. The retail price of the complete outfit is \$3.75.

United Specialty Co., New York City.

Automatic tire inflators are exhibited by this firm. In the device is a drum containing liquified carbolic acid gas, which vaporizes on being released by a penny dropped in the slot of the machine.

Veeder Mfg. Co., Hartford, Conn.

The new trip recording cyclometer made by this firm is rendered doubly interesting on account of the fact that its manufacture has led to the introduction of a new metal. The shell of the instrument is cast in two pieces and in such a perfect manner that machining is not necessary. White metals heretofore produced, while non-corrosive, have not been sufficiently tractable in the hands of workmen to render them fit for the manufacture of parts which are subjected to friction. The Veeder people, however, show that with their new metal all the gears as well as the shell of the trip recording instrument can be made of the same material, and assert that the instrument will run 125,000 miles at the rate of eight miles per minute without showing appreciable wear.

Vim Bicycle Co., Chicago.

The tire fitted to the machines made by this house is constructed to its special order and is guaranteed for a year and repaired free of charge during that period.

Model.	Style.	Retail Price.	Wt., lbs.
Men, 30	Chain	\$35	23
Women, 31	Chain	35	23
Men, C	Chain	35	23
Women, D	Chain	35	23
Men, 10	Chain	35	23
Women, 11	Chain	35	23
Men, E	30-in. wheels	35	25
Men, B	Chain	25	23
Women, B	Chain	26	23

Waltham Mfg. Co., Waltham, Mass.

Outside joints are found on all Orient models. The women's model has two straight tubes running from the head to the seat mast, making a very rigid frame. There is thoroughness of work disclosed in even the most casual inspection of Orient construction. The frame design for reception of bevel or roller gears attracts great interest.

Model.	Style.	Retail Price.	Wt., lbs.
Men	Chain	\$50	22½
Women	Chain	50	25
1.30 racer	Chain	65	20
1.30, women	Chain	65	22½
Men	Bevel or Sager gear	75	26
Women	Bevel or Sager gear	75	28
Tandem		100	42

Watson Automatic Seat Post Co., New York.

This seat post is constructed without fastenings or reinforcements and binds equally its whole length. A tap on the top of the saddle locks the post, and another tap under the point of the saddle releases it. Many bicycle makers fit the Watson post on their machines.

Western Camera Co., New York City.

As a relief from the tedium of constant inspection of mechanical features, the exhibit of scenery photographed by cyclists, which is presented by this firm, affords an unlooked-for but very welcome pleasure. The camera display is complete.

Wheeler Saddle Co., Detroit.

The cork top saddle pattern made by this firm is one of the many interesting features of the exhibit. All patterns are made longer and narrower in the nose than heretofore, and are tipped up behind. The variety of finish is an indi-

cation of the closeness with which the company studies the tastes of the public.

Model.	Style.	Retail Price.	Wt., oz.
Men's extra	Hair padded	\$3.50	15
Women's extra	Hair padded	4.00	23
Men's special	Wool felt padded	3.50	14
Men's Cork Top racer			
	Cork padded	3.50	14

Whitehead & Hoag Co., Newark, N. J.

An interesting exhibit of advertising novelties in the shape of buttons, badges and a variety of other articles is being made by this firm, which has the largest business in the world exclusively devoted to the manufacture of advertising novelties.

W. A. Whitelaw & Co., New York City.

As jobbers of fittings and sundries this firm displays the nickel steel chains made by the Power Mfg. company, the Perfection handle bar, which is square shaped without drop and covered with leather, and the Mesinger Bicycle Saddle company's goods.

Model.	Style.	Retail Price.
Model C (3)	Hygienic	\$2.50
Model J	Double base, padded	2.50
Model K	Double base, hard	2.50
Model L	Double base, padded	2.00
Model M	Double base, hard	2.00
Model O	Single base, padded	1.75
Model P	Single base, hard	1.75
Model O (new)	Metal base, felt pad'd	1.75
Model Q (new)	Metal base, felt pad'd	1.50
Model Q	Single base, padded	1.50
Model R	Single base, hard	1.50
Model S	Single base, padded	1.25
Model T	Single base, hard	1.25

Willis Park Row B. Co., New York City.

The Ferris and Elmore bicycles shown by this firm are fitted with Sunbeam spokes, a novelty which seems to have struck the fancy of a good many bicycle makers, and which undeniably adds to the general attractiveness of a bicycle. A complete line of sundries and tires is also displayed.

Model.	Style.	Retail Price.	Wt., lbs.
Ferris, men	Chain	\$38	22
Ferris, women	Chain	38	22
Elmore, men	Chain	40	24
Elmore, women	Chain	40	24

R. H. Wolff & Co., New York City.

The skill which this firm has acquired in the working of steel has resulted in its special application to bicycle frame construction. The frames of all Wolff-American patterns are spring tempered and if they should be deflected, will readily spring back into place. The frame stock is tempered to a straw color. The bearings of the machines are self-lubricating and are constantly run in oil. The readiest way to express an opinion concerning Wolff-American bicycle manufacture is to state that all the models are high priced, which in itself is equal to intimating that the goods are of high grade. The Morrow brake will be fitted to any machine for \$10 extra.

Coleman-Dunlop Injunction Case.

The following letter has been received from the American Dunlop Tire Company in explanation of the attachment on its property secured by the Western Wheel Works:

To the Editor.—In view of seriously misleading reports having been circulated in the trade respecting this company, which unless corrected may create a wrong impression regarding our ability to meet our obligations, we beg to state that these reports have no other foundation than a suit which has been instituted against not us, but the Dunlop Pneumatic Tyre company, Ltd., of London, England; and the plaintiff, believing that we had in our possession money or property belonging to the English company, has served a writ of attachment on all money and property thus alleged to be in our hands.

So far as we are concerned, the effect of this suit is merely that we shall pay to either the plaintiff or to the defendant whatever we may have, owing to the latter. During the six years of our existence we have made a practice of discounting our bills, and are prepared to continue to do so.

THE AMERICAN DUNLOP TYRE CO.  
Kirk Brown, General Manager.

Initial Tension  
Expansion Spring

Seat Post

The Only True Jar Absorber.

(Patent Pending.)

PRICE, \$2.50 EACH.

SYNONYM FOR THE BEST IS THE  
NAME OF

THE BUESCHER MFG. CO.

ELKHART, IND.

The jobber, the dealer  
and the user of bicycle sun-  
dries know this.

We will not have an exhibit  
at the Cycle Shows...

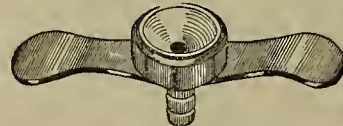
because our products are  
in the hands of the

Representative Jobbers

throughout the country,  
and you will have ample  
opportunity to see them.  
If, however, you do not  
find our full line with  
your jobber, write us for  
Catalogue, and do not  
buy until you see the best  
things and best values  
made in Bicycle Sun-  
dries.

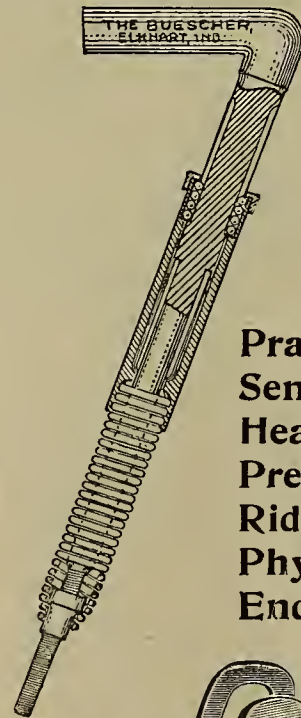


We make specialties—  
write for estimates.

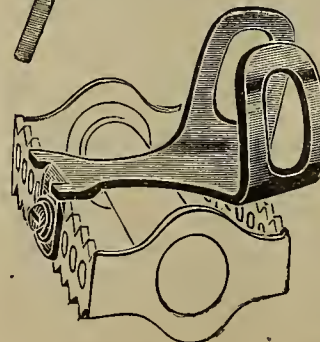


No. 3 COUPLING.

Latest and Best. Every Pump should be fitted  
with it. Pat. July 14, 1896.



Practical,  
Sensible,  
Health  
Preserving,  
Riders Like It  
Physicians  
Endorse It...



No. 3  
TOE-CLIP.  
Correct,  
Practical  
Design.  
35c. pair.

Patented  
Sept. 14, 1897.

## COMMERCE IN FOREIGN MARKETS

**HOW TO HOLD SCOTTISH TRADE**

In Scotland, American manufactures, with few exceptions, are regarded as above the average in point of quality. To be more specific, the articles of American make sold, either to a large or a limited extent, have gained acceptance on account of quality rather than on account of comparative cheapness. It is distinctly true, therefore, to say that our products have obtained favor in Scotland and are gaining favor on their merits. Generally speaking, it is considered in Scotch communities that to say an article is American is to commend it. The exceptions are not yet conspicuous and are confined to certain grades of bicycles thrown on the market a year or two ago.

In the interest of American trade in Scotland, it is a matter of the utmost importance that our manufacturers maintain the reputation they have earned for high quality of material and workmanship. Perhaps there is no other market where good quality counts for more than it does there. It is the essential thing, and, if united with a moderate price, it secures trade. Finish may be quite important, but the chances are that a bad article well finished will have a scant sale and soon drop out. To gain a profitable trade and to hold it, a manufacturer must offer an article of solid merit and keep it up to the original standard. Finish and what is rather indefinitely termed "style," and anything else designed to render wares attractive, are of permanent use only in helping the sale of an excellent article. It is doubtful if any American manufacturer would profit in Scotland by lowering the grade of his product to meet competition in the price. On the other hand, if he keeps up the grade, his rival, who resorted to the "cheap and nasty" tactics would be the loser in the end.

**TO INCREASE OUR CHINESE TRADE**

The proposition to establish an American-Chinese chamber of commerce at Shanghai, to which point many American bicycles are shipped, where both American and Chinese goods could be shown to advantage, would be the most practical method of increasing our trade quickly and permanently not only with China but with the whole Orient.

If the United States wants to increase its trade and commerce with China, let congress repeal, or at least modify, the Chinese exclusion laws, and make an appropriation of \$250,000, to be repaid in thirty years, with interest at 2 per cent. per annum, for the purpose of erecting and maintaining a permanent exhibition upon the United States reservation at Shanghai, to be conducted under the auspices of some institution whose sole object it is to develop our trade and commerce in that part of the world.

The Chinese are now buying bicycles and phonographs in large quantities, and none were sold until samples were exhibited. We can not expect to sell our goods on description. It seems that an exposition at Shanghai is almost necessary to direct connection between the American manufacturer and the Chinese merchant and consumer.

Many makers have been content to do business in a half-hearted way in Asia, and have not taken the trouble to make themselves acquainted with the banking methods, the shipping methods, the various laws in force, the climate, the superstitions, and the details of the needs and

customs of the people. The Chinese are peculiar people, who will buy nothing if they cannot get exactly what they want, put up and labeled as their customs and superstitions dictate. The supply must fit the demand.

Our people do not realize their opportunities there. A Chinese viceroy, who is considered antiforeign, stated a short time ago that he was always willing to have Americans come into his viceroyalty to open mines, establish manufactures, and do any kind of business, but he did not want other foreigners. "But," he said, "Americans do not ask for these things, while other foreigners are always asking for them."

No foreign merchant in China will sell American goods unless he can make much more money out of them than he could from similar goods from his own country. If American manufacturers expect to handle this market as their situation entitles them to do, they must be represented by Americans.

### RUSSIAN MARKET DEVELOPING RAPIDLY

There is a general desire on the part of Russian merchants and dealers to make connections with American manufacturers, provided this can be done advantageously; but as a rule American houses have a general agent in England or Germany, who supervises their business for Europe and appoints sub-agents for Russia and other countries, and takes three-fourths of the commission. Russian agents object to dealing through an agent in London or Hamburg, and very much prefer to deal directly with the home company.

The surest and best plan to introduce goods into Russia is to send samples by a thoroughly competent representative of the business it is proposed to push. St. Petersburg is but twelve days' travel from New York.

American consuls in Russia are in receipt, by every steamer, of letters and circulars from American manufacturers, museums, and export associations, making inquiries as to the prospects and methods of procedure, names of dealers, etc., to introduce their goods; but purchasers naturally desire to see and examine any article they are asked to purchase.

The Russians have respect and admiration for the inventive genius of the Americans, and, while conservative, they are always willing and anxious to look into new inventions from the United States. Articles of American manufacture are preferred, with few exceptions, to those manufactured in England, Belgium, and Germany, our principal competitors.

The commercial relations between the Russians and the people of the United States were never so friendly nor strong as today, and they are growing closer each year, by reason of better acquaintance and largely increased business relations.

The United States Steamship Company, of Copenhagen, has decided to establish a line of steamers between New York and Russian ports. This company has sent one vessel to New York and Boston and will soon send another. The establishment of direct communication will place our manufacturers on the same basis, except as to distance, as Germany and England. American goods sent to Russia are handicapped by the cost and delay of reshipment at Hull, Hamburg, or Bremen, and the cost of transportation from the two latter ports by rail. The

Russian government is now building an ice boat with 10,000 horse-power, being the largest vessel of that character ever built, with which it is proposed to keep open the ports of St. Petersburg and Riga during the winter months.

By a recent convention the international money order system between the United States and Russia went into effect on January 1, 1899.

### COMMERCE AND MANUFACTURING IN JAPAN

Yokohama and Kobe are the leading Japanese ports of entry — Yokohama for Tokio and Kobe for Osaka and Kyoto, inland cities. There are fifteen or twenty large houses doing an import business, three or four of them Japanese and the rest foreign. It is not good policy for American manufacturers to deal direct with the natives. The foreign houses are responsible and reliable, and they have branches in such important places as London, New York, etc. Inquiries made direct by native merchants are mainly for the purpose of beating down some dealer of whom they are customers in a regular way.

Patents and trade marks can be obtained by Japanese or foreigners with equal facility now under the new law, which is a result of recent treaties. This applies only to articles which have not previously been manufactured in Japan. The Japs do not like foreigners any more than the Chinese do, but they are clever enough to be willing to take all the knowledge and experience the foreigners will give them. Their watchword is, Japan for the Japanese.

Japanese manufacturing, when conducted under purely Japanese auspices, is not systematic and economical, but a number of foreign houses have gone into the country and have shown Japanese firms how to produce goods in the European manner. The result is that the combination of foreign system and the astonishingly low wages of the natives is quite sufficient to drive a foreign manufacturer out of the country.

### GERMANY'S CYCLE INDUSTRY

German bicycle manufacturers make large profits. According to the reports of the respective companies they pay 20 per cent dividends or more. At present there exist about 150 bicycle makers, of which 25 are on a large scale and 25 of medium size. The capital invested is estimated at \$0,000,000 marks and the number of workmen employed at 40,000. To this must be added the various auxiliary and supplementary trades of the bicycle industry.

French cycle manufacturers compete with the Germans, especially in Alsace and Lorraine. The English import has become quite insignificant. A Frankfort manufacturer formerly imported 6,000 English bicycles per annum before he commenced to manufacture them himself; nowadays but a limited number of English machines are being imported. The reason for this may lie to some extent in the price, but, on the other hand, among wheelmen it is asserted that the English machines are too heavy.

The Philadelphia department stores are to be allowed to make exhibits at the forthcoming bicycle show to be held there. It is an open question if this is not a fatal mistake on the part of the local cycle board of trade.

## PATRONIZING FAST FREIGHT

### Exorbitant and Unjust Rates of Express Companies Drive Away Cycle Dealers' Business

Further opinions of retail cycle dealers on the subject of exorbitant charges on bicycles and small packages shipped by express are embodied in the subjoined letters. Many of these came from points far distant from the manufacturing centers, where rates are so high as to practically prohibit dealers from ordering in less than car lots, thereby compelling them to purchase almost altogether from the jobbers.

Fast freight is much favored as an alternative, many of the dealers already patronizing the railroads whenever possible, but there is some complaint regarding the slower service and the fact that the freight companies do not deliver goods at the door of the consignee. Lower express rates are universally wanted and all stand ready to adopt the course that seems most likely to bring about the reduction.

#### All Things Cheaper but Express Rates.

Everything is cheaper than it was years ago except the express charges—they do not change. I have a good deal of express business and the charges are extravagant. My stuff could be carried with a good profit if the charges were reduced 50 per cent. Take castings, there is no way of damaging them in carrying; then why don't machine companies take hold of this and endeavor to get the charges cut down? I do not think we could use fast freight for local shipments. If the express companies are not willing to do what is right, the only resort is to fight them every way we can. Why does not the government carry larger packages in the mail to avoid the extravagant express charges? But the postal authorities will take only certain packages. I think it would pay the government to carry larger packages and small castings.

North Manlius, N. Y. D. D. COSTELLO.

#### Ships All Things by Freight.

We have troubles of our own that the dealers east of the Missouri river know nothing about. We ship everything by freight. Small packages, often of fifteen pounds, shipped from Chicago by freight cost only about half as much as by express and it takes only a day or two longer. We have had just as many bicycles damaged when shipped by express as by freight.

Central City, Neb. HASTINGS BROS.

#### Thinks Parcels Post Best.

We are heartily in favor of the work taken up by The Cycle Age in regard to the express companies, as it is the only way that something can be accomplished. Enough has been said in regard to prices charged, but certain it is that radical changes have been made on account of the bicycle. Some changes are necessary with the express companies, but it would be better still if we could get postal freight.

Livingston, Mont. CULLEY & LEWIS.

#### Coast Dwellers Suffer Severely.

It costs about \$6 by express and \$3 by freight to lay bicycles down here from Chicago. In amounts less than carload lots express takes from four to seven days and freight from ten to thirty. We should be able to receive machines on the coast by fast freight from Chicago in from five to seven days at a maximum cost of \$2. Will be glad to do what I can to help bring rates and time limit to where they should be.

Oakland, Cal. BURTON C. LUND.

#### Do Not Stick to Rates.

The rates charged by the express companies are exorbitant, and should be avoided if possible by all tradesmen throughout the country. On several occasions, the charges on packages being very high, we have protested against them and by the use of scales found that the companies do not in all cases adhere strictly to their rates. The idea of supplementing express with fast freight is a good one in our opinion and should receive the support of all business men. Any method which is at all reasonable will be

preferable to the express companies, and the sooner adopted the more profitable will it be.

Knoxville, Tenn. BIDDLE CYCLE CO.

#### Fewer Breakages Offset Slower Time.

We are glad to see the Cycle Age at the head of the fight against the present express rates. Some years ago we found that we really got better service from the freight companies. They bring goods in better shape. Our only damages have been through the express offices. The matter of time is often offset by the better condition of the goods.

Carthage, Mo. PEBBLES CYCLE CO.

#### Perfect System of Organized Robbery.

The express rates are so high as to be a serious problem with us. We have for the past year had goods shipped by freight whenever possible. The leading express companies parcel out the country in such a net as to avoid competition and goods frequently pass through two or more companies before reaching us, and each company collects its full rate. We certainly hold up both hands for any movement tending to make express rates less like highway robbery than at present.

Somerville, N. J. GARRETSON CYCLE CO.

#### Send Small Packages by Registered Mail.

We are in favor of fast freight or anything that will make the express companies reduce their most unreasonable charges. We have paid out enough in the last year to buy a small farm. We send lots of things by registered mail to avoid the express company as much as possible.

Tecumseh, Neb. WILLS & SPAULDING.

#### Freight Service Too Slow.

While we believe that the express charges are too high and would be glad to have cheaper service, we must use express for the reason that freight is very uncertain. Goods that are out twenty-four hours by express would take from two to three weeks if sent by freight. Short trips, one line through freight, is all right but when goods have to be handled over several lines it is very unsatisfactory. Our only complaint against the express companies is that they make 40-pound packages weigh fifty pounds but never the reverse. Taking it as a whole, the express companies are very accommodating and we believe that they give the best possible service.

Washington, D. C. W. E. BAUM & CO.

#### Full Rates to Two or More Companies.

We are certainly in sympathy with any move that will tend to the reduction of express charges. We think, however, that the fast freight proposition is the best way to get at the matter. The worst complaint we have to enter is the practice of making a full charge for each company, where the package is carried by two companies and is above a certain weight. This in some instances with us has made the expressage cost us more than the cost of the goods.

San Diego, Cal. NOLAN & TIBBALS.

#### Better Protection by Freight.

I think a fast freight would be better than express, providing it was as safe, for it would give the merchants better protection for a while at least.

Marshfield, Ore. E. E. NELSON.

#### Take Advantage of Revenue Stamp Act.

The extortionate charges of the express companies are positively outrageous and I never employ their services if I can help it and would most assuredly patronize fast freight in preference. Am satisfied that the agents of the express companies are taking advantage of the government in the stamp act in ways that the government little thinks of. For instance, they never forget to make the customer pay the one cent extra for revenue stamp for receipt, but often neglect to give the receipt. How is that for fraud?

Spencer, Ia. C. E. ADAMS.

#### Glad to Assist the Movement.

Most assuredly we are in sympathy with and will hail with delight any movement that will release the small merchants from the "stiff necked tyrant." If using fast

freight will assist the movement, we shall be only too glad to enter the combine to use fast freight in every case, with the exception of course of a special rush. Our specific complaints against the practices of the express companies would be simply repeating what has been already written, therefore, we refrain from ventilating our "special grouch."

Portland, Ore.

DENTON & CO.

#### Made Special High Rate on Bicycles.

We are most certainly in sympathy with the movement, as every other cycle dealer must be who has suffered from express extortions. The charges are heavier on us as we are so far from the markets. For some time we have been having bicycles shipped from New York to Savannah, Ga., by boat, care of Southern Express Co., to be brought by them to Tampa. When this arrangement was first made the rate from New York to Tampa was \$1.75 per 100 pounds, so that two crated machines of average weight could be got here for \$1.75. This was not enough for the transportation companies, so they shortly changed the rate to a special one of \$1.25 per bicycle, an increase of 73½ cents on each machine. All rail rates to this point are practically prohibitory in our line of business, and we have as little as possible sent in this way.

Tampa, Fla.

M. A. BENJAMIN & SON.

#### Cut a Big Hole in Prices.

The immense addition to the express business which the bicycle trade alone makes should still make it profitable with a mutual reduction in rates. I paid \$200 express last year on a business of about \$5,000 in bicycles and parts and sundries. This makes a large hole in my profits. This year I have so far ordered twenty-seven bicycles, all to be shipped by freight. I calculate on saving at least \$13.50 on the lot. I do not think we have any fast freight here in Vermont, so when the season is on I shall have to express in order to save time.

Burlington, Vt.

E. FRANK LANE.

#### How Rates Vary Unreasonably.

We regard express rates as excessive, and have for a long time. We always use freight whenever possible. The rate for a single bicycle, crated, from Kenosha, Wis., is \$1.70 by express. We have had occasion to send a pair of forks to the factory by express and the rate going was 30 cents, while the charge for returning by another express company was 45 cents for the same article.

Vineland, N. J.

VINELAND CYCLE HOUSE.

#### Will Ship by Freight Hereafter.

I am in sympathy with the movement started in New York and shall use fast freight at all times, if possible.

Houston, Texas.

J. WADE COX.

#### Fifty Per Cent Variation in Charges.

Being a small dealer and having to buy in small quantities, I certainly have found out that express companies know how to charge. I have on several occasions paid more express than the goods cost, and have sent parts off to get duplicates and found that it cost 40 to 50 per cent more to get new articles back than to send off the old ones. I certainly would like to see some relief for cycle dealers.

Wichita Falls, Texas.

E. M. WINFREY.

#### Wants State Legislation on the Subject.

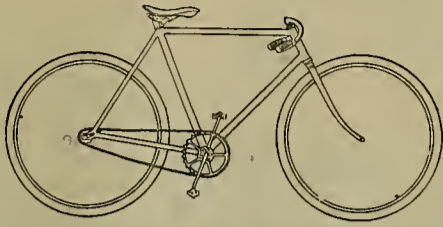
We are heartily in accord with the movement against the express companies. We believe in "live and let live," but we do object to paying the exorbitant transportation charges the express companies are charging us. If it were possible to conduct business without them, we would only be too glad to do so, but we have found, as every other business man has, that it is simply an impossibility, and the only hope is in getting them to reduce their charges in keeping with the times. It now costs us \$1.50 for a single bicycle from almost any point east of New York, and we think this is one of the principal reasons why the western trade is so reticent about handling wheels of eastern manufacture. Fast freight is all right if you are ordering a number of bicycles, but on a single machine the drayage, etc., amounts to nearly as much as the express. Why could not the dealers organize in different states and get the legislatures to pass laws on this vital subject, which means hundreds of dollars to every dealer? We have paid the express companies the last season over \$350.

Fort Wayne, Ind.

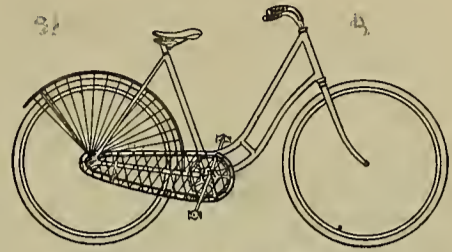
RANDALL WHEEL CO.

#### Bicycles in the Orient.

The attention of bicycle manufacturers is called to an advertisement in the want columns of this paper by a gentleman who desires to represent six or seven leading houses on a trip through oriental countries.



Model 20, Special, \$50.00



Model 23, Superba, \$50.00

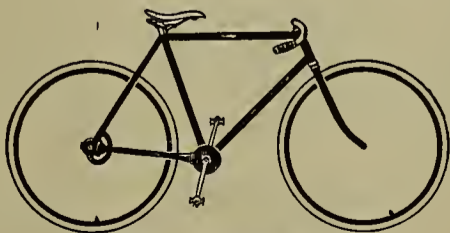
## No Cycle Shows

Barnes Bicycles will not be shown at the Cycle Shows. A reputation based upon the production of first-class bicycles we consider more valuable and lasting than one obtained by display, therefore our surplus coin and energy will be expended entirely in maintaining the standard quality of the White Flyer.

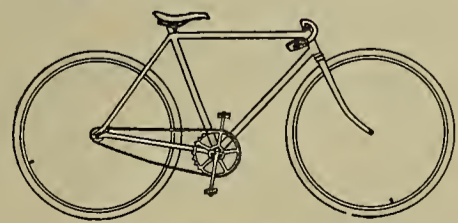
It is a good idea for agents to go to the Cycle Show, as in olden times, just for the fun of the thing and a little diversion from business cares, but when they return to their stores with clear heads and slightly depleted purses they will realize that fun and fancy display are all right for *one* week, but for the other fifty-one weeks of the year the bicycle that *always* has the *quality* and *style* is the one that insures the replenishment of their pocket books and ultimate success.

We have many more agents than ever before, and still the list swells. We are too busy for Cycle Shows, but will be glad to mail our beautiful 1899 Catalogue to any who may apply.

• • The Barnes Cycle Company • •  
Syracuse, N. Y.



Model 27, Chainless, \$75.00



Model 29 Road Racer, \$65.00

## SUBJECTS OF GENERAL INTEREST

### KEELY'S PROBABLE MOTIVE FORCE

Since the recent death of John W. Keely, of Keely motor fame, the interest of the engineering and scientific world has been reawakened in the mystery of the force that drove the motor with which this notorious inventor succeeded in securing investments of capitalists through more than a score of years, although the "motor" never turned a wheel commercially. In order to probe the secret of the Keely motor, an investigation of the dismantled workshop of the inventor in Philadelphia has just been made by Professors Herring, Goodspeed, Witmer and Dr. Miller, respectively electrical engineer and teachers of physics and experimental psychology.

The investigation was most thorough, every bit of flooring was ripped up and every nook and cranny explored under the flooring and under the walls. The debris left between the joists and in barrels was sifted, and no opportunity to find tell-tale evidence was missed.

The large steel ball weighing three tons, which had played an important part in Keely's experiments, was found imbedded in the clay of the basement, and short sections of metal tubing of the high pressure kind, with joints apparently made to withstand internal pressure, were found among the rubbish left after all the important machinery and materials had been removed by the Keely company, led to the presumptive conclusion that the mysterious force was, as had been strongly suspected in 1888 and 1889, compressed air.

As the investigation made clear, there was perfect communication between this cavern, in which the big sphere lies imbedded in the earth, and the upper room, in which, among other apparatus, near the door, stood the lever machine. The communication was by auger holes of various sizes in the flooring and in the ceiling.

This tubing did not look unlike heavy wire, and, in fact, was exactly the same size as some heavy brass wire found on the premises, which is of interest, since Keely claimed that he used no tubes whatever, his lifting force being communicated through wires.

In the light of the discoveries made, it seemed clear to all the investigators that he could just as easily have performed his lifting trick by using compressed air and transmitting through some of the tubes found under the flooring and in the doorsill so conveniently near to the lever machine. It was estimated that the steel sphere would easily withstand internal pressure of 1,000 atmospheres.

### AN INTOLERABLE SITUATION

The interstate commerce law cannot be enforced. The commission appointed to administer the law has so reported to Congress—a stale annual confession—and adds that until further and important legislation is enacted the best efforts at regulation must be feeble and disappointing.

Meanwhile the situation has become intolerable both from the standpoint of the public and the carriers. Tariffs are disregarded, discriminations constantly occur, the price at which transportation can be obtained is fluctuating and uncertain. Railroad managers are distrustful of each other, and shippers all the while in doubt as to the rates secured by their competitors. The volume of traffic is so unusual

as frequently to exceed the capacity of equipment, yet the contest for the tonnage seems never relaxed. Enormous sums are spent in purchasing business, and secret rates accorded far below the standard of published charges.

The general public gets little benefit from these reductions, for concessions are mainly confined to the heavier shippers. All this augments the advantages of large capital and tends to the injury and often to the ruin of smaller dealers. These are not only matters of grave consequence to the business welfare of the country, but they concern in no less degree the higher interests of public morality.

A large part of the railway business is now transacted upon illegal rates, and in certain quarters charging the published rate is the exception. The results are gross discriminations between individuals having gross preferences between localities, which most always favor the strong and oppress the weak. Probably no one thing today does so much to force out the small operator and build up those trusts and monopolies against which law and public opinion alike beat in vain as discriminations in freight rates.

A further result is that railroad business is carried on largely in conceded violation of law. This condition the present law is powerless to control. The criminal remedies have been applied and some convictions have been had, but no substantial effect has been produced and no satisfying results can be obtained from that course. The fact may be morally certain, but the name, the date, the amount, cannot be shown with the particularity and certainty required by criminal law.

### AFRICAN TRANS-CONTINENTAL RAILROAD

The richest part of South Central Africa will be tapped by a railway impinging on Lake Tanganyika, and having its terminus at Cape Town. The main road into and through Africa will continue to be that from the south to the north, with a prospect of one day joining hands with the Soudan railway and also with the other great highway that is being made from Mombasa to Uganda. As regards the first of these schemes, it is calculated that in order to connect the cape with Cairo there remain to be completed a maximum of 1,000 miles of railway. Already 2,730 miles have been constructed. The railway to Khartoum will be 1,200 miles in length, and from the cape to Buluwayo 1,530. Of this 1,000 miles of railway to be constructed it is announced that a contract has already been placed for the portion from Buluwayo to Kariba gorge.

Cecil Rhodes is now in London working industriously for the success of this project and is reported to be meeting with financial encouragement.

The line from Buluwayo to Khartoum is estimated to cost \$47,000,000. Rhodes has been assured of \$10,000,000 for the section from Buluwayo to Lake Tanganyika, and the remainder can be secured when the surveys from Tanganyika to Khartoum are made.

Among the many articles made from cork waste is the familiar cork grip for bicycle handles. By a secret process the waste is pressed into the required shape, and, strange to say, the grips thus made are stronger and more durable than those manufactured from cork wood, although the latter gives a much smoother finish.

### TECHNICAL EDUCATION IN GERMANY

German tradesmen and manufacturers are alive to the importance of increasing the efficiency of their mechanics and artisans, and improving the quality of their goods. They are resolved that "made in Germany" shall no longer pass as a term of opprobrium, but be a synonym of excellent materials and good workmanship.

As a first move in this direction, a conference of influential manufacturers, business men and municipal and provincial officials, delegates from chambers of commerce, workingmen's unions and manual training schools, etc., was held at Hanover on December 8, under governmental sanction and direction, to discuss German trade and manufacturing interests and devise plans for their extension and improvement.

As a result of the conference, it was unanimously resolved to establish at once in the city of Hanover advanced lecture courses, in which artisans and apprentices in all trades shall have an opportunity to complete their mechanical education and be instructed by experts how to install and manage a model workshop and work and use machines and tools to the greatest advantage.

The cost of the establishment and maintenance of the lectures is to be supplied by the general government and that of the province and city of Hanover, together with the trades unions, the chamber of commerce, and others interested therein.

The establishment of these courses of lectures is the initial move in a general plan to be inaugurated in all the main labor centers of Germany, dependent upon the success of this experiment.

A permanent exposition of all power machines and tools used in the small trades is to be established in the industrial hall at Hanover. The machines exhibited are to be worked by competent mechanics, who, on request, will exhibit their uses and management to all inquirers.

In order to enable small manufacturers and tradesmen to purchase their raw materials at wholesale prices and to facilitate the sale of their products, the formation of co-operative stores at designated places is to be encouraged.

The expositions of tools and machinery proposed to be established in connection with the lecture course should offer an excellent opportunity to American manufacturers to make exhibits.

### TO CONNECT CAL- CUTTA AND LONDON BY RAILWAY

The transcontinental railway scheme to give a route across Asia from north to south has been revived in India. The latest plan is to extend the railway system of the empire to Kandahar and Kabul to connect with the Russian railway. This would make Bombay and Calcutta the outlets for Russian commerce in Asia, and enable travelers from London to reach India in ten days.

A German inventor has recently patented in the United States a sand blast apparatus for bringing out the grain in wood for decorative purposes.—American Machinist.

Russian cycle manufacturers have petitioned their government to levy the same tax on bicycle frames as on finished bicycles.

BETTER THAN EVER BEFORE

# Chase Tires

FOR SEASON OF 1899

Are the Best Values ever offered. ❁ ❁ ❁  
No expense spared in their production.

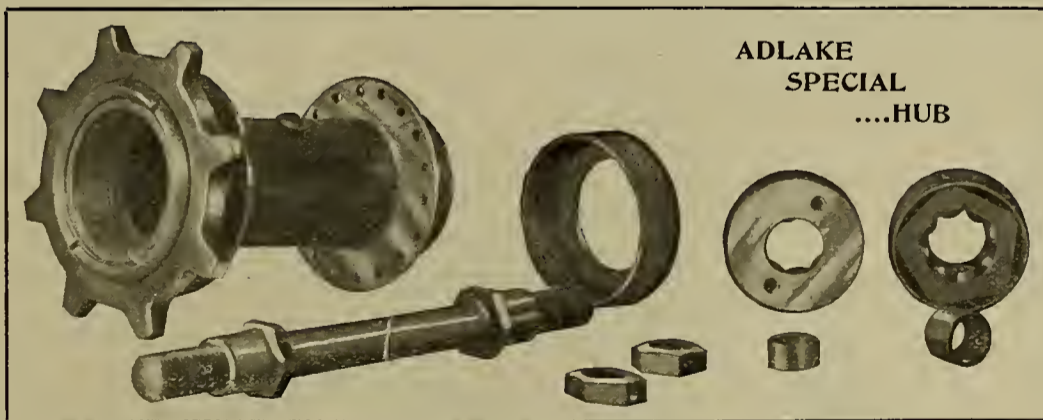
OUR PRICES WILL SURPRISE YOU.  
WRITE US FOR THEM ❁ ❁ ❁ ❁

— L. C. Chase & Co., Boston, Mass.

## ADLAKE BICYCLES

ARE ORIGINAL AND DISTINCTIVE

**T**HEY possess features of special merit peculiar to themselves. Particular attention is called to the "Special Hub." These hubs are turned from solid bar-steel, five pounds of which are used in making a five-ounce hub, the difference being the waste. Cups are turned from solid bar tool-steel of special brand, and screw into the hubs. They are locked in place by locking collars which screw onto outside of hub.



Cones are also turned from the same tool-steel and are screwed onto axles against shoulders. They are then carefully ground and polished. Cups are made ball-retaining by spring washers and are also carefully ground and polished. Right-hand cups are screwed in against shoulders and remain stationary. Adjusting is done by the left-hand cups and collars. Cones always remain stationary and the whole construction is dust-proof. Sixteen  $\frac{1}{4}$ -in. balls are used in front hub and sixteen 5-16 in. balls in rear. Thirty-two piano wire spokes are used in front wheel, and thirty-six in rear.

The wide-awake agent will handle only lines with distinctive and up-to-date features. Adlakes have them.

**The Adams & Westlake Company**

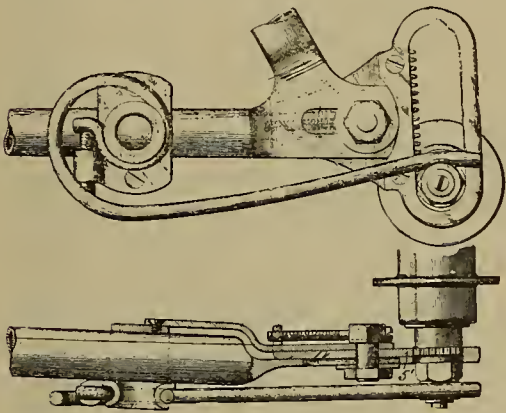
Also Makers of Adlake and X Rays  
Bicycle Lamps and Adlake Cameras

— Makers ————— CHICAGO

## RECENT PATENTS

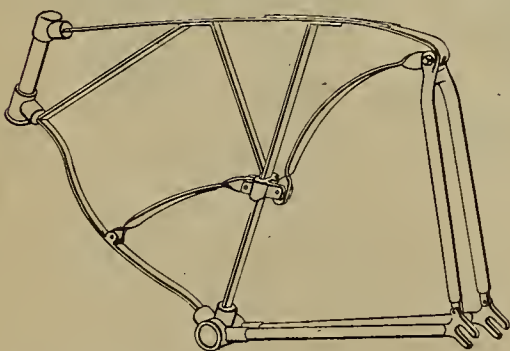
## Device for Cushion Frame Converts Who Own Rigid Bicycles—A Tire Repair—Adjustment Without Tools

**Cushion Attachment.**—The invention, while it belongs to the familiar type of spring devices in which the wheel axles are free to play up and down in a vertical guide way, is remarkable by its neat appearance and because the attachment may be put onto any standard pattern bicycle without necessitating alterations. An oblong guide piece is provided for



each end of the wheel axle, and has a rack on one side of the guide slot, meshing with a spur pinion placed on the axle. On the extreme ends of the axle are placed small stationary rollers which receive on their upper sides the rear ends of round wire springs, the forward extremities of which are coiled and fastened to clips clamped to the rear fork tubes of the frame. The guide pieces are secured to the bicycle frame by means of flat forward extensions, which are bolted to the rear fork end lugs. The bolts used for this purpose take the place of the rear axle and nuts used when the wheel is placed in the frame in the usual rigid manner. Adjusting screws turning in the heads of the bolts which clamp the guide frames to the bicycle frame impart a longitudinal movement to the former and allow the chain to be adjusted. Slender supplementary frames brace the attachment between the securing bolts and the clamping clips. Similar attachments are applied to the front forks, though, of course, the adjustment features are not needed. The inventor is Charles Cretors, Chicago.

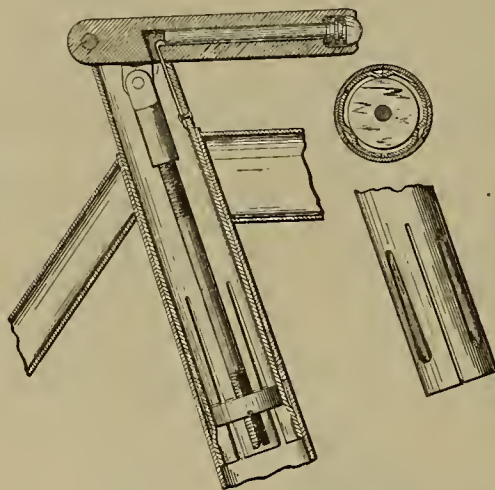
**Spring Frame Design.**—Design patents have been granted J. L. Knoll, Lebanon,



Pa., on an anti-vibratory frame the main feature of which is a system of flat spring bars connecting the front and rear ends of the frame and supporting the saddle. The illustration shows a frame for men.

**Seat Post Adjustment.**—The post is designed with the idea of dispensing with wrench and other tools for adjusting purposes. The horizontal saddle support is

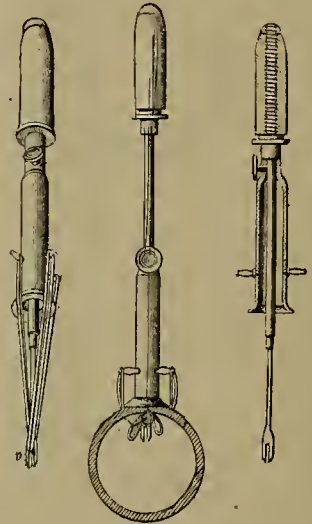
hinged at its rear end to the post and has a lug on its lower side in a position that is normally central with the vertical post and which forms one part of a hinge joint, the other section of which is the upper end of a rod which carries an expander piece at its lower extremity. The lower end of the post is split to be expandible and has several longitudinal grooves pressed in its outer surface which form tapering ribs on the inner wall. The ribs taper into the wall of the tube at their upper ends, so that by lowering the expanding piece the split end of the post is expanded to bind against the seat mast tube of the bicycle frame. The operation of the post consists in pushing downward upon the front end of the hinged horizontal saddle support when it is desired to tighten the post and in raising the front of the support when the post is to be loosened. A locking device is added, which consists of a spring latch catching the lower back edge of a central hole bored in the horizontal bar. This catch is pushed back out of the way, when it is desired to loosen the post, by a rod which slides in the hole and is operated by a half-round head which may be pressed with the thumb or finger. A short coil spring keeps the sliding rod away from the catch when it is not in



use and a slightly spun-over edge on the horizontal bar retains the rod in place. The exact location of the expanding piece on its rod is not fixed, the expander being screwed onto the rod, and can thus be raised or lowered, so that it will expand the post properly within the range of movement obtained through the hinged saddle support. A similar contrivance is applied to handle bars, the entire bar being tipped laterally on the machine to accomplish the loosening of the expander. The inventors are C. S. Irish and P. V. Markell, Jordan, N. Y.

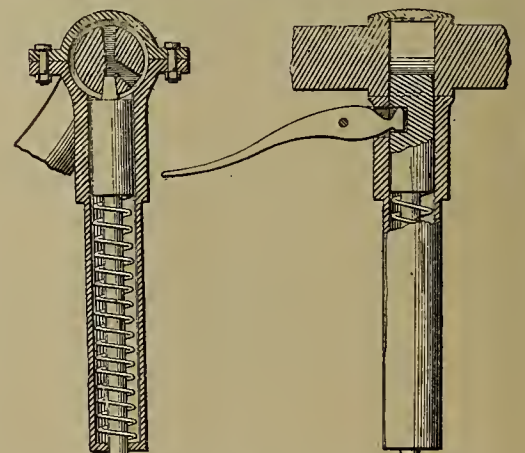
**Band Repair Tool.**—The tool is an improved form of instrument for closing punctures in single tube tires by the band method. It comprises mainly a handle piece with long slender shank on the end of which is a needle with an open-ended slot at its extremity. The back end of the flattened portion forming the slot is inclined to facilitate the work of removing the needle from the tire after the bands have been inserted. A cylinder with reduced upper end fitting the shank of the tool surrounds that shank and may slide upon it, though before a repair is started the cylinder is placed at its highest point near the han-

dle end of the tool and held in that position by a small thumb screw. The upper ends of the bands, which are hooked in the slotted needle, are held by pins on the lower end of the sliding cylinder. The lower extremity of the sleeve is flaring, forming a bell shaped mouth. After the needle and bands have been inserted into the tire the thumb screw on the sleeve is loosened and the latter lowered till the flaring mouth touches the tire. The bands will thus be loosened and will



fall from the retaining pegs and the flaring mouth of the sleeve, if pressed upon the tire, will aid in keeping the bands from coming back out of the puncture when the needle is withdrawn. The inventor is C. E. Kelly, Greentown, Ind.

**Sayres' Adjustable Bar.**—The central collar around the bar is provided with several radial recesses and also a central annular groove or guideway. Inside of the stem is a longitudinal sliding shoe, the upper end of which is formed so that it may engage any of the recesses in the bar collar. A coil spring surrounds the shank of the shoe and rests on the bottom of the stem. In the side of the stem near the upper end is placed a latch lever, by means of which the shoe may be lowered at will. The shoe normally engages one of the recesses in the bar, but when the rider pushes the outer end of the latch lever upward the shoe is lowered and the bar may be swung around to any desired position, when upon releasing the latch the shoe will engage the recess which is then adjacent, and the bar will be locked in the new position. The annular guideway mentioned keeps the bar from sliding laterally in the head stem, while an adjustment is being made. It also keeps the bar from



being pushed through the stem head, and so the latter has to be made in two sections, bolted together with outside lugs and binding screws. The inventor is G. F. Sayres, Milnesville, Va.

## Patent Office "Catching Up."

Washington, Jan. 23.—Last June Congress authorized a small increase in the working force of the Patent Office. The



# Agents, Attention Please

**BIG DISCOUNTS  
GREAT VALUE**  
Read Specifications

# Vim Bicycle



MODEL "30," PRICE \$35.00

EIGHT OTHER MODELS

## SPECIFICATIONS

**Frame**—Made of 1½-inch Shelby Seamless Tubing. Choice of 21, 23, and 25 inch.  
**Joints**—All flush, properly reinforced.  
**Fork Crown**—Vim arched, forging, spear-head pattern.  
**Crank Axle**—Genuine Fauber one-piece.  
**Cranks**—Diamond pattern, 7-inch throw.  
**Drop**—2½ inches.  
**Sprockets**—Star pattern; front 18 to 30, rear 7 to 10.  
**Gear**—Choice of 68 to 120.  
**Wheel Base**—43¾ inches.  
**Tread**—4⅞ inches.  
**Wheels**—28-inch.  
**Spokes**—Swaged, tangent, 32 to front and 36 to rear wheel.  
**Rims**—Rastatter, choice of plain, natural finish or colored.  
**Hubs**—Our own make, style "A".  
**Bearings**—All made of tool steel, ground, hardened and polished.  
**Seat Post**—Flush L pattern, tubular, with tubular saddle bar; very latest.  
**Expanders**—In handle bar—Chicago Handle Bar Co.'s eccentric make; one that will hold.  
**Chain**—Baldwin, highest grade 3-16-in.; B block detachable; polished.  
**Chain Adjuster**—Direct.

**Handle Bars**—27-32-inch; choice of any style made by the Chicago Handle Bar Co.; steel up-turned, dropped, ram's horn, Schlaener pattern or steel adjustable, all of the most graceful designs. Octagon tube bars 50 cents additional.  
**Pedals**—Vim, with or without rubbers.  
**Saddle**—Gilliam No. 59, Brown racing pattern, as shown on model "30," or Gilliam No. 46, Gordon pattern, with or without coil springs.  
**Tires**—Our own make; guaranteed for entire year; punctures repaired free.  
**Enamel**—Choice of Maroon, Green, Blue or Black, delicately striped. We use only the best quality of enamel of highest lustre and durability; all bright parts heavily nickel-plated.  
**Weight**—20 to 26 pounds, according to size of frame and sprockets used, regularly equipped with tool case, wrench, oiler and repair kit.  
**Frames**—Our frames are made of the best seamless tubing the Shelby Steel Tube Co. can produce. Built on the most approved lines; short head; 2½ to 3 inches drop to the crank hanger; a strong and rigid frame, graceful in design. Every joint is a steel forging, machined. For strength and rigidity our frames are unsurpassed.

There are positively no stampings, castings or brazed tubes used in these Bicycles. Do not compare our prices with those of wheels so made. We challenge any manufacturer to produce a bicycle of same material and workmanship for less money.

## VIM BICYCLE COMPANY, Incorp., CHICAGO, ILL.

Good Agents Wanted in Unoccupied Territory. Write to-day. Catalogue for the asking.

effect of this has been to greatly improve the condition of the work, as shown by the following figures: On December 28, 1897, there were 11,382 applications for patents awaiting action, while on December 27, 1898, the number then awaiting action was only 5,467. At the end of the year 1897 the divisions were in arrears from five weeks to seven months, while at the close of 1898 thirty-five of the thirty-six divisions were in arrears only six weeks on new work and fifteen days on amended work, and the remaining division will be up to them within two weeks. The total receipts of the Patent Office during the year were \$1,137,734.48, while the total expenditures were \$1,136,196.20.

### AMERICAN IDEAS DOMINATE

#### French Are Close Imitators of New World Construction—English Abandon the Field.

Aside from the great showing of motor vehicles, the features of the Paris cycle show were the complete dominance of American machines and ideas and the unexpectedly good showing made by chainless machines, according to an American trade visitor. So plainly in evidence were these two features that even the most biased critic could not fail to be impressed by them.

The show was almost like an American show. French and American cycles preponderated, but it was not always easy to distinguish one from the other. The latter are now looked upon as leaders. Sometimes they are copied outright, and at other times the attempt is made to produce composite machines. Even in the latter case, however, American characteristics come to the front. British makers have about abandoned all hope of competing in the French market. They appear to recognize the fact that the tide is running away from them, and rather than acknowledge its influence by modifying their patterns, they choose the part of abscission.

In the meantime American machines continue their steady progress. There is no fear that the pace cannot be kept. We are not apt to neglect an advantage once gained, especially in a case where we are so much in earnest as in this one.

#### No Purchaser for Warwick Plant.

J. H. Hendrick, one of the assignees of the Warwick Cycle Company, says that there is at present no prospect of opportunity to dispose of the idle plant. The assignees have yet a number of months in which to sell the factory, as last March they were given eighteen months by the court for their task. Mr. Hendrick says that the plant will not be "slaughtered," and that the low water price of \$100,000 has not been changed.

#### Rack Company Changes Name.

The Chicago Bicycle Rack Company, Chicago, has certified to a change of name to the Wallingford Manufacturing Company, increase in number of directors from three to five, and to change of object of incorporation to general manufacturing.

#### Harveyized Steel in Bicycles.

To an inquirer who desires to know what Harveyized steel is, and wherein the process of Harveyizing consists, the American Machinist gives the following answer, which may be of interest to those who see the term used in bicycle catalogues: It consists of nothing much or essentially different from the old, familiar case hardening process. The plates to be hardened are simply packed with bone charcoal next to the side it is desired to

harden, heated and kept hot for the absorption of carbon by the plate, which is then removed, placed upon suitable supports and numerous small jets of water projected against the surface to be hardened."

### RETAIL TRADE CHANGES

#### Iowa Dealer Installs Complete Repair Shop—Transfers of Business in Other States.

W. H. Senter has sold his bicycle agency business in Brockton, Mass., to Wesley Snow, who will conduct the business in the same place.

The bicycle and sporting goods business of G. G. Jackson, in Wichita Falls, Tex., has been purchased by E. M. Winfrey. Mr. Jackson will act as salesman.

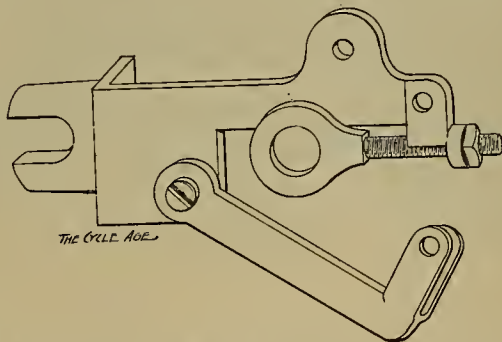
W. D. Heath has succeeded the firm of Munsey & Heath, who for the past five years have conducted a business in bicycles and bicycle sundries in Lakeport, N. H.

George E. Bagg, formerly employed by Hendee & Nelson and later a member of the firm of Holden & Bagg, of Springfield, Mass., died suddenly at Albany a fortnight ago.

C. E. Adams, who has conducted a furniture store in Spencer, Ia., handling bicycles as a side line for the past four years, has now sold his furniture stock and will hereafter confine his attention to the sale of bicycles and to repair work. He has installed lathes, forges, enameling ovens, vulcanizers and all necessary tools to make any part of a bicycle.

#### English Rear Fork Ends.

The accompanying illustration shows a new rear fork end lug recently offered to the English trade. The object of the fitting, as may be seen from the illustration, is to afford ready means for removing the rear wheel without separating the



chain. The lower side of the fork is hinged to the lug and when the set screw which holds it in its normal position is removed the entire rear wheel, together with the chain adjusters and nuts, will drop from the frame. Suppositiously the chain adjustment will not be lost during the interval between the removal and replacement of the wheel. In reality this depends upon the looseness of the fit of the nut on the threaded shank of the adjuster. If the nut is tight, the chain adjustment will remain unaltered. If it is loose, the probability is that the nut will be accidentally turned for at least a short distance either way. The fittings do not afford as easy rear wheel removal as some of the fittings now in use in this country, as it is necessary besides loosening the axle nuts to take out the screw which holds up the hinged portion of the lug. A screw driver is required for the removal of this pin, and it is very likely to be misplaced while out of the fitting.

#### Swiss Tire Healing Compound.

From Basle, Switzerland, there comes in the form of a United States patent granted to one Jean Gaa, a recipe for

making a puncture healing compound which seems meritorious in that there is nothing in its make-up which is liable to injure the rubber in the tire. The composition is made by forming an emulsion of ten parts pulverized ammoniac gum, ten parts of powdered gum and twenty parts of water. This emulsion is then suspended in twenty parts of glycerin. The choice of gums to form the emulsion is not limited very closely, the object in using the gum being to furnish a non-injurious plastic solid which being suspended in a non-drying liquid, such as glycerin, will enter all punctures and close them before the air in the tire has had opportunity to escape. Shellac may be used after having been precipitated in the form of gelatin from its solution by means of glycerin or hydrates of carbon or a mixture of both. Vegetable or animal cellulose may be employed in a suitable disintegrated state, as well as membrane gum or guttapercha, the latter being used either raw or cured or precipitated from its alkaline solution.

### AMERICAN AND ENGLISH EXPORTS

#### Week's Shipments from New York to Germany Double Two Weeks' English Exports.

Exports of bicycles and bicycle material from the port of New York for the week ending January 17 are recorded as follows:

	Bicycles.	Mat'l.
Germany . . . . .	\$10,175	\$11,386
France . . . . .	27,539	7,490
England . . . . .	8,845	16,848
Argentine . . . . .	15,925	336
British Africa . . . . .	4,853	277
Austria . . . . .	3,800	533
Denmark . . . . .	250	1,603
Australia . . . . .	925	18
Holland . . . . .	390	979
Scotland . . . . .	616	389
Brazil . . . . .	679	237
British Guiana . . . . .	442	180
Peru . . . . .	563	.....
British West Indies . . . . .	437	50
Italy . . . . .	453	.....
British East Indies . . . . .	400	.....
Chili . . . . .	367	.....
Mexico . . . . .	226	.....
Belgium . . . . .	225	.....
Central America . . . . .	20	123
Ecuador . . . . .	140	.....
Egypt . . . . .	.....	.....
Other countries . . . . .	320	133
Totals . . . . .	\$167,230	\$10,582

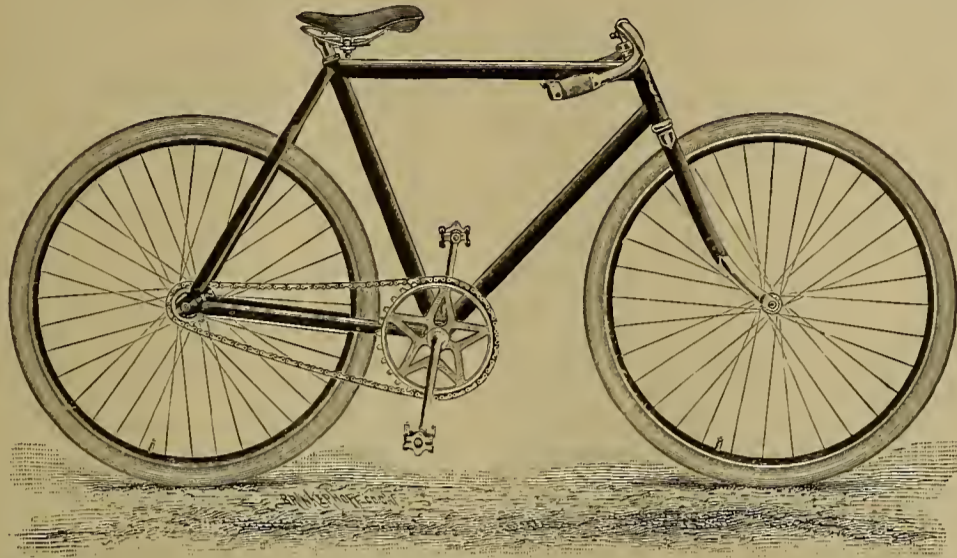
The total exports of bicycles and materials from England for the two weeks ending December 30 are recorded as follows:

Adelaide . . . . .	\$ 1,878
Melbourne . . . . .	9,486
Sydney . . . . .	1,532
Perth . . . . .	1,694
Wellington . . . . .	1,326
Cape Town . . . . .	5,435
Algoa Bay, South Africa . . . . .	2,686
Durban . . . . .	6,776
East London, South Africa . . . . .	160
Port Elizabeth . . . . .	4,731
Bombay . . . . .	3,235
Calcutta . . . . .	1,747
Madras . . . . .	189
Rangoon . . . . .	1,278
Colombo, Ceylon . . . . .	343
Flushing . . . . .	2,293
Boulogne . . . . .	2,449
Rotterdam . . . . .	910
Hamburg . . . . .	634
Ghent . . . . .	339
Bordeaux . . . . .	194
Antwerp . . . . .	116
Genoa . . . . .	310
Ostend . . . . .	271
Albany . . . . .	169
Hongkong . . . . .	242
Shanghai . . . . .	242
Singapore . . . . .	460
Otago, New Zealand . . . . .	174
Launceston, Tasmania . . . . .	387
Lyttleton . . . . .	237
Malta . . . . .	300
Port Said . . . . .	145
Other ports . . . . .	1,258
Total . . . . .	\$53,895

#### Bridgeport Dealers Co-operate.

An annual meeting of the bicycle dealers of Bridgeport, Conn., was held January 12 to determine upon a plan of cooperation the coming season. There were fifteen present, including all the prominent dealers in the city.

# The Monarch Line



“Covers the Ground”

Monarch Roadsters, \$50

Defiance Roadsters, \$35

King and Queen

Roadsters, - - - \$25

Our “KING,” the \$25.00 wonder. Sold only to dealers handling our complete line.

Monarch Chainless, \$75

AGENTS WANTED IN OPEN TERRITORY.

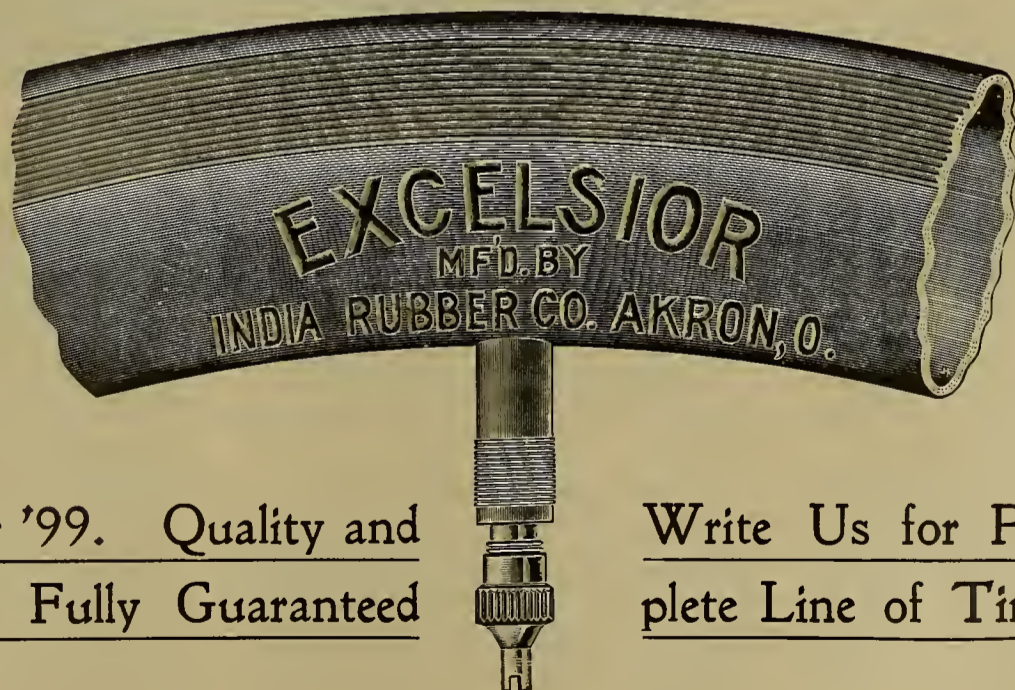
“Ride a Monarch and Keep in Front”

MONARCH CYCLE MANUFACTURING COMPANY

NEW YORK. LONDON. HAMBURG.

Lake, Halsted and Fulton Streets, CHICAGO.

# TIRES TIRES TIRES



Our Leader for '99. Quality and Workmanship Fully Guaranteed

Write Us for Prices on Complete Line of Tires ❁❁❁❁❁

## EXCELSIOR SUPPLY CO., CHICAGO

ESTABLISHED 1876

EVERYTHING FOR BICYCLE BUILDERS AND DEALERS

## COMPRESSED AIR VEHICLES

### Account of Motor Power Which Syndicates With Many Millions of Capital Mean to Exploit

For the first time in the development of the motor vehicle idea a system of propulsion has been brought under the notice of the public, which is subject to absolute control through patents; and this has been the signal for immediate aggregation of immense capital for exploiting that system in preference to any other system in which the field would be open for competition.

#### The Principal Companies.

The following companies have been organized to work the inventions of Hoadley and Knight in the use of compressed air, these inventions being protected by something like 200 separate patents on the street cars and motor vehicles taken together.

American Air Power Company, \$7,000,000; includes Whitney syndicate; controls works in New York city and compressed air street cars for United States.

International Air Power Company, \$7,000,000; works at Worcester and Providence. Controlled by the Hoadley-Leiter syndicate; will build and sell compressed air auto-trucks, engines, locomotives and automobiles.

New York Auto-Truck Company, \$1,000,000; controlled by the Croker-Hoadley syndicate; general truckmen, using International Air Power trucks. This company will own the charging stations throughout the city.

Chicago Auto-Truck Company, \$10,000,000, controlled by the Leiter-Hoadley syndicate; same business as New York Auto-Truck Company.

#### A Branch for Philadelphia.

Philadelphia, Jan. 23.—The Philadelphia Motor Wagon Company, the principal office of which is at No. 117 Federal street, Camden, N. J., was incorporated under the laws of New Jersey last Saturday with a capital of \$1,500,000. The object of the corporation is the manufacture of self-propelled wagons and other vehicles. The incorporators are Cornelius W. Woodward and William J. Jackson, of Philadelphia, and Josiah S. Dubois, of Camden. The new concern is supposed to be connected with the recently formed Cramp-Hoadley syndicate of New York, but in answer to inquiries in this direction the Cycle Age correspondent was referred to ex-District Attorney George S. Graham, counsel of the new company, who, however, could not be found.

Another company of a similar character about to be incorporated is the Philadelphia Auto-Truck Company, with a reported capital of \$10,000,000.

#### Secrecy of Proceedings.

The gigantic system of amalgamated companies which it is evidently the intention to form is yet in that stage of formation in which part of the information vouchsafed is more or less doubtful and in part self-contradictory. A New York correspondent writes in Chicago Tribune of Tuesday, January 24, in part as follows:

Mystery surrounds the New York Auto-truck and the International Air-Power companies. Among the directors of these allied corporations are Richard Croker, Senator Gorman, Nathan Straus, and Lewis Nixon. Joseph Hoadley is president of both.

The American Air-Power company is owned by the Metropolitan Traction company. President Archibald A. McLeod of the American said today:

"I know nothing of the Autotruck. The

Hoadley-Knight companies have nothing to do with the American. We are building air motors for the cross-town lines. Our cars run. We are not trying experiments."

Told what President McLeod had said, President Hoadley replied:

"That is true. The American is owned by the Metropolitan. The Autotruck and International are our companies. We have no plant in this city. Our works are in Worcester."

Can the autotruck turn a sharp curve? President Hoadley was asked about this, and permission was asked also to send experts to his plant. He said:

"The public never will get any description of our autotrucks till we have them running on the streets of this city. The turning of a curve is the whole problem. We have solved it; no person knows how except myself and the inventor. We keep our workmen in ignorance. When the time comes I will give

I. This shop tricycle has, as I was informed, about the same construction of engine as that proposed for the auto-trucks. Some very successful experiments have also been made with compressed air driven street railway cars, and it is the favorable results shown by these street cars and the Worcester heavy tricycle truck which are at this time attracting capital so strongly to investment in these compressed air propulsion schemes. The engraving given of the Worcester tricycle truck shows its general construction sufficiently to render a particular description needless.

Although the auto-truck managers say that there is more than one auto-truck completed, no photograph of this vehicle is yet obtainable. I have, however, secured a tolerably complete verbal description of details, which is here given:

#### Particulars of Standard Pattern

Motive power, compressed air, 4,000 lbs. per square inch.

Dimensions of truck platform, 12 feet long and 6 feet wide, wholly unobstructed on the upper surface.



First Hoadley-Knight Auto-Truck.

a description of the machinery, and not till then."

#### First Authentic Description.

In view of the magnitude of the deals which are under way and their possible influence for the advancement of automobilism, the representative of the Cycle Age has been at pains to gather all the information in regard to compressed air vehicles which seemed to be of a reliable nature. He writes in substance as follows:

#### The Hoadley-Knight Auto-truck.

Partial information as to the mechanical details of the Hoadley-Knight auto-truck are at last available, but they do not vary greatly from what has been open to the public for a long time in the Hoadley-Knight compressed air driven street cars.

The illustration shows a works-yard compressed air driven tricycle locomotive, built, evidently, as best it might be with materials at hand, and used for some time past very successfully in the yard at the Wheelock Engine Shops, Worcester, Mass., which are owned by one of the Hoadley-Knight companies, which has lately acquired the Rhode Island Locomotive Works, Providence, R.

Load, 5 tons, and can draw a 10-ton trailer in addition.

Weight of truck, 4,000 lbs.

Wheel base 72 inches, gauge 60 inches.

Diameter of wheels, 30 inches and 42 inches. Rear wheels only driven.

The wheels are of wood, with metal hubs, and steel tires 5 inches wide by  $\frac{7}{8}$  inches thick. The front wheels are carried on pivoted steering axles on roller bearings, the rollers being each  $1\frac{1}{2}$  inches long by  $\frac{1}{2}$  inch in diameter, hardened and ground, running on hard surfaces on the axles, and in hard bushes in the hubs. These rollers are arranged in two circles in each bearing, one circle at each end of the hub.

The engines are supplied with motive fluid from nine steel bottles charged with compressed air at 4,000 pounds to the inch. These bottles are each 8 inches in diameter by 8 feet long, made of nickel steel 5-16 inch thick, by the Carnegie company, tested to 18,000 pounds to the square inch. The bottles are arranged in three rows of three bottles each, lying lengthwise of the truck and suspended from the reach. In the truck shown in the illustration the bottles are shorter and are suspended crosswise.

From these bottles the compressed air

is led through a ½-inch copper pipe to the reducing valve. Between the bottles and the reducing valve, the ½-inch copper pipe makes three turns around a hot water heater 12 inches in diameter, 48 inches long, 3-16 thick, charged with hot water at 400 degrees of temperature, corresponding to about 250 pounds pressure. The three turns of the ½-inch copper pipe around the hot water reservoir are sufficient to heat the air passing from the bottles to the reducing valve to about the same temperature as the water contained in the hot water reservoir. Before reaching the reducing valve the air in the supply pipe receives a certain amount of lubricating oil from a drop-feed oil cup. This is the only oil cup on the wagon. It is large, and as the quantity of oil supplied to the air is extremely small, it requires filling but seldom and needs no attention whatever.

At the air valve the pressure is reduced to 200 pounds, which is the initial pressure of admission to the high pressure cylinder.

#### Exhaust is Noiseless.

The motor is a cross compound cylinder and piston engine, the pistons having a stroke of 6 inches. The high pressure cylinder is 4 inches in diameter and the low pressure cylinder is 8 inches in diameter. Air enters the high pressure cylinder at a temperature of 400 degrees and pressure of 200 pounds. The normal cut off is at ¼ stroke, and the pressure in the high-pressure cylinder is therefore reduced to 50 pounds at the termination of the stroke. Between the high pressure and the low pressure cylinder the exhaust is reheated to the original temperature of 400 degrees by injecting a sufficient portion of hot water from the heater, from 5 to 10 pounds of hot water being required per mile for this purpose. The initial pressure in the low pressure cylinder is about 50 pounds, and the normal cut off is at ¼ stroke, which results in an exhaust delivered at but little above the atmospheric pressure and temperature. This makes the exhaust nearly noiseless, and prevents it from being offensive in any manner. The cylinders are of plain, double acting, cross-head and connecting-rod construction. The valve motion is had from a wedge eccentric sliding across the shaft, and operated by a hand wheel and screw working in a journaled nut mounted on one arm of a bell crank, the other arm of the bell crank being suitably connected to the wedge eccentric which is operated thereby. A throttle valve is provided, but is not used except for stops of considerable duration. While running on the road the engines are handled entirely by the shifting eccentric, and stopped by placing it in midgear. The action of a wedge eccentric corresponds almost exactly to that given the valves by an ordinary link motion. The engines are wholly enclosed in a dust-proof casing, and all parts are lubricated by splashing from an oil basin forming a part of the casing.

The rear axle is continuous, and has secured to it a steel gear 4 inches face, 3 pitch, 63 teeth, giving it 21 inches pitch diameter. The gear reduction from the engine shaft to the axle is two to one.

#### Oiling Nearly Automatic.

One 36-inch driving wheel is secured to one end of the continuous rear axle. The opposite 16-inch driving wheel is mounted on a sleeve revolving on the axle, driven by the usual compensating gear, having two beveled pinions in the compensating gear disk. The rear axle is carried on roller bearings of the same description as those applied to the front wheels. The rear axle sleeve is also mounted on roller bearings, and all running surfaces are made self-lubricating without the use of oil cups, thus requiring no attention whatever from the driv-

er while on the road, it being only needful to replenish the main oil reservoir at long intervals.

There are no gear changes, the power variations being obtained by shifting the eccentrics.

The motor, complete with its casing and gearing, weighs about 1,000 pounds, and is rigidly connected to the truck frame. The nine compressed air bottles weigh altogether about 1,800 pounds, and the reheater weighs about 200 pounds empty.

#### Reheater Effective Five Hours.

The cylinder valves used are of the D-piston form, ¾ of an inch in diameter for the high pressure cylinder, and 2 inches in diameter for the low pressure cylinder; these valves are solid, without rings or packing of any sort. The working pistons are each fitted with two eccentric snap rings. The main connecting rods are 15 inches center to center. The reheating reservoir has a covering 4 inches thick to prevent heat radiation. This covering consists first of an air space about the reheater, next comes an envelope of wire cloth, supporting a covering of magnesia, which is in turn enveloped in a thick clothing of cow-hair felt. The reheater thus protected and charged with water at 400 degrees, will retain sufficient heat to be effective for five hours, at the end of which time it must be recharged. Such arrangements are made of charging nozzles as to permit the filling of the compressed air bottles and of the reheater, simultaneously.

The driver has only two hand-controlled operations to direct, the management of the shifting-eccentric controlling-wheel and the steering-wheel. The clearance between the lowest part of the machinery and the road surface is about 6½ inches.

The steering wheels swing through an arc of 120 degrees.

#### The Power Supply.

The normal speed is eight miles per hour. Twenty per cent grades can be ascended with a load of five tons. The range is twenty-five miles with a single charge.

It is said that auto-trucks as described can deliver to the drivers 40 per cent of the indicated power of the air compressing engine, and that the fuel cost per mile of driving a truck carrying five tons of paying load is 1 cent per mile.

To supply the auto-truck with compressed air and hot water, numerous charging stations must be provided in the territory over which the trucks are to travel. Each of these charging stations will contain an air compressor driven by about 100 horse-power, and a boiler fired to 250 pounds pressure, to supply the air heating tanks. The compressors may be driven by steam engines, or by gas engines. For various reasons the gas engines seem preferable, but nothing is positively decided in this matter as yet.

This information is directly from Mr. Knight, the chief engineer of the enterprise.

#### Few Engineering Difficulties.

The charging stations do not offer much of a problem, as they involve no engineering difficulties, and with an abundance of money and the liberty of the city which is suggested by the name of Croker, any desired number of suitable charging stations could probably be provided within ninety days from order. These charging stations do not involve any underground work, nor does a single one cost very much. It is not yet known how closely the charging stations must be placed for convenience; probably they should nowhere be more than a mile apart, and probably, also, facilities would need to be provided for the simultaneous recharging of a great number of trucks

at busy localities, such as the railway docks and steamer docks on West street.

The great points of advantage claimed for the auto-truck are its absolute cleanliness, and entire freedom from offensive product of any sort. As there is no fire and no gasoline, there is nothing to fear in the way of burning up.

The production of the auto-trucks is a simple matter from an engineering point of view; 2,500 of these wagons per month has been mentioned as a probable output, and it would not be impossible, with plenty of money, to reach that figure by August 1, 1899, although neither of the plants owned by International Air Power Company are now equipped with machinery specially adapted to the production of the auto-truck. But Worcester and Providence and vicinity can turn out unlimited supplies of machine work of the highest class to any financially sound order, and the production of the auto-truck can be very rapidly brought up to any possible demand.

#### Rapid Advance of Stock.

In regard to the financial outlook for New York Auto-Truck Company, it may be said that the stock was listed at 9 in September, 1898, and was sold at 48½ on January 14, 1899, the day on which the present organization was completed; at 62 on January 16; at 68 on January 17, and on January 18 at 71.

HUGH DOLNAR.

New York, January 19, 1898.

#### Motor Wagons for Ice Delivery.

The Consolidated Ice Company of New York city is considering the advisability of using motor driven wagons for the delivery of ice. According to reports the company will order 1,000 wagons, provided a satisfactory vehicle can be found. Plans and estimates have been invited for these wagons. The routes traveled by the company's regular wagons average, at present, from ten to fifteen miles in the city, and from twenty to twenty-five miles in the suburbs. These wagons weigh when empty about 3,500 pounds and have a capacity of from six to eight tons. Owing to the nature of the load the form of motor used in the new wagons must be free from heat and of small size, besides being powerful and cheap in first cost and cost of operation.

#### Low Price on Old Pope Models.

The Pope Mfg. Co., having on hand a limited number of its early product of chainless machines, has, by reason of recent improvements, decided to place the old stock on the market at \$65, and so announced at the opening of the New York show. The object of the company is probably to emphasize the value of the latest improvements and place the new machines where they belong, in undisputed possession of the position at the head of its models.

#### Paris Cab Company Delayed.

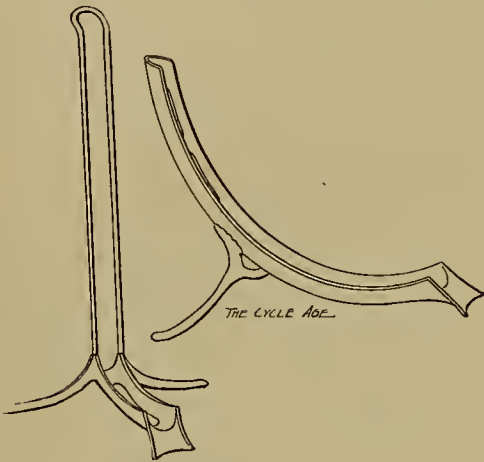
The General Automobile Company of Paris has had much difficulty in securing from England the accumulators ordered for use in its electric cabs which were to be put in public service in the French capital January 15. It is now announced, however, that 100 vehicles will be put in operation about February 15 and will have a maximum speed of thirty-five miles an hour.

Considerable interest has been aroused in France by the offer of a Frenchman to convert into alcohol driven vehicles the first ten petroleum motor vehicles sent to him, and it is expected that a contest between alcohol motor vehicles will take place early in October.

# INFORMATION FOR BUYERS

## ESMOND BICYCLE STANDS.

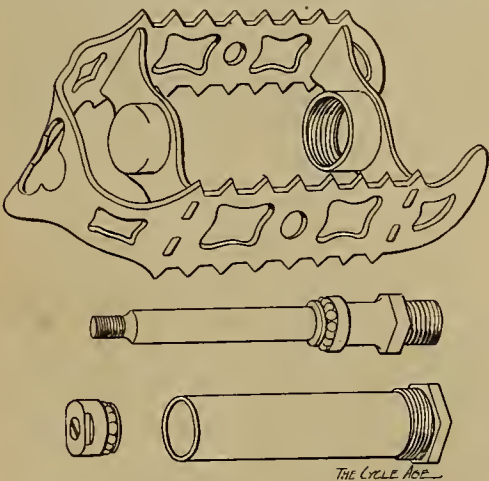
E. R. Esmond, 227 W. 29th street, New York city, is making a complete line of cycle stands which includes supports for home, store, office and exhibition purposes. The stands are all very rigidly constructed, and are finished in enamel, nickel, bronze or brass or combinations of these. One pattern of wall bracket and one floor stand are fitted with automatic locks. Of the two self-supporting floor stands illustrated the one at the left has an enameled base and nick-



eled rods. The other is a small, neat stand for use in the home. Legs are also furnished by the company so that a board of any length can be secured thereto and any number of the wall racks attached, thus giving a series of holders for street, store or club room use. The exhibition stands are adjustable in length from 38 to 44 inches for single bicycles and from 62 to 68 inches for tandems. A stand constructed similar to the exhibition stand and having a trough running its entire length, directly under the bicycle, is convenient for cycle cleaning purposes.

## THE "PERPETUAL" SEPARABLE PEDAL.

Edmonds & Metzger, 115 Monroe street, Chicago, have begun the manufacture of the Perpetual pedal, the distinguishing feature of which is that the bearing parts may be separated, cleaned and replaced without removing the balls from their races and without disturbing the adjustment. The first 1,000 lot of these pedals has been finished and the company is now ready to deliver goods. An exhibit was made at the recent Chicago cycle show where several large orders were placed for the pedals. As will be noticed from the accompanying drawings the pedal barrel instead of being brazed or otherwise permanently secured to the frame, is exteriorly screw threaded at its base and screws into the threaded hub on the inner cross arm of the frame. The outer end of the barrel enters snugly a cap-shaped sleeve on the outer frame arm. A rigid connection between the frame and barrel is thus form-



ed when the two have been screwed together. This feature of the construction as well as certain others is patented. To separate the bearing parts it is merely necessary to unscrew the barrel from the frame and then turn off the outer bearing cone from the end of the spindle. The outer row of balls is retained on the cone and the inner row is held on the spindle race by ring retainers. In the end of the cone is a small set screw against which abuts the end of the spindle when the cone is screwed down

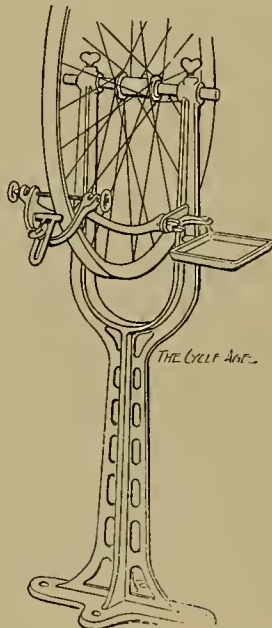
tight upon it and by screwing the set screw inwardly or outwardly the adjustment is loosened or tightened. The threading on the adjusting set screw is in the opposite direction from that on the cone so that there is no tendency for the adjustment to become accidentally altered while the pedal is in use.

## FRONTENAC MODELS AND CONSTRUCTION.

The advance circular of the Frontenac Mfg. Co. of Syracuse, N. Y., illustrates and briefly describes five models of Frontenac bicycles. The regular road patterns for men and women, Models A and C, and the women's diamond frame machine, Model G, sell at \$50; the track racer, Model B, at \$65, and the 30-inch wheel machine, Model E, at \$60. All models are fitted with Victor tires and enameled in the company's special russet color. The steering heads are enameled black. Frontenac Brown pattern saddles and Watson seat posts are the regular equipment for those parts. The Frontenac specially constructed flush joints and the double tubular fork crown continue to be mechanical features of the machines. Any of the models will be fitted with Weston rear hub brakes if desired.

## FLOOR WHEEL TRUING STAND.

To meet the universal demand for a good and substantial floor wheel truing stand the New England Cycle Supply Co., of Keene, N. H., are offering the tool herewith illustrated. It is handsomely designed, very strong and stiff, and is well made. It



will take the wheel either with or without axle. The gauge is simple, durable and quick in its adjustment. The swing shelf is a convenience. The weight of this stand is 40 pounds, boxed. The price is about the same as that usually asked for bench truing stands. This new stand, together with other specialties, will be exhibited in spaces 42 and 43 at the New York show.

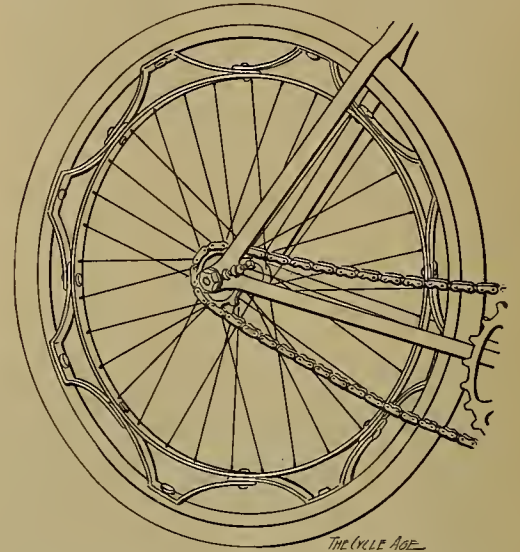
## THE CROWN BICYCLE HUBS.

For the third year the Cortland Carriage Goods Co. of Cortland, N. Y., offers as a high grade type of light weight cycle hub its Crown tempered barrel hub. This is carefully designed on standard lines with view to producing as simple and reliable and at the same time as free running a hub as possible. The front hub has a one-inch barrel and the rear hub 1 1/4. The axles and nuts are hardened and the rear wheel sprocket is screwed into the barrel with a right hand thread and locked by a left threaded nut. The regular chain line is 1 3/8-inch, though any chain line desired will be furnished. Spoke flanges are regularly drilled 32 and 36, other drillings being optional. The cups and cones after hardening are ground, polished and burnished and present a very highly finished appearance as well as being accurate in size and true in angles of race surfaces. The company also makes forged steel cranks and other bicycle drop forgings.

## RESILIENCE OF WOOD RIMS INCREASED.

A new "non-puncturable bicycle," and a Philadelphia product in its entirety, is "The Luxury," manufactured by the Devine

Wheel Manufacturing company—P. F. Jann, president; C. E. Stump, secretary and treasurer—incorporated with a capital of \$100,000. The feature of the new machine is the discarding of the pneumatic tire and the use of a special cushion tire, the necessary resiliency being obtained by means of a series of eight convex springs connecting the rim with an inner wheel to all intents and purposes the counterpart of the wheel at pres-



ent in use on the majority of bicycles except that it is, of course, smaller and has a flat steel rim, which at the points of contact with the eight convex springs is fastened with small bolts and nuts. George H. Foley, 911 Walnut street, Philadelphia, formerly representing the Remington company in Philadelphia, is distributing agent for the new bicycle, of which 200 have already been turned out.

## READING STANDARD COMPANY ELECTION.

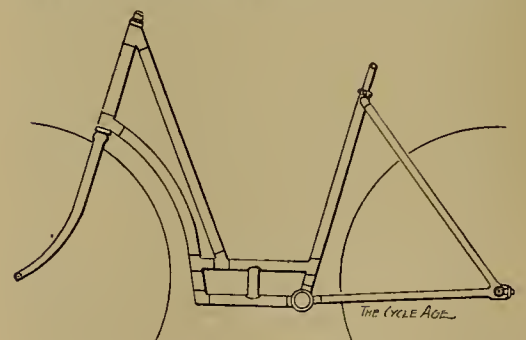
At the annual meeting of the Reading Standard Mfg. Co. of Reading, Pa., the stockholders re-elected the old board of directors, with the following officers: Johnathan G. Leinbach, president; Thomas P. Merritt, treasurer; William F. Remppis, secretary and general manager.

The Reading Standard company has done a largely increased and satisfactory business during the past year and the reports for the coming season are excellent. The company's former agents all report that they expect to sell far more Reading Standards this year than last and new agents are being added to the list daily. The company has a fine line of 28-inch wheels listing at \$30, \$40 and \$50, as well as a 30-inch model, listing at \$45, and the Reading Standard roller gear chainless model, listing at \$75.

A number of improvements have been made in the well-equipped factory, which is busily engaged on the season's product, so as to be ready to supply the wants of agents promptly when the shipping time arrives.

## ROOMY FRAME FOR WOMEN RIDERS.

The accompanying illustration shows a frame for women's bicycles, which has been designed by Sylvester B. Hill, 282 Front



street Chicopee, Mass. A military bicycle was recently constructed by the same designer and was illustrated in the Cycle Age of December 2, 1898.

## SAGER GEAR AND SADDLE INTERESTS UNITE.

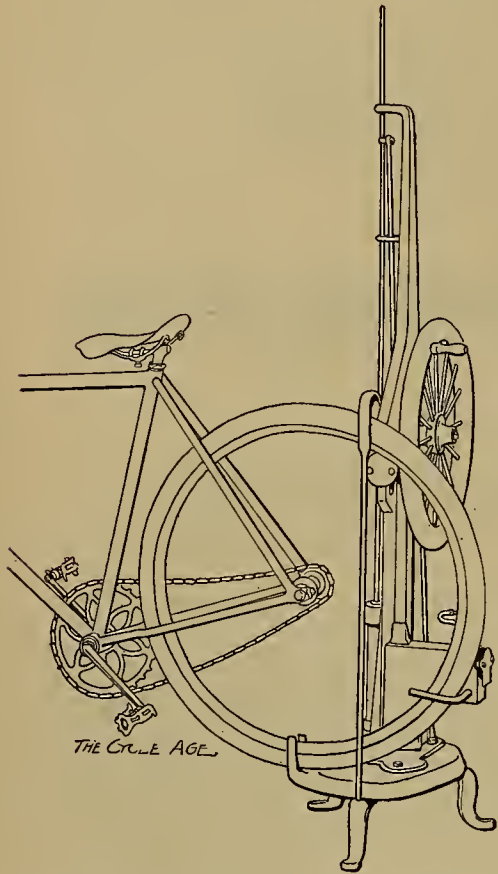
An amalgamation of the Sager gear and saddle companies has been effected. The change was made because the owners of the two being largely the same people, it was considered undesirable to continue the expense of separate forces. Both companies



drew on the same sources of supply, so that the change is in every way beneficial. The capital of the Sager Gear Co. has been increased to \$400,000.

#### IMPROVED TIRE INFLATOR.

The penny-in-the-slot tire inflating machine shown in the accompanying illustration has been added to the line carried by the Beckley-Ralston company of Chicago. It was designed by L. S. Brown, formerly of Columbus, O., and one of the machines which was placed at the disposal of riders in a public



park of that city for three months netted during this period an income in pennies of \$45.50. A large number of hardware dealers in Ohio, who also carry bicycles, have given orders for the machine, believing that it will save them the constant annoyance of complying with request for inflation of tires in the store, while at the same time bringing customers to their doors. By the possession of the inflating machine the loss of time is turned into a gain of pennies which quickly repays the first cost of the machine. It is stated that the internal mechanism of the slot arrangement is proof against tampering and will not get out of order.

#### WHY BUESCHER CO. DOES NOT EXHIBIT.

The Buescher Mfg. Co. of Elkhart, Ind., makers of pumps, toe clips, spring seat posts and other cycle specialties, states that it does not exhibit at cycle shows because its products are in the hands of representative jobbers throughout the country. The company would come in contact with some jobbers at the shows who might be interested in its goods, but would at the same time meet many more retailers, and it is the aim of the firm to have the jobbers handle the retail trade. For these reasons the company avoids cycle shows and gives the jobbers full opportunity.

#### LIGHT SELF-CLEANING CHAIN.

In the accompanying illustration is shown a bicycle chain, invented by August C. Schaefer, 76 West Congress street, St. Paul, Minn. The aim of the inventor has been to produce a chain much lighter than the ordinary without reducing strength or wearing surface and especially a chain for which no gear case will be required and which for this reason should be very acceptable in all countries, America included, where the favorable climate reduces the necessity of a gear case to such a point that the constant attachment of one is felt as an incumbrance. Mechanically, the main feature is the little lateral lug observed on each end of links and extending into the adjacent link. This lug forms a bearing the full length of journal on crosspin, and insures central draft on the entire chain. Without this lug the chain would be worthless, as each link would then draw the journal on either side in opposite directions, lengthen the chain and run uneven. A line of uniform thickness is thus formed by the links, having no bridges or splices, by which mud may be carried on to sprockets. On both ends of each journal pin rollers are secured by riveting. Where the chain is separated one of the rollers is secured by a removable lock-

ing plate as shown at one of the links in the illustration. The curved grooves cast on the face of the rollers serve a double purpose. In connection with the convex edges of the sprockets the grooved roller will produce a bearing equal in durability to a flat bearing



of one and one-half times its width. The grooves also prevent the link from touching the sprocket at any place. The inventor also claims that the rollers, being fastened upon pins, will aid in bending links when entering into small sprocket, the point where most power is usually wasted in propelling. Riders who have tried the chain contend that mud has no effect on the chain in running. Special sprocket wheels are of course made for this chain and may be made light and yet rigid with the large sizes now generally preferred. The inventor is looking for an opportunity to manufacture on a satisfactory scale.

#### "O. K." BICYCLES WELL CATALOGUED.

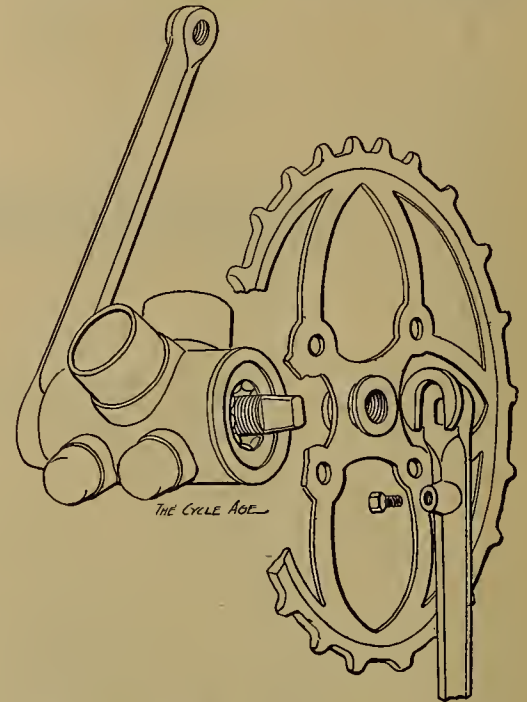
The Otto Konigslow Cycle Mfg. Co., 45 Michigan street, Cleveland, has issued a descriptive catalogue of its cycle models which, besides being unique and attractive from an artistic standpoint, specifies the fittings, equipments and main points of construction of the patterns illustrated in a manner both novel and convenient for the reader. Facing the page illustration of a model appear the corresponding specifications arranged in tabular form allowing the reader to readily determine what the regular equipment is in every particular and also what if any are the options offered. The leader of the Konigslow line is the O. K. Model 20, which has a 30-inch rear wheel and 28-inch front wheel. Model 21 is a lady's pattern to match. These two patterns sell at \$50. Of the three the \$40 patterns, Models 22 and 23, are respectively men's and women's roadsters with 28-inch wheels, while Model 24 is a man's machine with both front and rear wheels 30 inches in diameter.

All patterns are offered with either square or oval forged front fork crowns and all have flush joints made by swaging the tube ends and placing them inside of regular outside connections which have the same diameter as the unwaged portion of the tube. Black is the regular color, with terra cotta and coach green as options. The hangers are of one-piece crank and axle construction, and the Duckworth chain is used. Butler &

Ward saddles are regularly supplied. The tire equipment includes Hartford, Morgan & Wright, Goodrich and Palmer tires. Kundtz laminated rims are used on the \$50 patterns, while the \$40 machines are supplied with Old's one-piece rims, striped. The company calls especial attention to the fact that outside of such equipping parts as tires, saddles, pedals, etc., every part of the O. K. bicycles is made in the Konigslow factory. The company also makes a cheaper bicycle, called the Weld, which retails at \$30.

#### THE LATTA TWO-PIECE HANGER.

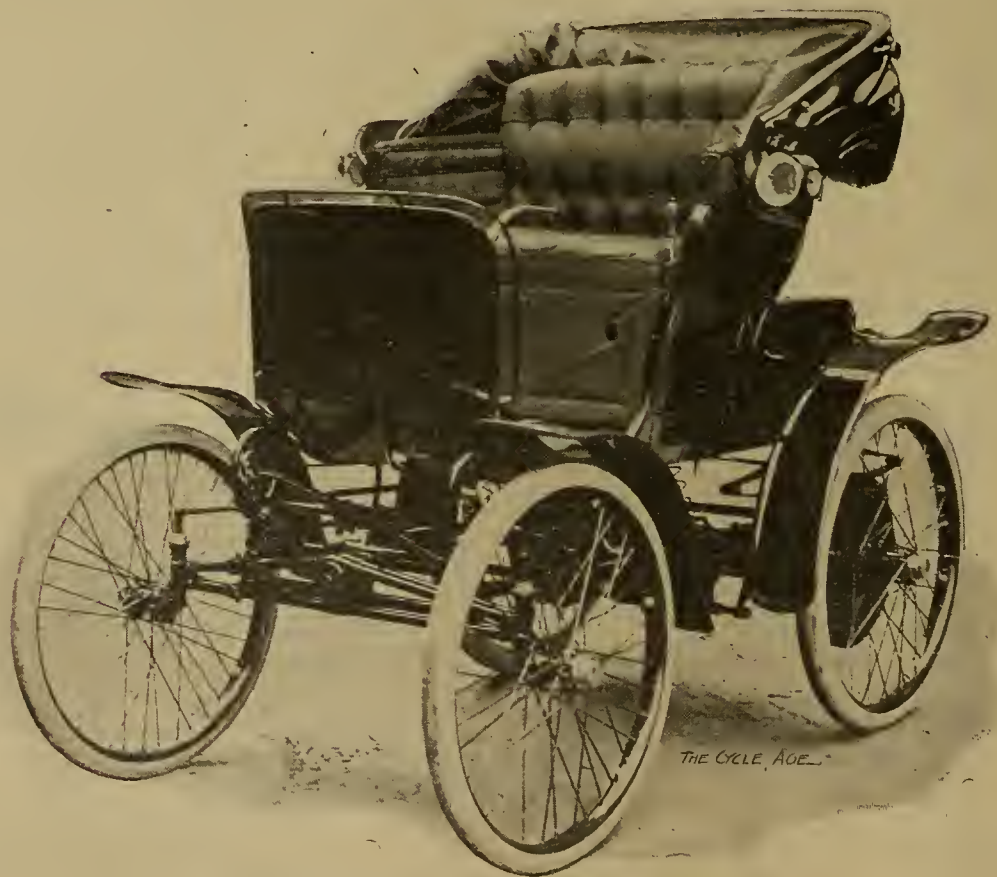
The accompanying illustration shows the construction of the Latta two-piece hanger which was described in the last issue of Cycle Age and which is manufactured by



the Straight Mfg. Co. of Jamestown, N. Y. The hanger is supplied to the trade by the Geo. L. Thompson Mfg. Co. of Chicago.

#### SNOW STANDS JOBBED IN THE WEST.

For the benefit of western buyers the Snow Wire Works, of Rochester, state that their bicycle stands, which have been de-



#### INDIANA BICYCLE CO.'S ELECTRIC STANHOPE.

It is the intention of the Indiana Bicycle Co. of Indianapolis, to devote just as much of its factory to the construction of electric vehicles as the business will stand, to turn out the best and handsomest vehicles that it is capable of making in a variety of styles, and to sell them at a price that will not invite competition either now or at any time in the future. In the accompanying illustration is shown the company's Waverley Stanhope which is a very rich, elegant vehicle of the ordinary electric type, weighing about 1325 lbs. and propelled by a motor of the company's own design and construction, the armature shaft of which is geared directly to the hubs of the rear wheels by a single reduction. The frame of the running gear is tubular; the wheels are wire with direct tangent spokes, steel rims, 2 1/2-inch pneumatic front tires, and 3-inch pneumatic rear tires. It has five speeds varying from about three to fourteen miles per hour and its selling price is \$1200.00.



A Tire with a Record

# THE DIAMOND CLIPPER

The Survival of the Fittest

# THE DIAMOND CLIPPER

What Tire Has Stood the Test?

# THE DIAMOND CLIPPER

What Tire Should You Buy?

# THE DIAMOND CLIPPER

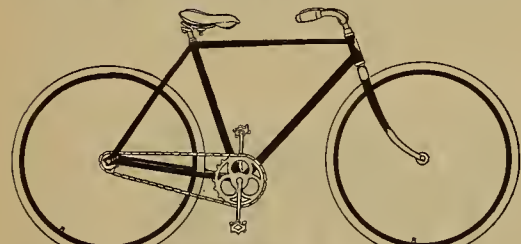
Call upon us at the National Cycle  
Exhibition, Space No. 67. ❀❀❀❀

**THE DIAMOND RUBBER CO. AKRON, OHIO**

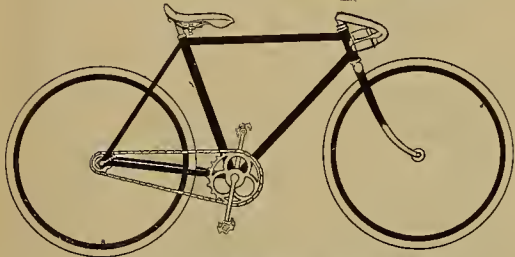
scribed in Cycle Age, will be carried in stock at Chicago by the Beckley-Ralston Co., the Excelsior Supply Co. and Eugene Arnstein, and that orders for the stands placed with any of these firms will receive careful and prompt attention.

**MANY ARIEL PATTERNS.**

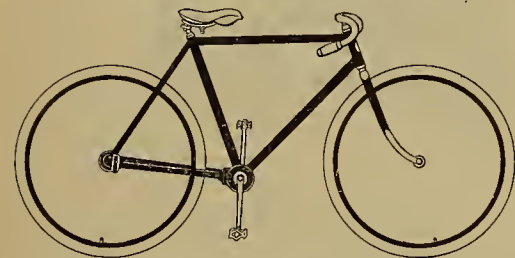
The line of Ariel cycles made by the Ariel Cycle Mfg. Co. of Goshen, Ind., and which



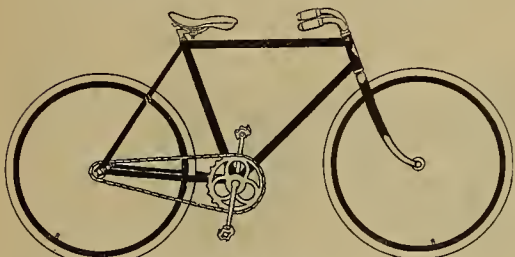
Model 50—30-inch wheels. Price, \$65.



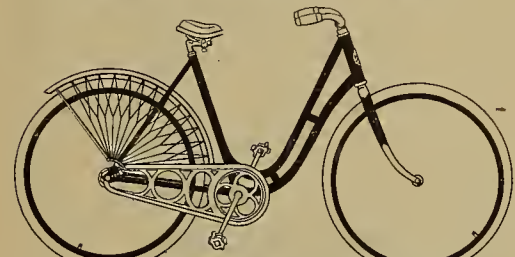
Model 51—Track racer. Price, \$60.



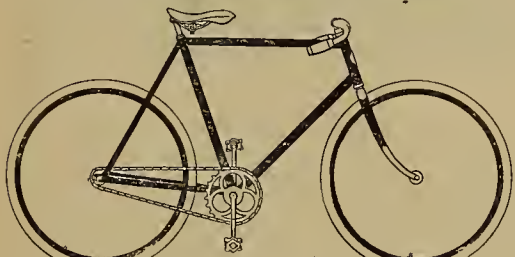
Model 58—Sager chainless. Price, \$75.



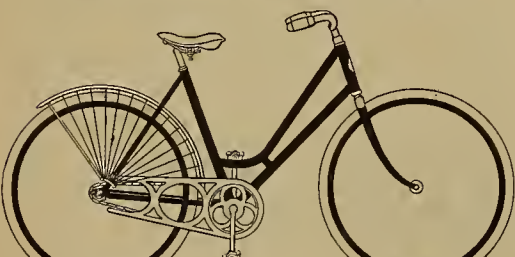
Model 52—Men's roadster. Price, \$50.



Model 53 - Ladies' roadster. Price, \$50.



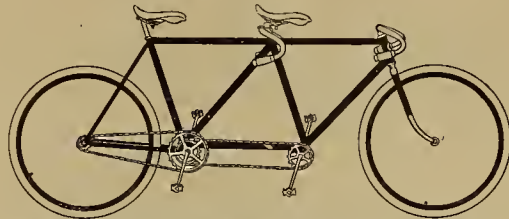
Model 54—Men's roadster. Price, \$40.



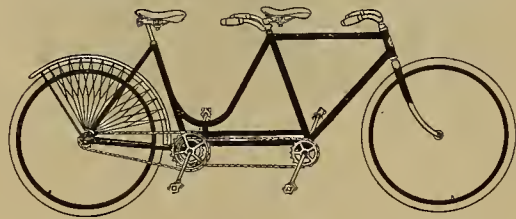
Model 55—Ladies' roadster. Price, \$50.

is herewith illustrated, comprises patterns of characteristic tasty and clean cut design. With the exception of the \$40 models the

machines all have the tubular Ariel fork crown, massive in effect yet light in weight. The hanger is of special two-piece construction and is secured by a bolt the head of which comes flush with the outline of the left crank and leaves the exterior appearance of

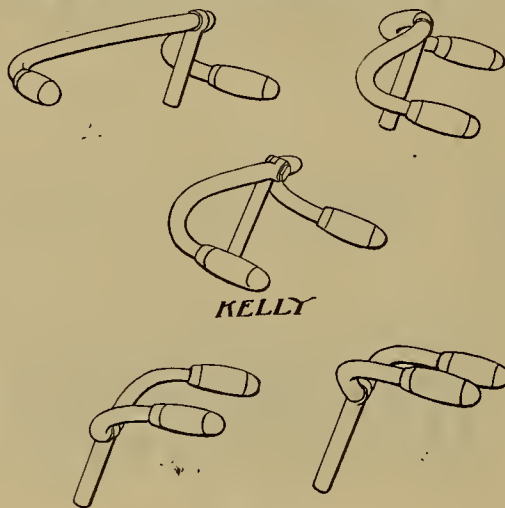


Model 56—Double Diamond Tandem. Price, \$75.



Model 57—Combination Tandem. Price, \$85.

both cranks alike at the axle ends. All machines have flush joints and the handle and seat post clamps are operated by spanners and are devoid of unsightly nuts. The chainless pattern is made in both men's and women's models and is equipped with the Sager roller gear. Ariel saddles of the Brown pattern and Wheeler saddles compose the regular saddle equipment and the pedals used are the Record and Banner. All machines are fitted with Lefever chains. Mod-



Ariel handle bars.

els 50, 51, 52 and 53 and the tandems are enameled in Brewster green; Models 54 and 55 in Ariel maroon and the chainless patterns in either maroon or green. The combination tandem represents the latter day idea in tandem construction of placing the drop frame for the lady in the rear and constructing the machine as a single steerer. The frame is well braced and presents an attractive appearance.

**STRAUSS SECURES SOUTHERN ORDERS.**

Matthew Strauss, 334 Genesee street, Buffalo, who is jobber and selling agent of several large lines of cycle parts, sundries and fittings, reports an excellent business even this early in the season and that many good orders have been booked from southern dealers and repairmen.

In the report of the Chicago cycle show a typographical error crept into the table of models manufactured by the Pope Mfg. Co., Hartford, Conn., and made the list price of the men's Hartford, Model \$19, appear as \$36. The correct price of this machine is \$35.

The Demorest Manufacturing company of Williamsport, Pa., is running to its full capacity on bicycles and sewing machines. It has lately built up an important export trade, and report orders for more than 12,000 bicycles for foreign buyers.

R. B. McMullen & Co. of Chicago are introducing a new saddle made by the Hunt Mfg. Co., known as models 76 and 77. It is of the padded type, with nose of the Brown style. It has already been sold extensively to jobbers.

Edward Porter, known the country over as an exponent of Palmer tires, has lately changed his position, joining the W. R. Rollins Mfg. Co. of Chicago.

You Can Easily Demonstrate the Extra Value in

# Hollenbeck

## Rawhide Saddles



By equipping it to your 1899 Bicycles, the favorable concensus of opinion will surprise you.

**Try It**

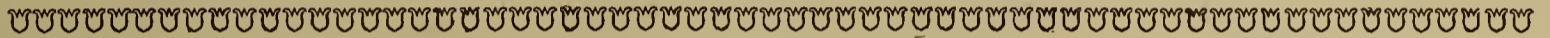
Mr. Dealer: Kick hard and you will get them.

# Hollenbeck Saddle Company

Makers, - SYRACUSE, N. Y.

**Quality and Price**  
 are both mighty good things and form an unbeatable combination when united with  
**Style and Finish.**  
 All of these points are combined in our line for 1899. Six Models, \$50 00, \$40 00 and \$25 00.

**Elk Bicycles**



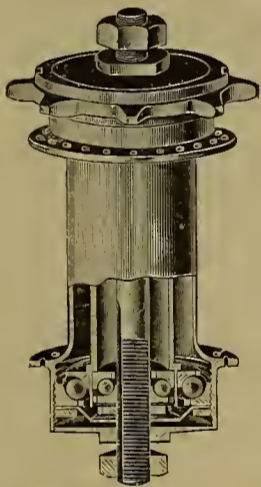
## THE ARCADE FILE WORKS

NEW YORK:  
97 Chambers Street.

WORKS:  
ANDERSON, IND., U. S. A.

CHICAGO:  
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— ALLERTON, CLARKE CO., SALES AGENTS. —



### THE J. P. THOMAS Revolving Hubs and Hangers

See inner revolving sleeve. Scientific and Practical. The future bearings of high grade bicycles. Increases the speed 40 per cent.

J. P. THOMAS & CO.  
439-443 31st St., Chicago, U.S.A.



### HANDY CYCLE POCKET FOOT PUMP

Best Pump for home or road use.  
Price 50c. Liberal discount to the trade

Handy Cycle Pump Co.,  
112 Clark St., - CHICAGO, U. S. A.

# Hubs!

Hub Shells  
JULIUS HEINEMANN & CO.  
193-7 Van Buren St.,  
CHICAGO, ILLS., U. S. A.

## Graphite Lubricants

ALL KINDS, ACCORDING TO WANTS.

Joseph Dixon Crucible Co., Jersey City, N. J.



## WHEELER SADDLES

HAVE ALWAYS BEEN MADE WITH THAT  
CURVE IN THE BACK.

OUR LINE FOR '99 COMPRISES BUT FOUR DISTINCT MODELS:

- "EXTRA" Woman's . . . . . Broad, Soft and Easy. ❀❀
- "EXTRA" Men's . . . . . Hygienic and Durable. ❀❀
- "SPECIAL" Roadster . . . . . An ornament to any wheel.
- "CORK-TOP" Racer . . . . . Light and Graceful. ❀❀❀

These saddles are made and finished in the careful and stylish manner that has always characterized Wheeler Saddles.  
Send for samples of the most popular saddle on the market.

## THE WHEELER SADDLE CO.

1427-1457 Woodward Ave., DETROIT, MICH.

Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT.  
New York Distributing Agents: HARTLEY & GRAHAM.

# THE PASTIME AND SPORT

## WILL OPPOSE CYCLE TAX

Washington Wheelmen Will Present Objections to Proposed Legislation.

Washington, Jan. 23.—The wheelmen of this city are strenuously opposing the proposition of the municipal authorities to have Congress enact a law imposing a tax on all bicycles in the District of Columbia. They contend that this proposition is nothing more than a deliberate attempt to fine every person for riding a bicycle, inasmuch as a tax could not be urged as a revenue measure. The proposed law also provides for the registration of all bicycles. The wheelmen point out that this provision would be of no practical value, as every bicycle now sold is numbered in such a manner that it can be easily identified. President Potter has assured the officers of the local division of the L. A. W. that the League would support every effort of the local division made against the imposition of a bicycle tax.

At an early day a committee representing the wheelmen will appear before the two congressional committees having the tax measure in charge and present their objections to the passage of the bill. If their efforts are unavailing and the bill is finally enacted, then the wheelmen will strongly urge that the tax levied be expended in the improvement of the country roads around the city.

At a recent meeting of the local division of the L. A. W., the chief consul was empowered to appoint a committee to appear before the District commissioners and urge the repeal of the handle-bar regulation, which is practically a dead letter upon the police regulations and inoperative.

## Philadelphia Wheelmen Awake.

Philadelphia, Jan. 23.—Some results of the recent activity of the A. C. C. of Philadelphia were made manifest last week by the passage by the city council of a bill declaring the throwing of glass on public highways to be a nuisance and providing a \$10 fine for every offense; an appropriation of \$1,500 for asphalt strips on Broad street over the Reading railway "hump," the laying of two-foot vitrified brick gutters along both sides of a greater portion of the East River drive in Fairmount park, which, although slightly concave, make excellent side paths; the appropriation of \$10,000 for the completion of the brick cycle path along the Mount Prospect drive in West park, and the repaving of the whole system of drives between the Oxford and Dauphin street entrances to the park. The association is now stronger than ever, thirty-one of the largest clubs being members, representing upwards of 5,000 wheelmen.

## Cycle Path Bill in New York.

A bill has been introduced in the New York state senate which has the sanction of the L. A. W., and which, if passed, will have a great effect in strengthening the movement for cycle side paths in that state. According to the bill, any county judge, except in Monroe and Albany counties, may, upon the petition of fifty resident cyclists, appoint five wheelmen as a board of side path commissioners, their term of office to be five years. The board will be authorized to construct and maintain side paths along any of the public roads of the county. The paths are to be not less than three feet wide and not

more than six. A further duty of the board is to settle upon a license fee of not less than 50 cents and not more than \$1, and no cyclist will be allowed to use the paths unless he holds such a license. The fees when collected will be deposited with the country treasurer and will be used for building and maintaining the paths.

## Outlaw Riders Remain Obstinate.

The members of the American Racing Cyclists' Union claim that as soon as the complete welding of its interests with those of the track owners is completed, the League will be spared the bother of deciding whether or no it shall continue the control of racing. Arthur Gardiner, who is vice-president of the A. R. C. U. and who, in the absence of President E. C. Bald, is general manager of and chief talker for the Union, is now in the east trying to bring about the last step in the separation of the riders from the League. The racing men en route for San Francisco are said to have been polled upon the subject of smoking the peace pipe with the L. A. W. and to have unanimously declared in favor of a special racing organization, the ground taken being that it would be impossible to induce the League to carry out all of the reforms demanded by the racing men.

## Fast Racing in Algiers.

The final of the Algerian championship was run at Algeria on January 8. The semi-final heats of 1,000 meters were won by Banker, Grogna, Guignard and Tommaselli. In the bell lap of the final Grogna and Banker tried to jump, but Tommaselli followed and forced them to the outside of the track during the entire last lap and won the race, riding the last lap in :22 1-5, constituting a competition record for a fifth of a mile. Banker ran second by half a length and Guignard third. Banker won the 1,080-meter handicap in the record time of 1:20 1-5 from scratch. Grogna running second, St. Ives third. The 2,000-meter tandem race was won by Banker and Tommaselli from Gaub and St. Ives, second, and Grogna and Coquelle, third.

## Nine Inch Cranks in England.

Long cranks and high gears form the subject of a discussion which rages in the English cycle trade at the present moment. There are some who look upon nine-inch cranks and a gear of 90 as the proper combination for experienced riders—others are more moderate in their views. The opponents of these frown upon the attempt to displace the six and a half-inch crank and a gear in the neighborhood of 60, which has been the popular one with the masses.

## Brooklyn Riders Plan Asphalt Strips.

The Associated Cycling Clubs of Brooklyn have undertaken the attempt to have asphalted connections made with all the principal cycling routes in the borough. They mean to unite all the important asphalt street and will ask the local boards of all the districts to come together in the near future and petition the Board of Public Improvements to urge their request on Mayor Van Wyck.

Philadelphia will spend \$2,000,000 this year on the improvement of the city streets.

## CYCLISTS' ROAD RIGHTS.

Kansas Judge Decides That Bicycle Riders Are Not Responsible for Runaway Accidents.

Topeka, Jan. 22.—Judge Simpson, of McPherson, Kan., has rendered a decision of importance to wheelmen in the case of George Lehman against Henry Kibbe. He holds that a bicycle rider is not responsible for accidents which may result from horses becoming frightened at persons riding bicycles, because all persons who travel on public highways have a right to choose the vehicle or conveyance they desire to use. This decision at once places every wheelman in Kansas on an equality with the drivers of horses, the important point being that wheelmen are not expected to leave their machines by the roadside and walk ahead to ask a man if his horses will be scared.

The decision of Judge Simpson clears the atmosphere of many theories which the people who do not ride bicycles have held, and furnishes a basis upon which an organized effort in the direction of procuring wheelmen's rights may be based.

Henry Kibbe, of Hutchinson, was riding his machine along the public highway, when George Lehman met him. The latter was driving a team, which became frightened, ran away, and threw Lehman out, crushing his leg. He sued Kibbe for damages, including doctor's bill and the injuries to the team and damage to the buggy in which he was driving. He lost the suit, Judge Simpson's decision being in part as follows:

A person wishing to travel in the public highway in this state has the legal right to choose any kind of vehicle he pleases and every person who wishes to do so may ride a bicycle along the highways of this state with the same rights he would have with any other mode of conveyance, and is subject to the laws of the road the same as the driver of any other vehicle.

Persons traveling upon a highway are required to use ordinary care and prudence and are not liable for injuries to others unless they are guilty of some wrong or want of ordinary care which is the direct or proximate cause of the injuries.

A person riding his bicycle on a public highway has the right under the law to presume that horses of ordinary gentleness have become so familiar with bicycles as not to scare at them and as to be safe under careful guidance and would not be required to stop and inquire whether the horses are likely to be frightened in order to anticipate that such horses would be frightened.

## Good Roads Day at the Assembly.

Special arrangements are being made to make good roads day at the coming National Assembly of the L. A. W. at Providence more interesting and profitable than the day has usually been at previous assemblies. At the two sessions there will be representative speakers to present new and advanced ideas on the improvement of highways as affecting horse owners, automobilists, farmers, and cyclists, and also upon such subjects as state aid and scientific road building.

## Sams Denies Telegram Story.

Conway W. Sams denies that his withdrawal from the League presidential contest was because of a telegram sent to a doubtful district which sent back an answer in favor of Keenan. Sams say that the story is mythical and that during his conference with Keenan nothing was said about the respective strength of the two candidates, that everything was friendly, and that all there was to the withdrawal was his own statement that there would

# TO DEALERS

When travelers tell you "We can build wheels like the **Orient**," "We can get 300 World's Records in a season," "We can build a wheel for **ten men**," "We can get a record on a Chainless of a mile in 1:31 4-5," "We can **advertise like the Orient**," "We can do all and more than the **Orient has accomplished**"

Talk is cheap, but something else is needed to bring results. ORIENT PERFECTION has been reached only by close application, exclusive concentration to the manufacture of bicycles, and the watchful care of details. Ample capital, and careful attention to our thousand agents, has brought about ORIENT POPULARITY.

AN ORIENT AGENCY WILL REVIVE A DROOPING BUSINESS. IF OUR REPRESENTATIVE HAS NOT YET CALLED WRITE US.

Ask  
them "Why  
don't you  
do it"  
?

**WALTHAM MFG. CO, Waltham, Mass.**

'99 Catalog on application

Mention The Cycle Age

"They All Ride the Orient"

## Eclipse

CYCLES

ONE GRADE—ONE PRICE

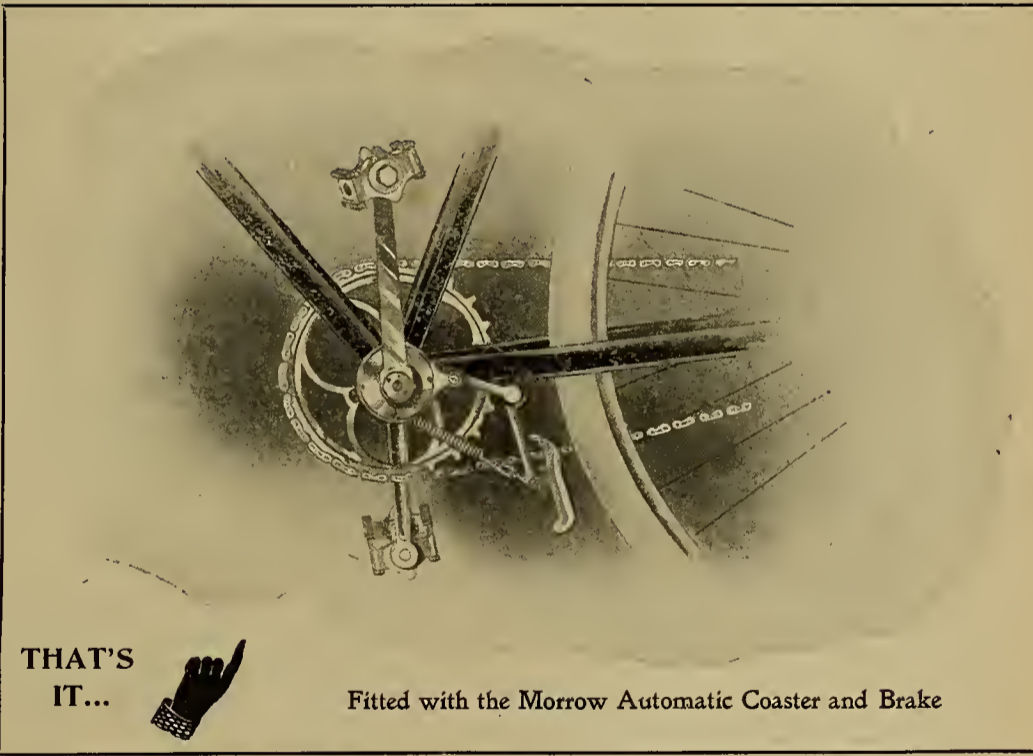
**\$50.00**

## Waldorf

CYCLES

ONE GRADE—ONE PRICE

**\$35.00**



THAT'S  
IT...

Fitted with the Morrow Automatic Coaster and Brake

Mr. Agent—They will put you in a position to control the trade in your city. Secure the Agency. Write for quotations **to-day**.

**Eclipse Bicycle Company, Elmira, N. Y.**

be no contest for League offices this year so far as he was concerned.

#### Relic of Cycle Boom in Porto Rico.

Some years ago a German bicycle firm sent a representative to San Juan, Porto Rico, and created much excitement in a sporting way, organizing an athletic club, selling several hundred bicycles, and engineering the construction of a \$10,000 bicycle track. It is a one-fourth-of-a-mile affair, the record of which is 32 seconds. The war broke up the club and its property has been turned over to the American club.

#### NEWS IN BRIEF.

Tom Linton is now in Germany, where he will ride during the greater part of this year, having signed a good contract.

"Mother" Webb, Cooper's trainer for the last three years, will have charge of the Columbia college team this year.

F. W. Chinn, the Englishman, has emulated the example of Bald and Titus by retiring from racing and adopting the stage.

At the meeting of the wheelmen's national union in Switzerland on December 10 the treasurer's report showed a deficit of \$155.

The trial of Peter Berlo's new gasoline motor pacing tandem is being delayed until the arrival of some special tires now being made for the machine.

By riding in exhibition at Madison Square Garden on January 4, Arthur Zimmerman became a candidate for suspension by the L. A. W. racing board.

Joe Downey, the boy wonder, left for Boston after his races in New York just in time to escape arrest by the Gerry society for performing in public under fifteen years of age.

The Supreme Court of Iowa declares that while no law requires bicyclists to use lanterns or bells at night, wheelmen without them are guilty of contributory negligence in case of accident.

The new Great Central hotel in London is to have a small cycle track on one of the upper floors. The purpose of the track is to allow the guests to take their usual cycling exercise regardless of the season or weather.

The wheelmen of Manistique, Mich., are heartily in favor of securing legislation looking to the protection of bicycle paths in their state, owing to the fact that farmers cannot resist the temptation to use them for cow paths.

The newly formed Bengal Cycling Association is doing all in its power to bring about a flourishing cycle racing game in India and is taking the necessary steps toward the building of a cycle track in the neighborhood of Calcutta.

The Grand Prize race of Paris promises this year to be unusually interesting since the prize will be larger than ever before, \$2,000 having been voted for the purpose by the municipal council of Paris and \$400 by the department of the Seine.

One of the first consequences of the application of the Denver Wheel Club for admission to the L. A. W. was the delegating of the club's president as a representative to the National Assembly inviting the League to hold the 1900 meet in Denver.

Eddie Bald, who was the first of the racing men to arrive in San Francisco for the indoor races there, has been telling the local newspaper men of that city about his expected conquests on the other side of the Atlantic next summer and that he expects to do his preliminary training in California.

Harry Elkes is said to be responsible for a novel and valuable idea in training for paced races. At unexpected times his pacers slow up as if they had met with an accident and Elkes rides ahead and goes unpaced until picked up by a relieving team. In this way he becomes used to accidents and to sprinting unpaced without slowing up.

Illinois good roads advocates are preparing for an early start in the campaign at the state legislature for better roads in the state. Judge Gibbons and Assistant Corporation Counsel W. H. Arthur, of Chicago, are framing a bill and wheelmen of Chicago are raising money with which to push it after its introduction to the legislature. The bill will be much like the New Jersey good

roads bill which provides that each county which builds good roads will receive a bonus from the state for so doing. In order to make the good roads bill stronger the proposed bicycles-as-baggage bill has been abandoned.

The Wisconsin division of the L. A. W. will ask the present session of the state legislature to repeal the statute passed last summer giving the cities power to regulate and license bicycle riding, which not only imposes an extra burden on cyclists, but makes them liable to arrest and annoyance while touring.

Earl Peabody is so determined to once more wear the virtuous halo of a simon pure that he declares he will bring suit against the present chairman of the racing board if not reinstated. Peabody's father is deeply interested in the matter and will back the ex-amateur speed merchant in his efforts to force the racing board to reverse its decision.

A bill to tax bicycles, which has been introduced in the New Hampshire legislature, is very simple in its provisions, calling for a tax of \$1 apiece on bicycles, the entire proceeds to be devoted to the improvement of highways. The wheelmen of the state generally seem to agree that some such a measure should be passed, or, at least, should not be opposed.

One of the features of the indoor racing to be held out on the coast will be another trial of Henri Fournier's motor pacing machine. Fournier is not entirely discouraged by the failure of his machine at New York and will take advantage of the privilege granted him to place his motorcycle among the pacing machines in a hundred mile race at San Francisco.

Major Taylor denies the press reports which stated that he was endeavoring to secure teams of colored pacemakers because his white pacemakers had not done their best for him. He says that the teams he rode behind at Philadelphia strained every nerve to give him all the pace he wanted and that he has not the slightest complaint to make of their willingness.

Assemblyman Collins has introduced a bill against six-day racing in the New York legislature which makes it a misdemeanor for any contestant in a bicycle race or other contest of skill or endurance to continue in such contest after the expiration of forty-eight hours for a longer time than twelve hours out of each twenty-four. Any manager permitting such violation is also guilty.

London cyclists are now rejoicing in the fact that drivers of carriages, coal wagons, omnibuses, garbage carts, etc., must carry lights after dark as well as themselves. Universal lighting of vehicles is an accomplished fact within the entire district under the jurisdiction of the London county council. While the police are somewhat lax in some neighborhoods the number of vehicle drivers who are being brought into court for not carrying lights show that the new law is not to be a dead letter for some time at least.

#### MISCELLANEOUS.

Advertisements under this head 5 cents per word first insertion, 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received

#### WANTED

**MANUFACTURERS**—Gentleman, trained engineer with central London office, many years' experience in the cycle trade, large connection amongst manufacturers, factors, shippers and agents, is open to take up and thoroughly work through travellers and himself a good sole agency for cycles components or stampings, etc.; best firms only enter aimed. R. M. P., care Cycle Age.

**WANTED**—An experienced bicycle maker and repairman desires position with reliable firm; modest and industrious. Address Box 426, Bile Center, O.

**WANTED**—Situation by expert polisher and plater as foreman. JOHN NELSON, 341 Franklin St., Chicago.

**WANTED**—A first-class, experienced bicycle enameler, well versed in the different branches of the business to take charge of a department. Good wages and steady employment to a competent man. Address B. M., care Cycle Age.

#### FOREIGN TRADE

A BUSINESS MAN INTENDING TO VISIT Japan, China, Manila, Australia and Honolulu on a commercial trip wishes to correspond with two firms, one a bicycle house who desire their goods introduced in those countries, or special investigations made of trade conditions. Highest references. Firms must have financial responsibility. OLCOTT PAYNE, Seattle, Washington.

#### FOR SALE

**FOR EXCHANGE**—High class hubs and two-piece hangers for machuer. Address C. H. B., care Cycle Age. \*

**TO MANUFACTURERS** of Bicycles and Bicycle Fittings; also Jobbers of Fittings. On account of retiring from business are closing out at bargain prices bicycle parts and fitting, also factory equipment, consisting of machinery, standard small tools in great variety, special bicycle tools, general line of equipment and supplies. All in first-class condition. Send for catalogue. Something in the lot sure to be of interest. Address THE MOORE CYCLE FITTINGS CO., 50 Mechanic St., Newark, N. J.

**FOR SALE**—Fox Machine Gas Brazer at a bargain. The same is fully guaranteed, and never been used. THE CARLISLE MFG. CO., 69-71 W. Jackson Blvd., Chicago, Ill.

**FOR SALE**—A 31 inch Peck, Stow & Wilcox power-shear; will cut 16 gauge steel; is as good as new. Want to buy a second-hand exhaust-fan with opening from 9 to 12 inches. Address STANDARD TUBE FORKSIDE CO., Toledo, Ohio.

**FOR SALE**—Thoroughly equipped repair shop, everything necessary for repairing and assembling bicycles; also bicycle trunk. Address FRANK C. RANDALL CO., Joliet, Ill.

#### AGENCIES WANTED.

##### AUSTRALIA AND NEW ZEALAND.

Frank Grimley, 263 and 264 Clarence St., Sydney, N. S. W., importer of bicycles and their accessories, bicycle makers' materials and tools, for trade buyers, is open to negotiate for exclusive agency for manufacturers of those lines and to introduce and push the sale of their goods throughout Australia and New Zealand on manufacturers' account or to purchase right out. Quotations and samples of novelties invited. Unquestionable references on application to the proprietors of this journal.



#### PEDALS

We make high grades only.  
Standard Adjustable  
Standard Racer.  
**AMERICAN  
WATCH TOOL CO.  
Waltham, Mass.**

## Stearns Bicycles

E. C. STEARNS & COMPANY,  
Syracuse, - - - New York.

A NEW LIGHT ON AN OLD SUBJECT  
It saves from 33 to 50% propelling force.

Notice to...  
**BICYCLE MANUFACTURERS.**

The riders of 1899 will insist upon their wheels being equipped with

"The Star Ball Retainer."

Send us samples of Cups and Cones and write for prices.

THE STAR BALL RETAINER CO. LTD.  
LANCASTER, PA., U.S.A.

"I USE THE STAR BALL RETAINER"  
"I DON'T"

ALL ROADS ARE EASY WHEN THE STAR BALL RETAINER IS USED

**STAR BALL RETAINER**

IS USED

**DU**

REGISTERED TRADE MARK

# THE CYCLE AGE

## AND TRADE REVIEW

VOL. XXII—No. 14.

CHICAGO, FEBRUARY 2, 1899.

NEW SERIES No. 63.

### AMERICAN PARTS IN SWEDEN OUR SADDLES ARE NOT LIKED

Two Concerns Announce Their Intention to Handle Only Parts Which Are Made in This Country.

Soderhamn, Sweden, Jan. 12.—On the first day of this year the new tariff law went into effect and the custom duty on bicycles will be \$7.50 on each complete bicycle and 54 cents a kilogram on parts, but this new custom duty is not likely to hurt the American trade in this country for many years to come. It has been stated in a former letter that this country would have to import about 75 per cent of all bicycles sold annually, and this estimate is now found upon study of reigning conditions to hold good for this year.

#### Big Opportunity for Parts Makers.

The following articles must, without exception, be imported, as there is no concern making such parts yet: Pedals, saddles, chains, spokes, hubs, crank hangers, rims, frame connections, handle bars, seat posts, chain adjusters, fork sides and fork crowns, and several minor parts.

Pedals have up to date been imported from Germany and England, with a few from the United States. Saddles have mostly come from Germany. American saddles are not liked very much, but by conforming to the wants of this country America could get a good share of the trade. Saddles of the Brooks pattern are the most liked. The better quality chains have come from England and the poorer from Germany. Hubs have mostly come from England, also frame connections.

#### Superiority of American Parts.

Until last year there were few American parts sold, but in that year a considerable quantity was sold, and this year promises to be still better. Two concerns are known that will use American parts exclusively. That American parts are considered superior can be illustrated by a firm which charges \$20 more for every cycle manufactured from American fittings than for those manufactured from German or English parts, although the American parts did not cost any more, besides being easier to put together and superior in finish. So it may be seen that here is an excellent chance for parts makers to sell their products. But it is suggested that they be not too slow in getting their goods marketed here, as ten years hence nearly all parts mentioned above will be manufactured here; for such has been the case with railway locomotives, which until ten years ago were all imported from England, but now we have two very large works building very fine locomotives, and only a very few are imported.

Until five years ago mowers, hay racks, self-binders and other agricultural machinery were all imported from America, but now we have several factories making these articles, but not on as large a scale as to supply the demand. Lathes and milling machines have formerly been imported from Germany and England, but three enterprising concerns bought some engine lathes from America, used them as samples, and are now making lathes exactly like them and on a large scale, and are finding a ready market for them. A great many more cases similar to this could be brought forward, but this may be enough to show that it is better not to wait too long in getting their goods represented here. It is best to strike while the iron is hot.

#### Exclusive Agency Not Recommended.

A branch house would be the best thing if managed by a man with American push and energy. Exclusive agencies are not to be recommended, as such concerns in this country usually rely mostly on the fact that nobody else sells the same goods, and therefore sits down, waiting for business to come—and it generally does come. But a larger volume of business would be done would they go at it with American energy.

#### To Help Dealers in Georgia.

Bicycle makers are being solicited to contribute to a campaign fund which will be expended with the intention of defeating the bill now in the Georgia legislature which provides for a \$200 penalty on every company selling or dealing in bicycles, by itself or its agents, in that state, which does not pay a tax of \$5 per annum for each agent so represented. The measure is but another variation of the many laws discriminating against non-resident corporations. It is possible, if the tax is not paid, to prevent outside corporations from doing business within the state—even to confiscate the stock of dealers representing outside firms. Hence H. A. Lozier, Sr., has called the makers to his support, and from many of them received promises of aid in opposing the passage of the bill.

### SADDLE MAKERS CONSOLIDATE TWO MILLIONS CAPITAL STOCK

Headquarters of the Organization Will be in Cleveland—Saddle Patterns to be Decreased.

Under the title of the American Saddle Company, with a capital stock of \$2,000,000, many saddle makers have effected a consolidation. One-half of the capital will be issued as preferred shares and the remainder as common. The headquarters of the organization will be in Cleveland, O. The officials of the concern will be elected within a week. The stock is being distributed upon a basis of inventory valuation of the plant, stock, fixtures and business of each firm. The organization was made effective, so far as commercial interest is concerned, on January 1 of the present year.

#### Reasons for the Organization.

Of course there is a reason for an organization of such a colossal character. It is found chiefly in the fact that while for two or three years past the price of saddles of all kinds has been steadily declining, the bulk of sales have been made in the cheaper forms of manufacture at prices which have not proved profitable. While at present it is difficult to persuade bicycle manufacturers, who at the present moment are the heaviest buyers of saddles in advance of the season when they are actually put to use, that there will be benefits conferred upon them by the formation of the American Saddle Company, yet this is the broad foundation of the organization. The reasoning for this conclusion is as follows:

#### Saddle Options Will be Lessened.

Months in advance of the actual use of saddles the bicycle manufacturing establishments are persistently solicited by the representatives of saddle making houses to stock up with the variety of patterns manufactured. If the American Saddle Company is successful in its outlined plan of operations, hereafter the concerns within it will assure bicycle makers that to each establishment within the organization will be apportioned the duty of making only a few patterns of recognized advantage in use. Moreover, it is the intention to give the bicycle makers the benefit of such curtailment of selling expenses as the withdrawal of the foregoing form of competitive strife has engendered.

Within the last year it has been an open question among the saddle makers as to whether the makers of cheap goods would destroy the business of the makers of high priced stock, which afforded some profit, or would annihilate the business of both.

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## BRAZING BY IMMERSION

### Brass Founders' Crucible Used in Circular Furnace—Removal of Spelter By Puddling

While the majority of manufacturers who find immersion brazing practicable have made their furnaces of the type which takes the trough-shaped crucible, at least one firm is using successfully a furnace in which the brass is melted in an ordinary brass founder's round crucible. The furnace is now in operation in the shop of B. E. Harris of Chicago, and was erected after plans furnished by the Welland-Vale Co. of St. Catharines, Canada.

#### Construction of the Furnace.

The fire brick structure is circular in shape, as may be seen from the illustrations, and stands about forty inches high. A central shaft in the neighborhood of 17 inches in diameter extends from the top to the bottom and in this shaft are supported the fire grates and the crucible. The grates are of common furnace grate pattern and are some distance above the floor, leaving ample room for the accumulation of ashes and clinkers. The latter may be removed from the furnace through an opening in the wall near the floor. This opening is closed by a thin plate of iron which is arranged to slide upward between metal ways secured to the sheet metal casing placed around the fire brick walls of the furnace.

The casing is merely thick enough to aid in keeping the fire brick in shape



PUDDLING OUT SPELTER FROM CRUCIBLE.



WELLAND-VALE FURNACE IN OPERATION.

and gives the furnace a neater appearance than it would possess uncovered.

The support of the crucible is one of the strong points of the furnace, being designed to absolutely prevent the crucible from collapsing and falling into the fire by the weight of the metal carried, or cracking from too rigid encasing and propping. Three buttresses with faces curved to correspond to the curvature of the sides of the crucible are projected from the inner wall of the furnace, forming a sort of basket seat into which the crucible may be placed. The

support by this plan comes on the sides of the crucible from top to bottom and makes unnecessary props under the bottom of the crucible.

The heat and flame rushes up around the sides of the crucible in the same manner as in other crucible furnaces previously described and are deflected to pass across the top of the spelter by cover tiles, also as previously described. One of the inner walls of the furnace is built with a vertical recess or chute and through this space coal is fed to the fire. When not needed the top of the opening is closed with tile. The draft pipe enters the furnace below the grate in the usual fashion.

#### Advantages of Round Crucible

The round crucible, while it does not offer the convenience for brazing certain parts that the trough-shaped crucible affords, yet gives ample room for dipping all of the joints of the ordinary single frame, and has the obvious advantage that the spelter will not be affected by exterior cold draughts as much as when held in a shallow crucible. While a little more time is spent in firing up than with furnaces which give readier access to the fire box, little attention is, on the other hand, paid to the fire during the day, and it is stated that two bushels of coal will last for a ten hours' run, making the coal expense not over fifty or sixty cents per day. While the furnace has not been put into constant operation as yet, from 80 to 100 complete frames have been brazed in one day. The operator states that but little if any over five pounds of brass were used for 100 frames. The round crucible is claimed to last under constant use from ten days to two weeks, but the crucible specially referred to in this article has given much better service than that. Allowing \$3 per day for the wages of a good man and counting in the various other expenses, the cost of brazing frames should not run much higher than \$4.50 per hundred, or 4½ cents apiece.

At night when the day's operations are over the blast is shut off and before the brass solidifies about half of it is pud-



dled out on the ends of stout iron bars, one of which, about half loaded, is shown in one of the illustrations. The rest of the brass is left in the crucible, but before it cools a rear fork, fitted to its stay, is placed in the crucible with the point of the V in the brass. In the morning the brass will have solidified and the entire button, weighing perhaps fifty pounds, may be lifted out by means of the projecting stay and fork. Before the melting is begun the button is lifted a short distance from the bottom and some loose spelter thrown in underneath it. This leaves room for expansion between the button and wall of the crucible and prevents injury to the latter. After the brass already in the crucible has been melted the rods with the puddled out brass on their ends are stuck into the crucible and their loads melted off.

### CONSTANT DIP BRAZING WORK

**Discomfort from Heat No Greater Than By Blowpipe Method—Parts Dipped Cold.**

To the Editor:—Having read with interest the description of the "Fulton" brazing furnace in your issue of January 19, we would like to ask if it is possible for a man to go up to the furnace when the blast is on and dip a bicycle frame into the metal and continue doing the same for ten hours every day; also is it necessary to heat the frames before dipping?

Milwaukee, Wis.

ADVANCE BICYCLE CO.

In those factories where immersion brazing is now in practical use, workmen stand by the furnaces and dip the parts throughout the entire day without experiencing any excessively uncomfortable heat. In fact, operators say that the discomfort is no greater than when brazing at a blowpipe brazing stand, if it is as great. At present most of the operators of immersion brazing furnaces dip the work cold. It is, however, a good plan to heat the work before it is dipped, as this reduces the time required for immersion, and also prevents the spelter from losing heat through the introduction of cold parts.

### Stockholders Sure of Their Money.

A certificate of dissolution of the National Cycle Board of Trade has been filed with the secretary of New York state. The secretary of the board, George Hammann, is of opinion that the affairs of the organization will be wound up in a month. He adds that the firms which were elected to membership during the past year may with certainty count upon having the amount they paid for stock refunded.

### Humber Trustees Want Case Removed.

Arthur R. Martin and Frederick Goddard, trustees for Humber & Company, Limited, of Westboro, Mass., have filed a petition in the superior court in Worcester asking that the case of the B. F. Goodrich Company against the Humber Company and themselves be removed to the circuit court, on the ground that the parties to the suit are persons residing out of this country and in England.

### Buffalo Show Plan Abandoned.

Owing to opposition that developed at a meeting of the Buffalo cycle board of trade, called to take action on a proposed bicycle show, the project has been abandoned. The reason set forth by the opposers was the item of expense, which several manufacturers were unwilling to share.

When parties have a settlement of their accounts, and a check for the amount found due from one to the other, which recites that it is in full, is accepted, and afterwards paid, the presumption is that all items chargeable at the time are embraced in the statement.

## FOR UNIFORM FREIGHT RATES

### CONGRESS IS ASKED TO ASSIST

#### Review of Efforts Made in the Past Year to Strengthen the Interstate Commerce Commission.

Foremost among the powerful commercial organizations which aim at the amendment of the Interstate Commerce Law is the National Association of Manufacturers, which, in the course of its annual convention recently held in Cincinnati, reviewed the work done in this direction and held out hopes that the practical reforms contemplated would soon be in effective operation. Uniform freight classification and publicity for rates and contracts governing transportation are the main features in the general plan of reform.

#### Opinions Differ and Chaos Results.

It was ascertained some time ago that there was little or no possibility of securing conclusive action by the present Congress upon the subject primarily because the controlling elements of public opinion which are most vitally interested in the interstate commerce law hold widely divergent views as to the action which ought to be taken. These elements are: The shipping public, the transportation company, and the Interstate Commerce Commission.

During the year just ended the opinion of the Supreme Court disclosed the illegality of existing associations of carriers and of all agreements for the establishment and maintenance of rates of transportation. This disclosure contributed additional confusion to the chaotic condition already prevailing.

A large number of the commercial organizations of the country have urged that Congress restore to the carrier companies the right to make between themselves contracts and agreements, and to form associations for the maintenance of fair, equal and stable rates for the transportation of persons or property; stipulating, however, that all such agreements shall be subject to rigid and conclusive scrutiny, supervision and regulation by the government through its constituted agent, the Interstate Commerce Commission.

Many organizations have gone further and urged upon Congress that the carriers be invested with the right to pool or distribute their earnings, and that contracts made between carriers subject to supervision of the commission be legally enforceable between the parties:

#### Outline of the Reforms Planned.

In view of these facts and considerations, the transportation committee of the association recommended:

1. Absolute publicity of all rates, rules, regulations, contracts and agreements governing the transportation of persons or property between the states.
2. The enforcement of severe money penalties (not imprisonment) against any corporation, firm or individual through whose deliberate action any other than lawfully published rates, rules, regulations, contracts or agreements affecting transportation of persons or property between the states shall become current and available.
3. Permit common carriers, whether corporations, firms or individuals, to enter into contracts and agreements and to form associations and adopt all legal methods for the establishment and maintenance of lawfully published rates, rules or regulations governing transportation of persons or property between the states.

Provided, that all contracts, agreements or methods adopted between common carriers for the purposes above described shall be subject to control and supervision by the Interstate Commerce Commission to be void if disapproved by the commission; otherwise, to be legally binding and enforceable between the parties.

### Direct Freight Line to Russia.

The first vessel of a line of steamers to ply from New York and perhaps Boston

to St. Petersburg and other Russian ports on the Baltic, stopping on the way at Christiania, Copenhagen, Stettin and Riga, will leave this country the latter part of March or first of April, so as to reach St. Petersburg about May 1, when navigation opens there. The Scandinavian-American company expects to follow this with other vessels once a month, depending on the quantity of freight obtainable. Funch, Edye & Co., of New York city, have been appointed New York agents for the new line, which offers direct communication with Russian and some Scandinavian ports. Heretofore American goods have had to be transhipped at British or continental ports, which involved much delay and increased expense. Eight or ten weeks is usually required to land goods from this country.

### PROTECTION OF DESIGNS

#### Special Law Will Prevent French Manufacturers Copying Designs at Paris Exhibition.

Manufacturers who contemplate making an exhibit at the Paris exhibition in 1900, but are concerned lest their designs may be copied with impunity by French manufacturers because they have no manufactory in France themselves, as, according to a recent decision of the court of appeals, seems to be required by the French patent laws, may be completely reassured on the subject.

As a matter of fact, a law for the protection of the foreign designs exhibited is invariably passed before each world's show comes off; and it is stated on the highest authority that at the present date the exhibition officials and the ministers of commerce are engaged in drawing up a bill to this effect. It is certain that the decision of the appeal court will be provided against in the new law. Moreover, a measure for the extension of protection to industrial designs in general has lately been adopted by the senate, and will be discussed by the chamber of deputies when Parliament assembles. Therefore, there is not the slightest doubt that designs will be fully protected at the forthcoming exhibition.

### Overman Denies Rumored Offers.

One of the men employed in the office of the Overman Wheel Company, of Chicopee Falls, Mass., has approached a number of the creditors of the company and offered to buy up their claims for 60 cents on the dollar, which, it is said, gave rise to the rumor that the Overman company was making the offer itself. President Overman, however, stated that the company had never deviated from its original purpose to pay 100 cents on the dollar. Last fall he had stated that creditors would be paid in full and he has not yet seen any reason for changing his opinion in the least. Creditors, of course, have the right to accept or refuse any offers that may be made for their claims by persons not connected with the company.

### Law to Discourage "Fences".

A bill requiring dealers in second-hand bicycles to take out licenses has been introduced in the Connecticut legislature. The object is to keep improper persons out of the trade. The license fee is not so large as to annoy reputable dealers. By the provisions of the bill dealers are required to make weekly sworn statements of goods received and furnish descriptions of persons from whom they secured the goods, the books containing such statements to be open to the inspection of the police. A severe penalty is provided for destroying the nameplate or number on any machine or for re-enameling the bicycle or changing its identity within thirty days from the time of purchase.

# CRESCENTS HAVE WON



the reputation of being "THE WHEELS THAT STAND UP." We have won the confidence of the riders by selecting the best materials and adopting the most careful construction, to secure the greatest COMFORT and SAFETY to the rider, and by PROTECTING PURCHASERS by a guaranteed uniform price throughout the season

1899 CRESCENTS ARE NOT '98 MODELS

Juveniles, \$25 Adults' Chain Models, \$35 Bevel Gear Chainless Models, \$60

ART CATALOGUE No. 2—FREE

...CHICAGO—WESTERN WHEEL WORKS, Makers—NEW YORK

NEW TESTIMONIALS EACH WEEK.

## MILWAUKEE TIRES

PUNCTURE PROOF

Pneumatic

Resilient



Single Tube

Easy Riding

PRESENTING TESTIMONIALS.

SOUTHERN MINNESOTA INSPECTION BUREAU.

WINONA, MINN. Dec. 6, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen—Answering your inquiry of recent date, I beg to assure you that my experience with the Puncture-Proof Tires purchased of your agents last June, has been entirely satisfactory in every respect, and although I have given them extremely rough usage they have required no repairs and are to-day apparently as serviceable as when first purchased. Yours truly,  
(signed) FRED J. LILLY, Asst Inspector.

RHINELANDER, Wis., Dec. 10, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen—It gives me great pleasure to say a word for the Milwaukee Patent Puncture-Proof Tire. I purchased them eight months ago and have never had a minute's trouble with them. Have tried all kinds of so called "Puncture-Proof Tires" without success until I purchased the "Milwaukee," which I believe to be the only Puncture-Proof Tire.  
(Signed) J. W. ATKINSON.

Representatives Wanted. Write for Prices and Other Information.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.

# THE CYCLE AGE

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

Published every Thursday at 324 Dearborn Street, Chicago.  
Eastern Offices, American Tract Building, New York City.

Subscription price in the United States, Canada and Mexico, \$2.00 per year; in foreign countries \$6.00 per year.  
ALL remittances should be made to THE CYCLE AGE COMPANY.

## ADVANCE INSTALMENT SALES

At last a plan for pushing early retail trade in bicycles of high grade has been devised which suits manufacturers and retail dealers, both, and seems very acceptable to the public. The plan has been practiced before by live dealers, but only in a few instances and then not with that faith which springs from ripe conditions and then secures splendid results. This year it is being actively supported by manufacturers of the first class; branch houses are working the plan out under directions of their principals; and independent retailers are being encouraged to try it.

The plan is very simple. It consists only in selling bicycles in January instead of in April. The agent canvasses his territory to secure orders for bicycles in advance of the riding season and offers in return for the early orders easy terms of payment. The payments commence at once, but delivery of the bicycle is not to be made until the riding season opens or at a stipulated date. The selling price is the cash list and there is no interest on deferred payments.

It is easy to see why the plan of "advance instalment sales," as it might be called, has not become popular until this year. It was never as practicable in former years as it is now. The support of the public could not readily be obtained, until the public felt certain of two things, first, that no radical improvements would be introduced between date of order and date of delivery, and, second, the reputation of each particular manufacturer for whose goods they contracted. Both these factors have now become crystallized. Whether the purchase contemplated is that of a chainless bicycle or of a chain bicycle, the type is known and recognized as satisfactory, each to its devotees.

Further than this, sample bicycles have been on hand in the stores much earlier this year than ever before. The public can see what they are going to get.

The \$75 chainless machine, in its two principal forms, the bevel gear and the roller gear, very largely promotes the system, and the system, in turn, helps makers of chainless bicycles. The uncertainty in regard to their practicability has almost disappeared, and a large number of people wish to possess one. The advance instalment plan places it within their reach in a manner which agrees very nicely with ordinary human nature. The many who would wince at paying the higher price for their fancy when confronted with a cash purchase, stand ready to advance a small sum every week in return for the assurance that when the riding season opens they will have the mount which they really desire.

It is already acknowledged by those who commenced operating the plan in December that it favors the sale of the highest priced machines, whether chainless or otherwise.

## SALESMEN AND CREDITS IN EUROPE

An importer of American bicycles, who has always paid cash in advance for the product of our manufacturers, writes to The Cycle Age to explain that the European importers whose trade is worth having, not only have no objection to paying cash but would feel much relieved if all export business of American bicycle manufacturers were conducted on the cash-in-advance plan, as thus only the ruinous competition may be avoided in the European markets which now naturally follows when a consignment of American ma-

chines is sold at a sacrifice sale after being first hawked around to find a purchaser upon any kind of prices and terms.

He says in part:

To-day the market here belongs to the United States and it would be a pity to spoil it. I have collected orders for 1000 bicycles to be delivered in October, November and December, 1899, and for which bank guarantee will be placed as security that the entire lots will be taken and paid for cash in New York against documents. I am not partial to any special brand, but always open for a deal with everybody who would like to make offers and deal honestly and straightforward. A great many highly respectable firms in this city object to paying in advance and before inspecting the goods, for fear they may not get the value for the money. I do not know of what sad experience they may have had; as for myself, so far only one manufacturer disappointed me through unfair dealings. I need scarcely say what damage and bad feelings such actions may create and I do wish that you could find a way to stop such atrocious dealings, which will make it impossible for importers on this side to pay in advance.

In the same letter this importer who recognizes so keenly that his own trade chances depend largely upon the integrity of the cash system speaks of another matter of policy in connection with export business, as follows:

There is one thing special I should like you to point out for your manufacturers and that is that they should be most careful in selecting the travelers they send out here. I shall not speak of the extravagant habits some of them are indulging in, specially those not accustomed to continental life, but simply draw the attention to the great harm and annoyance arising from the fact that they are visiting all and everybody likely to order one or two dozens of cycles, stating their lowest export prices, granting ruinous conditions of sale and giving promises which never can be fulfilled; and all because they are naturally anxious to book orders justifying their heavy traveling expenses and strengthen their positions at home. In all cases where the manufacturers cannot come themselves they fare much better by submitting offers and samples.

The suggestion of supplanting the traveling man with the less energetic and slower system of submitting offers and samples, will hardly meet with general approval, but on the other hand, there is undoubtedly much room for improvement in the general human qualities of export salesmen. Unless they possess a certain sympathy for the most cultured forms of life and amusements, they are sure to offend continually against the sensibilities of nearly every European purchaser who is prepared to pay cash in advance.

They should by all means be of the same class as those representatives of European manufacturers who introduce foreign goods in this country—men who, if they have personal foibles, carefully avoid flaunting them before business associates.

• • • •

While everything else pertaining to bicycles and bicycle work is assuming more and more definite and final forms, it is a notable fact that the one department of tire repairs is lapsing in the opposite direction and is to-day in a chaotic condition. Few repairmen know of any system which they care to follow and many tire manufacturers do not seem inclined to assume much responsibility in recommending the elaborate plug and vulcanizing repairs which were shown by the traveling "demonstrators" at the beginning of last season. One of the results has been that the trade in vulcanizers has fallen off and another that repairmen jump at heroic measures, such as inserting inner tubes in single tube tires, when they are confronted with the smallest difficulty in effecting repairs by other means. The situation calls for a remedy and it depends largely upon the enterprise of tire makers in what direction the remedy shall be found. Considerable tire trade hangs in the scale awaiting intelligent action; yet little has so far been done to mold the prevailing indecision into popular preference for one or another repair method and convert the knowledge of the manufacturer's repair department into a valuable aid for selling the tires to which the knowledge may be applied.

• • • •

Among the signs of sound conditions of the cycle industry the constant inquiry for manufacturers who will place bicycles in consignment, is one of the most encouraging. The inquiries travel by letter or by word of mouth, and, if they met with response, they would never reach the office of The Cycle Age. But they do.

• • • •

Local cycle shows are good advertising if they pay, and if the local dealers are the exhibitors, and if the exhibitors are the managers. But, if they manage by proxy, the proxy should be one of their own number. He should be Their proxy.

## POOLING FOREIGN FREIGHTS

### Substantial Benefits Given to Manufacturers by an Organization Which Takes its Work Seriously

Manufacturers who send cycle goods abroad persistently slight the foreign freight question, and excuse their want of interest in the subject by stating that their customers are more concerned with it than the houses from which they receive shipments. This indifference to the interest of buyers invariably results in extortionate charges, and the unchecked practice of a variety of minor abuses seriously hamper the business of both buyers and sellers. Thus, for example, because the makers who sell bicycles to foreign customers through export brokers in New York will not bother themselves about ocean freight charges, their customers are put to the necessity of selecting a brokerage house for expediting deliveries and safeguarding the account which, not having strong connections with the steamship lines, is unable to quote the lowest ruling ocean freight or express rates, and as a result the customers buy more dearly than they might if the makers were more watchful.

#### Truckage Charges Are High.

Again, if foreign shipments are made from the interior to the seaboard, there are forwarding charges to be paid upon the removal of the goods from the cars to the docks, which charges are far in excess of the value of the services rendered when compared with the cost of similar service inland. This matter also is neglected by makers, when by pooling interests they might pitch upon one trucking establishment, give it all the business and so lessen the cost of forwarding. In ignoring the chance to economize at this point makers pinch both themselves and their customers.

Ocean freight rates are by foreign brokers based upon the extent of their dealings with steamship companies; the greater the volume of their freights, the lower the freight charges, and vice versa. Recognizing this fixed principle, certain members of the National Cycle Board of Trade last summer made an effort to have all shipments cleared through one export broker and have all trucking done by one forwarding house. The project met with ready encouragement from the bulk of the members, but the directors deemed it unwise to attempt so large an undertaking. The plan was labeled impracticable, much to the disgust and chagrin of those who, not having a hand in the shaping of board affairs, expected from the directors a sympathetic interest in the things conceived for the welfare of the majority.

#### Putting the Cycle Makers to Shame.

Now comes the National Association of Manufacturers—an organization which does not balk at common obstacles, nor shy with jealous apprehension whenever there is an obscuration of personal interest threatened—and proves how well grounded were the hopes of our makers. Its special committee appointed to organize an international freight and transportation bureau and devise a plan to aid sellers and foreign buyers, has easily performed the miracle which so awed the National Cycle Board of Trade, and in recounting its achievement makes report as follows:

This committee mailed a blank to every member of the association, calling for a report as to the approximate amount of freight each member shipped during the last year, from what ports it was shipped, and the ports of destination. From the information thus obtained the committee was able to determine the volume of freight shipped by the members responding, and its destina-

tion, and could then determine what steamship lines it was necessary to arrange with to carry such shipments.

This committee has been successful in consummating some very advantageous arrangements with steamship lines to certain ports, and is now negotiating with many others from different ports of this country to foreign ports, and hopes in the near future to be able to ship, under special contracts, every ton of freight offered it from any port in this country to all principal ports in other countries.

#### Connecting With Forwarding Agents Abroad.

Believing that it would be of great assistance to our members, and an aid to this bureau in carrying on its work, the committee had letters prepared and sent to all our consuls in all principal ports and cities in other countries, asking for the names of responsible forwarding agents in their consular districts, also the names of all steamship lines and railroads leaving, centering or touching at the principal ports or cities, with a list of ports or cities to which they carried goods. A very large number of replies have already been received, giving the information desired. These have been tabulated and filed, and are at the disposition of any member who asks for such information regarding any particular port of connection.

#### Collections on C. O. D. Shipments.

One of the most important features of the work of this bureau is the selecting and contracting with reliable forwarding agents in foreign ports. This has been vigorously pushed, and this committee has already completed some very satisfactory contracts and has many others well under way. Under these contracts the cost of receiving and forwarding goods to other ports or interior cities has been reduced in some cases to about one-half the usual rates. Collections of C. O. D. shipments can be made through the agents with whom this committee has contracts with entire safety and dispatch, or in case shipments are made and drafts drawn, they obtain the acceptance of the drafts and collect them when due at reduced cost. This will be a valuable feature for shippers sending goods to Russia and other parts of the continent of Europe, where the bankers will not handle documentary drafts. Through these agents the committee is able to contract at a definite rate for storage, by which goods can be stored and insured at reasonable rates, and be at all times under the control of the shipper through this bureau.

#### Substantial Reductions in Freight.

Contracts have also been made with transportation lines from seaports in other countries to interior and coast cities, by which substantial reductions in cost of transportation have been obtained. By reason of these various contracts, the committee is now able to inform shippers or buyers of the exact cost of transportation from certain ports in this country to nearly every port throughout the world, and nearly all principal cities of Europe, and it hopes in the near future to be able to give like information to every city of importance in all foreign countries.

#### Express Rates also Reduced.

This committee believed that a large saving could be effected in the matter of foreign express service; therefore it has gone into this matter thoroughly and is pleased to report that it has been able to make contracts by which the cost of sending goods by express to foreign countries has been largely reduced, in some cases fully one-half, and has besides greatly simplified the methods for such work.

#### Forwarding Shipments for Members.

This committee at first thought it would not undertake the attending to details of actual shipments, but it soon found that to be necessary; therefore it has completed arrangements and organized a service by which it is now receiving shipments from members and attending to all details pertaining to same, and is pleased to report that it has been able to render valuable aid to those members who have made use of its service, and is now prepared to attend to all shipments that members may favor it with.

#### Pass Book System Insures Safe Sales.

The pass book system for the retailing of bicycles is being quite generally adopt-

ed by the cycle dealers of Buffalo. This plan requires the payment of \$1 each week, which amount is credited in a book furnished by the dealer for that purpose, until a specified sum is credited. When the credits reach this sum the holder of the book is entitled to a bicycle upon which subsequent payments of \$2.50 weekly are required until the machine is paid for. The system was tried here last year for the first time and was pronounced the best of the installment plans in use. It affords a protection to the dealer and places the bicycle within the reach of everyone. The dealer has nearly one-half of the purchase price in his hands before a machine is let out and this, together with the weekly payments of \$2.50, places him in a position where loss is reduced to a minimum.

## PLANS FOR SPRING SHOW

### New York Promoters to Bring Retailers and Public Together at Opening of Riding Season.

The spring cycle show which is to be held in New York city in the Grand Central Palace at the opening of the outdoor riding season, the week of March 23 to April 1, under the management of Allen S. Williams, has been arranged for the benefit of the local dealers and the public in their relations with each other. A thorough canvass of the local trade has demonstrated that the dealers of New York city are ready to welcome an opportunity to reach the riding public at a time when it is ready to invest in bicycles, fittings, lamps, and other sundries, particularly if no restrictions are placed on orders being taken and, in the case of the smaller sundries, goods being sold over the counter.

Aside from the reasonable rate at which the spaces will be disposed of, and the ample room that each will contain, unusual concessions will be made in the supply of platforms, railings and electric lighting.

Besides the customary trade exhibits, special displays are to be made which will interest the general public. Under this head will come the most elaborate showing of racing trophies ever gathered together.

During the week of the show, parlors are to be set aside without charge for the meetings of any organization in the cycle trade. The League of American Wheelmen will be invited to occupy a booth, and so will the New York state division of the Century Road Club of America.

#### Bretz Will Aid Peck.

Jacob S. Bretz, who for a long time has been prominently connected with R. H. Wolff & Company, will on February 6 become assistant manager of the Barnes Cycle Company. Arthur R. Peck, the general manager of the Barnes company, will not relinquish his interest in or position with the company, but on account of the press of outside business affairs finds it necessary to pass over the bulk of his work to the competent hands of Mr. Bretz.

#### Milwaukee Repairmen Organize.

Preliminary steps have been taken toward organization by the repairmen of Milwaukee, with the object of regulating wages and prices for repair work. About twenty signatures were secured to a petition to the National Bicycle Workers' Union for a charter for a local organization.

#### Attempt to Injure Hilsendegen.

George Hilsendegen, the well known bicycle dealer of Detroit, was defendant in a case in the chancery court a fortnight ago, brought by the former manager of his retail store, W. C. Rands, who sued to recover \$1,500 capital, \$500 alleged to be

due as his share of the season's profits, and \$150 for salary. In rebuttal, however, Hilsendegen stated that his former manager wanted last year to have a share in the business and agreed to invest \$1,500 and receive \$100 per month salary and one-twelfth of the profits. Toward the end of the season there was a disagreement, he alleged, and his new partner withdrew and instituted suit. Then he stated that Hilsendegen was going out of business and asked that a receiver be appointed. In reply, Hilsendegen stated that he had no intention of disposing of his business and that the motion was made only for the purpose of injuring him. Altogether he claims to have been damaged to the extent of \$4,000 by Rands.

**LASLEY'S APPEAL CASE**

**He Will Contend That Second Hand Trading is Not His Business, Being Only Incidental.**

Washington, Jan. 28.—The case of J. D. Lasley, who was convicted some time ago of being an unlicensed second-hand dealer, will be argued in the Court of Appeals on February 7. In his plea Mr. Lasley contends that his dealings in second-hand bicycles form only about 5 per cent of his business as a bicycle dealer. That is to say, his trade in second-hand bicycles is not his business, but is a very small part of his business, and is merely incidental to it. He further contends that the law of March 3, 1891, was never intended for the class of business men to which he belongs, it being inconceivable that Congress intended any such scope to be given to the law by the use of the phrase, "dealers in second-hand personal property," a phrase which is in common use and has a well known and accepted meaning, i. e., those who deal principally or exclusively, or, to use the language of the statute, "whose business it is," to deal in second-hand personal property.

The act shows upon its face that it was intended to apply to junk dealers and pawnbrokers and others who fall within the general class to which junk dealers and pawnbrokers belong, and was evidently framed for the purpose of facilitating the efforts of the police in tracing stolen property.

In the event that the decision of the lower court is sustained, the bicycle dealers, in common with other merchants, will strongly urge the repeal of the statute.

**EXPORTERS NOT CONCERNED**

**American Manufacturers Think Action of German Makers Will Have Little Effect.**

Further communications upon the subject of the action of the German bicycle makers in denying credit to agents who handle American bicycles are herewith presented:

**One Way of Escaping Effects.**

The failure of the German prohibitory import duty and the after action of the German manufacturers' association, we are pleased to state does not affect the Racycle, inasmuch as our bicycles are now being manufactured in Germany, and have been for the past six months or more. It may also be of interest to know that we will commence the manufacture of the Racycle in Canada within the next two weeks.

THE MIAMI CYCLE & MFG. CO.

**Will Not Affect Responsible Dealers.**

We do not think the arbitrary stand taken by German manufacturers would have much effect upon dealers who have ample capital to carry on their business with, as they could very readily buy their goods for cash, as well as handling the American lines they usually represent. It will not affect us in any way whatever.

IVER-JOHNSON ARMS & CYCLE WORKS.

**Will Cut Off Some Trade.**

The proposed action of the German Bicycle Manufacturers' Association will undoubtedly cut off some of our trade for the present at least, but as we have all we can do for the present we are not worrying over the matter. These things usually right themselves in time.

THE GENEVA CYCLE CO.

**TO PAY OVER EIGHT PER CENT**

**ENGLISH PROFITS THIS YEAR**

**Price Cutting is Expected — Machines Listing at \$50 Will Command Ready Sale.**

It is calculated that in the present year the average English cycle making firm will make 8½ per cent on the actual cash invested. Last year the profit was 7 per cent, and the year before 13 per cent.

It is by the Irish Cyclist reckoned that in the entire cycle trade and its ramifications \$155,000,000 is invested. The figures are too large, as they were based on the returns of many prospectuses which never got their full capital. Probably \$135,000,000 would be nearer the mark.

Total Capital is \$135,000,000.

Taking the returns of the leading companies, whose aggregate capital is \$56,250,000, it is found that in 1897 there was a net profit of about \$7,250,000 made, or an average profit of 13 per cent; that is, dividend paying profit.

On the capital of \$56,250,000 there has been a decline in dividend profit of \$3,257,905 in 1898, as compared with 1897. Taking these figures and working them out for the total cycle trade capital of, say, \$135,000,000, it is found that shareholders lost about \$7,818,970 profit last year. In all probability, however, the total loss would come out at a much bigger figure, for no account is taken of mushroom firms which lost money on their trading.

**Rich Harvest for Insiders.**

Out of the \$56,250,000 the Dunlop company holds 40 per cent. Out of the total profit they earned 56 per cent. Again, taking the entire cycle trade capital at \$135,000,000, the total net profits last year work out approximately at \$9,754,275, and of this the Dunlop company earned almost one-fourth.

The highest dividend of the year was paid by the Palmer Tire Company, 40 per cent being the abnormal figure. On a capital of \$245,000, they earned \$120,950.

**Price Cutting Will be Prevalent.**

Profits in 1899 will be affected by price cutting. There has been over-production. Firms with big factories must keep their works going, and to do so are prepared to reduce the profits to a very small margin. Other firms are in the unfortunate condition of having large stocks and no working capital. To turn the stocks into working capital, they will sell even at a loss. Worse still will be the effect caused by the inevitable liquidation of a number of the mushroom concerns floated during the boom year or of those that were launched with such absurdly small working capital that they cannot continue in business. These concerns also have stocks which must be disposed of at less than cost price by forced sales either under the auctioneer's hammer or otherwise. Then there will be the competition of new firms possessing no good will, who will only seek to make a profit, say of 10 per cent on the actual cash invested.

**The Demand for Cheap Machines.**

A very large proportion of the trade will be done in a ten guinea mount, and no matter how careful or capable the makers may be, the utmost net profit they can legitimately make on such machines is about \$5 each, or in other words 10 per cent on their turnover. If there was no goodwill this would be a fairly satisfactory return, but every public company is saddled with goodwill, some to a moderate extent, but in most representing far more than the tangible assets. It will easily be understood that in these cases 10 per cent on the turnover will rep-

resent a comparatively small return on the total capital. In many cases not even 10 per cent will be earned on the turnover in cheap machines.

The Belgians and the Germans can completely undercut the English in the cheapest class of bicycles. For example, it is said that the Belgians can now sell machines wholesale in England fitted with English tires, saddles and chains at a trifle over \$25 each.

**Estimating the Turnover for 1899.**

The turnover of the firms that weather the storm with few exceptions can scarcely be as large as last year, notwithstanding that more machines will be sold in the aggregate. The forced sales of old stocks will affect them, and most of the leading firms have been afraid to make stock, so that no matter what the demand is when the season opens, they can only do four or five months trade at anything like full pressure.

To sum up, therefore, it is believed that the good, solvent concerns will only be able to earn for the present year a net profit of from 5 per cent to 12 per cent on the actual cash invested in their businesses or an average, say, of 8½ per cent. That is to say, supposing a firm doing averagely well has a capital of \$1,000,000, and if its goodwill stands at \$500,000, and plant, working capital, premises, etc., at \$500,000, the net profits will work out at about \$42,500, enabling a dividend of about 3½ per cent to be paid. Some will do better and others worse. Of course, where the goodwill is small the dividend may be 5½ or even more.

**Exports of Cycles and Materials.**

Exports of bicycles and bicycle materials from the port of New York for the week ending January 24 are recorded as follows:

	Bicycles. Materials.	
Holland ..	\$ 4,007	\$ 4,045
England ....	1,810	5,362
Denmark ..	3,346	3,701
British Africa ..	5,955	.....
Italy .....	4,544	2,550
British East Indies.....	5,198	.....
Russia .....	149	4,174
Australia ..	2,453	1,280
Germany ..	2,720	89
Sweden ..	538	431
Argentine Republic .....	880	20
Belgium ..	125	626
British West Indies.....	324	211
Turkey ..	375	.....
Cuba .....	150	18
Brazil ..	80	84
Other countries .....	129	2
Totals ..	\$32,783	\$22,593

**Will Attend to Paris Exhibits**

The Cycle Age is able to refer an American manufacturer of bicycles, tires or accessories who contemplates an exhibit at Paris in 1900 to an American at present in Europe, who can handle every detail. The gentleman in question can arrange for space, fit up the exhibit, clear goods through customs, make translations, and has an excellent connection among European buyers.

**Decision Against Barnes Co. Reversed.**

A new trial has been granted in the case of the Barnes Cycle company against Charles M. Reed, brought to recover \$3,018 as surety for Leo Chlaudecker, who was agent for the company. A verdict for the defendant was rendered in the circuit court at Pittsburg, but Judge Acheson, of Philadelphia, reversed the finding.

If a contract expressly provides that delivery shall be made at a certain place the seller's title to the property is not divested until delivery has been made at such place.

The Pittsburg Cycle Board of Trade has decided to hold a local bicycle show during the week of February 11 to 18.

## AGENTS EXPECT HEAVY SALES

### High Priced Bicycles Will be in Strong Demand—Maker's Reputation Valuable This Year

The commercial reputation of a bicycle maker will play a very important part in the approaching season of sales. This is the opinion of many bicycle agents who have been solicited to hazard a guess as to what the future contains, both for them and the establishments they represent. It seems to be the general opinion that the volume of sales will be increased, a conclusion reached upon consideration of the lower prices which are ruling upon machines of all grades as well as the improved condition of general commercial affairs.

#### Standard Patterns Will Sell Well.

Quite an important prophecy is variously put forth in the appended communications with respect to the sale of high priced machines. It is believed in many parts of the country that standard patterns will sell to better advantage in the coming season than heretofore, and excellent reasons are adduced in support of this belief, the chief of which is that the slight difference in cost between standard bicycles and those which are nearest to them in grade competition will prove helpful to the high-priced models and correspondingly disadvantageous to those which are sold at prices slightly under them. It is at this point that the reputation of the makers of standard goods plays a conspicuous part.

#### Reigning Conditions Are Favorable.

To be sure, it is as yet a little early to indulge in prophecy of this sort. A delay in the breaking of the winter in the northern states or the sudden appearance of an unlooked-for event in the national life might, as was the case last year, suddenly put an end to day dreams. The reigning conditions, however, so far as they may be useful in piercing the future, are favorable. Here and there local conditions will operate disastrously to the retail cycle trade, particularly in such quarters as are affected by strikes, bad crops, and the like evils, which are unavoidable even at a time when the mass of the people are in a condition of prosperity.

#### Not Satisfied With Treatment Received.

I think sales may be somewhat greater than last year if weather holds good. I think the lowered list price will make no difference, as the people who will buy the \$50 machines this year would have bought them just the same if last year's list had been adhered to; others will buy the wheels selling at \$25. There will be very little difference in ordering by the dealers, although some are going out of the business. As for ourselves, we shall pay more attention to the repair part of the business, as we are not satisfied with the way the manufacturers have treated the agents in the past—they have catered to the hardware and department store trade and neglected the agents who have made their business, although we will say there have been a few exceptions.

New Hampshire F. B. PARSHLEY & Co.

#### Dealers Reducing Their Lines.

The general impression is that fewer bicycles will be sold this season than in '98 in this city. The lowered list will have little effect here. Dealers are buying more carefully and not so many kinds.

New Hampshire R. E. WILM'T.

#### Evils Descending from Last Year.

I think that the sales of bicycles will be less than last year because there is not the interest shown by riders that there was last season. Lowered prices will have a good effect upon the public, but bad effect on the dealers. Bicycles this season will cost the dealers about the same as they did last season, while list prices are not nearly

so high. A large proportion of machines put out last year were of low grade and were listed for nearly twice what they were expected to be sold for. That class of bicycles was handled mostly through department stores, and parties selling them offered large discounts to the public to buy them, which discount was taken advantage of. They also allowed for old mounts double what they would sell for. Now this season riders are looking for the same thing, which no dealer can afford to do if he depends upon the bicycle business for a living. Dealers are not buying more freely than last season. There are not so many in the business and those that are in it—that is, those who are in the bicycle business alone—are more careful what they buy.

Massachusetts.

J. A. TINPANY.

#### Will Feel Effects of General Prosperity.

I am looking for increased sales in '99 because it will be a prosperous year in business generally. The lowered list prices will have a tendency to increase the bicycle trade and to dispose of better grade goods. I am buying somewhat more freely this season, but do not know about the other dealers in town.

Vermont.

E. FRANK LAM.

#### Dealers Consulting Conditions.

Sales in this city will be larger than in '98, the effect of lowered list prices being to increase the demand. Dealers are buying more carefully than usual.

Massachusetts.

HEDGES CYCLE CO.

#### More Sales Expected.

The sales of bicycles will be greater this season than in '98, as the lowered list prices will create more demand. Dealers are not yet buying as freely as usual, however.

Massachusetts.

GARDNER R. HATHAWAY.

#### Strike Spoils Local Prospects.

The sales of bicycles in this city will be less than in '98, although the lowered list prices will create more sales than if prices had remained the same. The dealers are not buying as freely as usual. There is a general strike going on here and more than 3,000 people are thrown out of work, thereby bringing business to a standstill.

Massachusetts.

MARLBORO RUBBER CO.

#### Public Convinced at Last.

We expect to do a larger business this year. We think the general public feels confident that prices are about as low as possible and that a satisfactory bicycle can be bought for \$25 or \$35, which enables many more people to buy. Dealers here are ordering samples much earlier than usual.

Connecticut.

C. H. MINCHIN & Co.

#### Will Keep Standard Goods on Market.

I think sales will be about a third larger. I believe lower prices will be the means of keeping the first-class machines on the market instead of flooding it with cheap ones. Dealers seem to be buying more freely than usual.

Connecticut.

G. B. PARSONS.

#### Sales Will be About the Same.

Sales will be about the same this season as in '98, lowered prices tending to increase the demand somewhat. Dealers are not buying freely at the present time.

Connecticut.

D. S. SPENCER.

#### Shoddy Goods Will be Crowded Out.

More bicycles will be sold this year than in '98, the demand for them being for business purposes as a means of locomotion and not generally for pleasure as in the past two seasons. The lowered list prices will make customers for high grade machines and ruin the sale of cheap wheels—that is, the shoddy, thrown together kind. The dealers are not buying so freely as usual this season, but are all waiting for spring and to see just where they can get the best bicycles for the least money.

Delaware.

HOWARD G. SAPP.

#### Outlook Much Improved.

We are unable to fully determine from the present outlook what the season will be, but the prospect is a great deal more favorable than last year at this time. The

lower prices will, we think, have a tendency to induce the people to exchange their mounts for others more up-to-date. When the dealers open up for the season they will, we believe, buy more sample machines than they have recently done. We have placed orders for about three times as many as we have ever ordered before. We do this thinking it will make more of an impression on the public and induce them to buy, where they would not if they did not see the goods and notice the improvements.

Rhode Island.

CRESCENT CYCLE CO.

#### Reputable Goods Will Have the Call.

Sales will be greater than in '98. Low prices will have no effect. A good make of bicycle at a fair price will take the lead. Dealers are not buying any more freely than usual as yet, but we believe they will later on.

New Jersey.

BRIDGETON CYCLE CO.

#### Buying More Heavily Than Usual.

The sale of bicycles in this vicinity with me, at least, will be greater this year than last, because I have more machines spoken for already by good parties than I sold the whole of last year. Lower list prices will have a tendency to create more demand for wheels among the middle class. What the other dealers are doing I am not able to say, but as for myself, I am buying more heavily than in any season heretofore.

New Jersey.

BUD VAUGHN.

#### Run on Cheap Bicycles Expected.

We expect to sell more bicycles this year than last, because we are selling them at a smaller profit and they are better looking machines than formerly. Lower prices will certainly sell more, as this is a cheap town and supports lots of dry goods store wheels, which are used by the working classes. The wealthy patronize Philadelphia, only thirty-five miles away. We had a big run on \$25 wheels of our own make in '98.

New Jersey.

VINELAND CYCLE HOUSE.

#### Dealers Pushing Their Own Makes.

The sale of bicycles for '99 will be about the same as in '98 for the reason that bicycle riding has ceased to become a fad and the riders will purchase only through necessity due to wear and tear, which will keep the sales about normal. The prices are practically the same here as last year. The purchasing tendency seems to settle on low price guaranteed machines. Reliable makes and the sale of strictly high grade wheels for more than \$50 will fall behind. The dealers are not buying as freely as usual with the exception of myself. They are pushing bicycles of their own manufacture, which sell at about \$35. Therefore the buying of manufactured machines is practically limited to myself.

New Jersey.

BENJ. A. LUTHER.

#### Beginning to Realize Bicycle's Utility.

Sales in our city will probably be greater this season than in '98, for the people are beginning to realize what a necessity and convenience the bicycle is here, where we have good roads and fairly good weather. Since the price list has been lowered more persons will be able to purchase for the first time, and old riders can obtain new mounts. For the most part dealers here buy as the orders come in and do not carry a large stock.

New Jersey.

JOHN H. BAWDEN JR.

#### More Reputable Machines Will be Sold.

We predict fewer sales here in consequence of the dealers being more conservative in making credit sales and also in taking second hand bicycles in trade. We expect as far as our own sales are concerned to sell more new machines, however, as we are refusing second hand wheels in exchange, excepting at very low prices or allowances; consequently we will sell cheap new goods where we formerly sold second hand goods to this class of trade. Customers will take the better machines for the same prices they were willing to pay in '98. There are fewer dealers here than a year ago and these are buying more conservatively, although personally we are placing orders about as usual during '96-7-8.

New Jersey.

GARRETSON CYCLE CO.

#### Dealers Buying Cautiously.

We think that the sale of bicycles in this town will be at least equal if not greater than for the past two seasons. The lower prices will cause a bigger demand. Most of the dealers here have been burnt the last year or two, so are not buying much.

Maryland.

WM. A. MORSE.

#### Public Wants Good Bicycles Cheap.

The outlook is very encouraging and with a fair season sales should be larger. A good bicycle for \$25 is what the people have been trying to get for several years, and this is the first season, in my mind, when one could get a good machine for so small a

sum. I will not do any ordering until the weather gets normal again, it having been bad since October.  
Virginia. C. B. M. KENNIE.

**Low Price of Cotton Injures Prospects.**

I think sales in our city will be less this year. The demand is supplied and there is a scarcity of money, owing to low price of cotton. The lowered list prices will very likely have some effect in increasing the demand, for the lower prices place wheels within the reach of the negroes and poor whites. Dealers in our neighborhood are not buying any more freely than usual.  
South Carolina. SOL. J. RYTENBERG.

**Sales Will be Increased.**

The sale of bicycles will be greater this season than in '98, one of the causes being the lowered list prices. The dealers in this neighborhood are buying more freely than usual.  
Alabama. W. M. FLORENCE CYCLE CO.

**Riders Will Practice Economy.**

Fewer bicycles will be sold this season than last, as the consumers are nearly all supplied, and agents cannot afford to take second-hand machines in exchange. The reduced list prices will make the inclination to buy strong, but riders will say, "Wait until I sell my old wheel." Dealers are not buying so freely as usual this season.  
Pennsylvania. WARREN SAVINGS BANK.

**High Priced Machines Will Sell Best.**

I am looking for greater sales this season than in '98, everything being favorable. The low priced bicycles will not sell as readily as the \$50 to \$75 machines. I will carry a larger stock than I had last year, but don't know about the other agents.  
Pennsylvania. JAMES S LYONS.

**Decreased Trade Expected.**

We think that the sale of bicycles will be less this season than in '98, notwithstanding the lowered list prices may have a tendency to stimulate the demand. Dealers are not buying as freely as usual this season.  
Pennsylvania. EBY & SPONEBOYR.

**Chance for Enterprising Salesmen.**

I fully expect a better trade this season than last, although I made more money last season than in any previous year. Plenty of money and work in the vicinity is my reason for expecting an increased trade. The lowered list prices will have the desired effect. The price of high grade wheels is so near the average purchaser's price that he will strain a point and pay the difference. My customers have so expressed themselves. The disposition of the rider this season is to buy as high priced a machine as it is possible for him to purchase. It is quality they are after this year, and the new prices have inspired that desire. Dealers are buying very judiciously what they are absolutely sure of selling before the season is well past. This is the year for good salesmen to get in their work, as they can sell to purchasers who have been paying the past two seasons \$25 per wheel, a \$35 or possibly a \$40 machine. Customers who paid \$35 can easily be induced to pay \$50. And the others will buy chainless bicycles and be up-to-date and happy.  
Pennsylvania. C. W. KEEFER.

**Outlook is for More Sales.**

Present indications are that sales will be greater than in '98. The lowered list seems to be the demand of the trade.  
Ohio. L. V. LASH & CO.

**More High Class Machines Will be Sold.**

I think the sale of bicycles in our city and vicinity will be greater this year than last and that on account of the reduction of prices a larger percentage of high class machines will be sold. The dealers here are very conservative and are not buying liberally now.  
Ohio. J. K. BOWMAN.

**Dealers Slow in Ordering.**

I think that the bicycle trade here will be about the same as in '98. From \$25 to \$35 bicycles are what the average rider wants here this year. I believe the local dealers are holding back a little more than they have in the past.  
Ohio. W. E. REX.

**Slow Collections Expected to Hurt.**

There will probably be fewer sales than in '98, as money was never harder to collect than now. This will largely influence the trade and only the lower prices can cause equal or greater sales. Dealers here are not buying much at present.  
Ohio. D. S. PRENTICE & SON.

**Purchasing Power Increased.**

I think more bicycles will be sold this season than last, as more people have employ-

ment. Lowered list prices will help the poorer classes to get wheels. The dealers are buying more freely than last season. I have several more lines.  
Ohio. F. S. CULP.

**Low Prices Suggest Poor Quality.**

I think this season will be a good one. It is a good idea not to list bicycles too low, for price governs the grade of the machine. Dealers are buying about the same as last year.  
Ohio. MOSES CRUMBINE.

**Reduced Prices Will Increase Sales.**

I think we will sell more bicycles than last season, on account of the lower prices this year. Dealers are buying a few machines.  
Kentucky. H. A. REESE.

**Sundries Trade on Good Basis.**

From present indications the sale of bicycles will be much greater than in '98. The lowered list prices will be an important factor in this increased demand. Our dealers are conservative and having facilities for getting wheels quickly, carry only samples, but a much better feeling exists. The bicycle sundry trade is nearer to a legitimate business basis, and altogether more satisfactory business is anticipated.  
Missouri. J. E. ATKINSON.

**A Pessimistic View.**

We do not look for much, if any, increase in sales this season, even if the weather conditions are perfect. Another late spring, as in '98, and the sales will be even less, as interest of old riders is waning and there are no new recruits. We do not think that the lowered price list will increase the demand, as the person who will purchase a bicycle at the present list would have done so had the prices remained the same. People who have been waiting for prices to drop will say, "I told you so"—and wait another year. A person who wants a bicycle and has the money will invest whether the prices be lowered or not. The person who is short of funds can pick up good second-hand wheels any time. Dealers are not making haste to place orders, as in former years. Any amount of good machines can be bought late in the season.  
Missouri. E. L. CHAMBERLIN & CO.

**Expect Larger Business.**

We think that the sale of bicycles will be greater this season than in '98, because of lowered prices. Dealers here have not placed their orders yet so far as we know.  
Minnesota. DICKERMAN BROS.

**Lower Prices Will Help Trade.**

The demand will be greater this season because buyers can now get a first class machine at a reasonable price. A great many in the past would not buy an inferior wheel and could not afford a good one. Others will also invest in new mounts. Dealers are taking more interest than usual, but they never lay in a large stock at this point at this time of the year, as the season will not open here until the first of April. But most dealers have closed contracts here for '99.  
Minnesota. A. L. HOFFMAN & CO.

**Agents Buying Very Freely.**

I think that the sales of bicycles will be much greater than in '98, as lowered list prices will cause some people to buy more freely. The dealers in this city have contracted for about twice as many machines this year as last.  
Minnesota. G. W. CLINE.

**Farmers Want Cheap Machines.**

I am of the opinion that there will be more bicycles sold this season than in '98, as the lowered price list will increase sales to the farmers, who, as a rule, want a cheap article. I do not know of any dealer in this section who has as yet bought any more than a sample. As usual no buying is done here until March.  
Minnesota. W. H. DAVIS.

**Winter Riding Helps Trade.**

I think at least one-third more bicycles will be sold here in '99 than in '98, as the lower prices will actively increase the sales. Dealers are purchasing more. We have had an ideal bicycling winter, as so far we have not lost three weeks of the good roads.  
Nebraska. QUEEN CITY REPAIR WORKS.

**Better Grades Will Sell Well.**

We expect the sales to be greater this season than in '98, owing to the lowered list prices. Most people here cannot afford to buy high priced machines, but the present prices bring them within their reach. I think there will be fewer of the cheapest makes sold, as there is such a small difference in price between the best and the trash.

No dealers besides myself have as yet received samples.  
North Dakota. R. J. HUGHES JR.

**Country Sales Will be Better.**

Sales here the coming season will be normal. Lower priced bicycles will increase the sales in the country. Dealers are not buying freely.  
Minnesota. FRED O'REILLY.

**Everybody Has Been Supplied.**

The sales will be less this season than in '98, as nearly every one is supplied. The lowered list prices will have no effect. For these reasons the dealers here are not buying as many machines as usual this season.  
Colorado. SMITH & KESTLER.

**Easy Money Will Benefit Trade.**

I sold about thirty-five bicycles in '98, and expect to do better this year, as money is getting easier. The lowered list prices will necessarily enable many to buy who could not afford to buy high priced wheels. I believe that I am the only local dealer who has ordered yet.  
Idaho. C. J. JOHNSON.

**Buy Bicycles for Business.**

We believe that the sales will be slightly increased, owing to prices placing the machines within the reach of many who could not purchase before. The lowered list prices also create a desire among a great many riders to replace their old mounts with more up-to-date ones. The demand is gradually changing from those who buy for pleasure riding to those who use the bicycle for practical purposes and would not ride except for economy. Dealers are buying earlier and I believe some are placing larger orders this year than last.  
Oregon. ROSCOE LANGLEY.

**More Standard Machines Will be Sold.**

We expect that more bicycles will be sold this season than in '98. The effect of reduced prices will be to cause the buyers to give more attention to close buying and dealing in more standard lines. The dealers are buying about 25 per cent. more than last year.  
Oregon. W. T. BOOTH & SON.

**Lower Prices Will Make More Sales.**

More bicycles will probably be sold this season than in '98 because of lower prices. The dealers in this neighborhood are buying the same as last.  
Oregon. WM. L. SHIVERICK.

**Dealers Preparing for Large Sales.**

I think the sales will be greater this year than in 1898, the demand being helped by the lowered list prices. Dealers in our neighborhood are buying more freely than usual.  
Kansas. H. I. SPURLOCK.

**Asphalt Paving Will Increase Riding.**

We expect a much greater demand for bicycles in this vicinity this year than ever before, one of the reasons being the large amount of asphalt paving being done in this city and another the low prices for which the high grade bicycles are being sold. As far as we have been able to learn, the dealers of this city have been buying quite freely. The prospects are very flattering for a good business.  
Texas. C. L. & THEO. BERING, JR.

**Dealers Cheerful and Ordering Liberally.**

Sales will be greater than last year, owing to lowered list prices, which are the best inducement to wheel life. The dealers in this neighborhood are buying several times more freely than usual. It has been two years since there was a "craze," financial conditions are better, and all prospects are encouraging.  
Texas. J. E. LIGHT.

**Better Quality Will be in Demand.**

The sales of bicycles this season will fall considerably short of those of '98. The lowered price list will have no effect. I think high grade bicycles will be more in demand. Dealers are not buying as freely as usual as trade at present is too uncertain.  
Texas. MARCH CULMORE.

**Disgusted With "Nasty" Goods.**

I think sales here will be less this year than last, even with good weather, because there were quite a large number of cheap wheels sold here last season which gave lots of trouble and people seem to be disgusted with bicycles. I don't think that lowered prices will have much effect in this locality, as people seem to take no interest in cycling. It is very common to hear people assert that bicycles cost more to keep than a horse. I don't know of any dealers buying more freely than usual.  
Texas. E. M. WINFREY.

## COMMERCE IN FOREIGN MARKETS

### VENEZUELANAS WANT TO BUY DIRECT

The Venezuela merchant is averse to dealing with the jobber or middleman, and would rather buy direct from the manufacturer and thereby save commissions. The jobber does not care whose goods he sells, nor where they are sold, so long as he makes his profit; consequently, his efforts are directed toward selling them at home, where there is less expense and trouble in handling the goods, but only a small margin of profit for the manufacturer, which causes the overcrowding of the stores at home and a reduction of prices for lack of demand.

There is no use in sending traveling salesmen to the South American countries who do not understand Spanish and cannot accommodate themselves to the habits and customs of the people, pre-eminently different from our own. A man must first of all be a gentleman in every sense of the word. Polish goes a great way there. Things can not be done in a rush, but persistence and hard work will tell. Many American drummers sent to those countries to sell goods are, on account of their behavior, a detriment to American business.

American goods can undoubtedly stand the highest competition and will sell alongside the best of European makes. They are in many cases admittedly superior and fully as cheap. Now is the time for the American manufacturer to introduce his goods into those markets, and with the application of his usual common sense, he can reap the benefits of an immense commerce, which is today sadly neglected.

### ENGLAND'S SCHEME FOR COMMERCIAL DEFENCE

Great Britain takes approximately 20 per cent of Germany's total exports, amounting to about \$175,000,000 annually. Germany, in short, gives England a hundred years' start; gives her a vast world of colonies peopled by her own sons, who would naturally desire to buy from her; gives her a vast fleet of merchant vessels to carry her own manufactures under her own flag; and then, herself a unified country for less than half a century, she competes successfully with England in her own commodities and her own markets—home, foreign, and colonial.

The competition of the United States has not reached the volume of that of Germany, nor has it been exercised so markedly in directions that, up to now, England has considered peculiarly her own. It has not, therefore, attracted quite the same attention; but it is regarded with serious concern, and with a conviction that it is destined to develop, in the near future, into imposing dimensions.

Confronted thus by German and American competition, plans of defense have naturally exercised the minds of the merchants of England; and the most important and far-reaching of these no doubt has been the idea of an imperial customs union, with protection against the rest of the world. The colonies have come politically much closer to the mother country during the last part of this century; and the idea of imperial federation has fired the imagination and stirred the heart of many British subjects. That the political effect will be important most people believe; that the commercial or fiscal result will be considerable is much to be doubted. The inexorable logic of figures proves that two-thirds of England's overseas trade is with foreign countries, one-third with her colonies, and that an imperial Zollverein would mean the sacrifice of the larger share of her commerce to

the smaller portion. Besides this, free trade between England and her colonies and a tariff against the rest of the world would mean a tariff in England on food products. Now, in 1896, England imported from the United States more than \$500,000,000 worth of commodities, most of which were food products; and this sum exceeds the total importations from all the British colonies together, including India. With the balance of political power in the hands of the workers living in towns, whose first demand is the "cheap loaf," it may at once be seen that the idea of the Zollverein will not develop. Wherever practicable, however, such degree of reciprocity as is at all possible will doubtless be entered into.

### DUTCH TRADE WORTH SEEKING

With the exception of the traffic with her own colonies in the Indies, and with South America, which is very extensive, the export trade of the Netherlands is very limited. Holland is practically a free-trade country, the average import duty being only 5 per cent ad valorem. German and Belgian machinery, tools, and other industrial products find a ready market there, and all the American manufacturers have to do in order to get their share of the trade is to send active and energetic representatives to introduce their wares and appoint local agents for the sale of them.

It has been the custom of many American manufacturers, when disposing of European territory to agents, to include the Netherlands in some German agency. Probably they think that Holland is too small to warrant the establishment of separate agencies there. If the Holland trade is worth having, it is quite safe to say it can be obtained only by intrusting the agencies to natives, or at least to residents of the country. There are two reasons for this. One is, while Holland is a small country, the Hollanders have a great deal of native pride, which even extends to business matters and makes them protest against being considered an annex to another territory. Another reason is that German or other agencies pay but little attention to the Netherlands trade. They take, of course, what they can get, or what may naturally come to them, but they expend no money or energy towards procuring business for or advancing the interests of the American houses they represent.

### TARIFF CHANGES IN BELGIUM

A deputation of delegates from the various foreign chambers of commerce in Belgium—Anglo-American, French and German—recently had an audience with the minister of finance for the purpose of advancing their objections to the proposed new law inaugurating changes in the present system of levying customs duties on goods taxable ad valorem and, if possible, securing the withdrawal of the bill.

The representatives of the government defended the bill and claimed that there were many points in the Government's favor—for instance, that some importers of foreign goods into Belgium, taxed ad valorem, have adopted the rule of having the names of their respective firms printed on the goods. These goods are then declared at a figure far below the real cost, and here the government is absolutely powerless to protect itself, because if the customs authorities seize these goods on account of undervaluations, they are unable to dispose of them

either at private or public sale, owing to the fact that the name of a certain firm or individual is imprinted upon each article. The delegates readily concurred with the government representatives on this point, and even requested that stringent measures should be taken to prevent this fraud in future.

On the other hand, the delegates maintained their opposition to the proposed law on all points bearing upon the importation of foreign goods into Belgium, wherever such importation is practiced upon an honorable and equitable basis. They told the government representatives that the system of pre-emption as practiced at present must be maintained; but, in order to put the customs authorities in a position to prevent all possible fraud, the delegates agreed to abandon the bonus of 10 per cent which the government actually pays in addition to the value of the seized goods, or, in other words, give the importer the right to simply abandon his goods in case the custom-house officers should find the valuation too low. They also pointed out the inevitable delays which would result in the delivery of goods to the importer if the proposed change in the present law should be adopted by the legislature, and the arbitrary decisions which the contemplated commission, in case of contested valuation, might render, and from which there would be no appeal. It is believed that a favorable consideration of these demands may be soon expected.

### COLLECTING FOREIGN ACCOUNTS

The question of foreign credits brings up a point that is of considerable importance. It is of no less importance to know of disreputable concerns than to be advised of houses that are solvent and honest. In one instance a manufacturer in New York had a long-standing account in Vienna which he had been unable to collect by any agency at his command; finally, as a last resort, he wrote to his customer that unless a prompt settlement should be made the matter would be reported to the National Association of Manufacturers. The reply was a remittance in full by return mail. A member in the west had similar difficulty with a purchaser in Norway, and upon suggesting a reference of the matter to the National Association an immediate settlement was secured. The mails were too slow for this delinquent, who cabled instructions to a bank in this country for the payment of the account, amounting to \$600 and over.

### German Exports and Imports.

During the first ten months of last year Germany exported 34,744 bicycles and 8,455 cwt. of parts, while her imports were 43,275 cycles and 1,706 cwt. of parts. America sent 28 cwt. of tires and England 58 cwt. Of saddles, America contributed 395 cwt., England 335 cwt., and France 106 cwt.

### French Imports and Exports.

The exports of bicycles and motor vehicles from France during the period from January 1 to November 1, 1898, amounted to \$1,977,920, against importations during the same time amounting to \$1,626,800.

The negotiation in one state of sales of goods in another state for the purpose of their introduction in the former state is interstate commerce, and they are not liable to a license tax in the state where sold.





TRADE MARK



We invite correspondence from any bicycle agent who is asked  
extra for



# Dunlop Tires



Our tires are supplied promptly and without extra charge on nearly  
all of the best grade wheels.



## The American Dunlop Tire Company



134 Lake Street, Chicago.

Belleville, (North Newark) N. J.



TRADE MARK



# THE STERLING

## "BUILT LIKE A WATCH"

### OPTIONS

#### FRAMES

20, 22, 24 or 26-inch.

#### COLORS

Olive or Black.

#### RIMS

Enameled or Striped

#### TIRES

Palmer, Kangaroo, Dunlop,  
Hartford or G. & J.



### OPTIONS

#### CHAIN

Morse.

#### SPROCKETS

22, 24, 25 or 28.  
8, 9 or 10.

#### PEDALS

Velox or Record.

#### SADDLES

Christy, Wheeler, Plew,  
Garford or Hollenbeck.

ENERGETIC AGENTS DESIRED

# STERLING CYCLE WORKS, KENOSHA, WIS.

# SUBJECTS OF GENERAL INTEREST

**SMALL VALUE OF OUR PARCELS POST**

Our present parcels post system is of comparatively small value, and the limited extent to which it is used affords no basis upon which to judge of the volume of foreign trade which could be developed with proper facilities of this character. Our present parcels post conventions, fifteen in number, embrace Central and South American countries and points in the West Indies which are of minor commercial importance, with the exception of Mexico, and in several instances the limitations of the service are such as to lessen its utility to a great degree.

We are making but very little progress in the extension of this system. A treaty with Chili has recently been negotiated and now awaits ratification by the congress of that country. A treaty of similar character with Venezuela is in course of negotiation, with fair prospect of successful result. But so far as is known to the general public no effort is being made to provide such facilities for transacting a small parcel business with the European countries, the English colonies and other important markets. Beside the European manufacturer, who can dispatch small packages of merchandise quickly, cheaply and safely to many of the more important markets, we are sadly handicapped in our efforts to develop foreign trade.

There is no evidence that the postal authorities of the United States are disposed to undertake the extension of the parcels post system except at the instigation of the business interests of the country, and the lack of a well-defined and strongly-supported demand is one of the chief causes why the system of foreign parcels post has not been extended to more important countries.

**MEMBERSHIP OF TRADES UNIONS**

The report of the Commissioner of Labor Statistics estimates that the proportion of all the working people in the

state of New York who are organized is at present not far from 10 per cent. This is evidently as favorable a showing as can be made.

The commissioner says there are no statistics giving the total number of persons in the state who could be classed as wage workers, but making an estimate from the statistics of occupations in the state in the eleventh census of the United States, and allowing for the increase of population since 1890, he concludes that 10 per cent of the workers are organized. The percentage is too high. If in eight years the population has increased 13 per cent—and in the preceding decade it increased 18 per cent—and if 40 per cent of the entire population is engaged in gainful occupations, which was the percentage in 1890, and this percentage has a tendency to increase, then the number of persons who are earning their living in the state is 2,711,000. The highest membership of labor organizations reported, just under 180,000, is 6.6 per cent of this. This is the number reported in the first quarter of 1898; by the last quarter the number had fallen to 171,067, which is only 6.3 per cent of the probable number of workers in the state.

But the number of members of labor organizations is extremely variable. On the last day of the first quarter of 1897 it is reported to have been 142,570. A year later it had increased 47,000, and during 1898 it fell off 9,000. What may be called the permanent organized labor, the workers who really keep up the organizations, who stay by them, and do not simply join

when there is a boom in business and the demand for labor is above the average, are perhaps about 5 per cent of all the persons who are working for their living. For the country at large the percentage is undoubtedly smaller than it is in this largely industrial state.

**NICARAGUA CANAL CONSTRUCTION**

Interest in the construction of a Nicaraguan canal has been stimulated powerfully by the incidents of the late war with

Spain and by the commercial expansion of the United States which has resulted from the brief conflict. Arguments heretofore advanced in behalf of the various interoceanic canal projects have been more essentially of a commercial character; but while the importance of a canal from a purely mercantile standpoint has in no way diminished, the political and strategic value of a waterway across the Central American isthmus has been increased enormously during the past few months.

We have heard much of the importance of a shorter route from the Pacific coast to the Atlantic seaboard based upon the theoretical necessities of a possible war, but when our magnificent "Oregon" steamed from San Francisco to Key West last spring, traversing a distance of over 15,000 miles in an actual sailing time of fifty-nine days, then it became clear to every mind not hopelessly obscured by preconceived opinions how immeasurably important would have been a channel of communication between the two oceans capable of saving one-half of this time and avoiding the constant danger of destruction by a hidden foe in South American waters. Experience has added to theory an argument which cannot be overthrown.

The whole tendency of the Nicaragua canal agitation of late has been more and more strongly in the direction of the United States, and in fact under the actual ownership of our nation. In the minds of the people this subject is becoming more and more a public enterprise in which private interests are figuring only in the promotion and preliminary work.

The commission created under the act of June 4, 1897, for the purpose of investigating and considering the entire field of canal possibilities in Nicaragua has finished its field work during the past year, and the results of its labors will give to this government a more accurate and complete basis upon which to consider legislation touching this project. The preliminary report of this commission roughly figures the cost of constructing a canal upon either of the two best known routes at about \$125,000,000, this estimate providing for a waterway of larger dimensions and greater capacity than any heretofore proposed.

**DEPARTMENT OF COMMERCE**

While the interest in the proposed Department of Commerce and Industries has not diminished in any degree during the past year, yet little substantial progress can be reported as compared with the situation of one year ago. The bills that have been pending are still before the committees of the House and Senate.

The consideration of the various problems involved in the war with Spain has so far occupied the attention of Congress as practically to exclude many very important matters upon which action has been greatly desired, and among these few are of more consequence than the

proposed Department of Commerce and Industries. The conditions have not been favorable to any active or very aggressive work in this line. It is believed that in the incoming Congress there will be a larger sentiment favorably disposed towards such action than has existed in the present body. The continual expansion of our foreign trade and the certainty of still greater development in the same direction add constantly to the arguments in behalf of this new federal department.

**TELEPHONES OF THE WORLD**

Below are given some interesting statistics in regard to the telephones in use in the different countries in the world. On

the score of number of machines in operation and distance covered, this country leads all others, Germany being second, Great Britain third and Sweden fourth. Canada makes a poor showing. Australia is worst of all, its civilized condition considered:

	Instruments in use.	Distance covered.
	Number.	Miles.
Sweden (1897) ..	56,500	74,568
Norway (1897) ..	20,678	33,481
Denmark (1895) ..	10,500	9,321
Finland (1895) ..	7,351	13,049
Great Britain-Ireland (1894) ..	69,645	83,401
Holland ..	8,000	4,971
Belgium (1895) ..	9,227	16,235
Germany (1896) ..	151,101	147,093
Austria (1896) ..	21,616	46,375
Hungary (1896) ..	10,293	17,940
Switzerland (1897) ..	28,846	47,594
France (1894) ..	27,736	63,230
Italy (1896) ..	11,991	13,049
Spain ..	11,038	14,282
Russia ..	18,495	40,391
Roumania ..	750	141
Bulgaria (1893) ..	300	372
Japan (1897) ..	3,232	5,262
British Indian ..	1,601	2,296
French India ..	89	345
Philippines ..	452	592
Algiers ..	335	224
Tunis ..	200	281
Senegal ..	50	54
The Cape and Natal ..	600	1,100
United States (1896) ..	772,627	805,711
Cuba ..	1,818	1,181
Canada (1898) ..	33,500	44,020
Mexico.. (1896) ..	9,000	11,807
Paraguay (1891) ..	500	625
Uruguay (1896) ..	3,269	8,117
Australia ..	823	2,390
Total ..	1,288,163	1,509,499

**RESULT OF ENGINEER'S STRIKE**

The reaction of the so-called great but very short-sighted engineering strike in Great Britain is coming about in a way

that was not anticipated by the strikers. That it drove away trade was not a surprise to such as could see beyond the end of their noses, but that it should bring about a gigantic combination of capital against trades-unionism was not among the hatchings expected of a cockatrice egg. It may be an unwise movement on one side as it was on the other, and it, too, may have an unexpected reaction, but the fact remains that a colossal federation of employers has been formed with the declared intention of running their own business without the dictation of British trade unions. About 300 firms are represented and the capital at the command of the federation runs up into the millions.

Joseph McCluskey, of McCluskey & Pugh, bicycle dealers in Terre Haute, Ind., has sold his interest in the business to W. C. Rottman.

The prospect for a starting up of the Greyhound bicycle factory in East Brookfield, Mass., is brighter than it has been.

GARFORD

HUNT

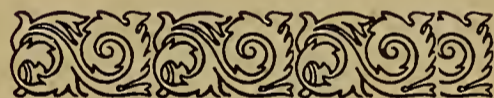
BROWN

## Guarantees

**W**E imagine that the average dealer gets awfully tired of having to bolster up little-known goods with a guarantee. He must labor to convince that they are safe to buy; that no risk is run because "money will be refunded if not satisfied," etc., etc.

How much better to handle goods that need no long-winded, brain-cudgelling argument to sell, above all, goods that don't have to be lied about; in other words Garford-made goods that sell themselves.

All we ask is that dealers will *tell the truth* about our saddles—if they can find anyone who does not already know about them.



The Garford Mfg. Co.  
Elyria, Ohio.

The Hunt Mfg. Co.  
Westboro, Mass.

The Brown Saddle Co.  
Elyria, Ohio.

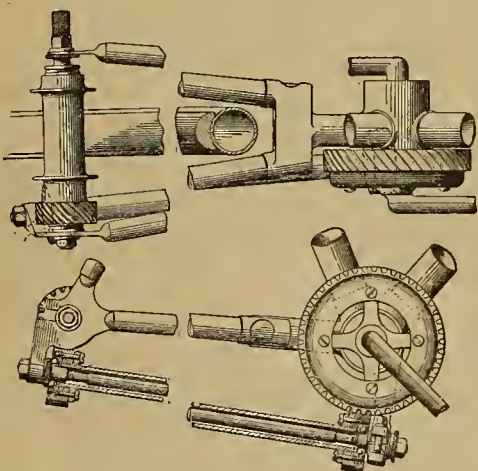
R. B. McMullen & Co.  
SALES AGENTS, CHICAGO AND NEW YORK

Hibbard, Spencer, Bartlett & Co.  
CHICAGO DISTRIBUTORS

## RECENT PATENTS

## Inventors Directing Attention Toward Chainless Driving Gear—Novel Sprocket Movement

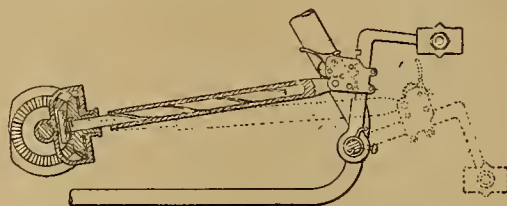
**Spiral Gear Mechanism.**—The application of spiral gears and pinions is effected in this invention by placing the spiral driving gear in the same position as that occupied by the front sprocket in an ordinary chain driven machine. Brackets depending from the crank hanger and the right rear fork end support, on ball bearings, a tubular spindle on the ends of which are mounted spiral pinions, engaging respectively the driving gear in front and the spiral gear on the rear hub of the machine. A stationary rod inside of the hollow spindle clamps the two pinion-supporting brackets together and braces the construction. An obvious advantage of this form of driving gear over other patterns of chainless gears is that the driving pinion at the rear hub and its casing do not extend laterally outside of the rear end lug of the frame. The invention's principal claim for the mechanism is that the teeth of the gears, which are all pitched to the same angle and in the same direction and are practically short sections of screw-threads of quick pitch, will properly mesh with



each other though the gears and pinions be thrown out of their normal alignment. The friction involved in the use of spiral gears is principally due to the great amount of end thrust on the pinions, says the inventor, and attempts to demonstrate that in his construction the thrusts are made to neutralize each other in such a manner that specially strong frame construction is made unnecessary. Nothing is claimed for special contact surfaces of the gear cams or means for cutting them, but it seems to be the intention that the pinions shall be so generated as to avoid all sliding friction between the pinions, leaving the end thrusts to be absorbed in the ball-bearings. The inventor is M. C. Johnson, Hartford, Conn.

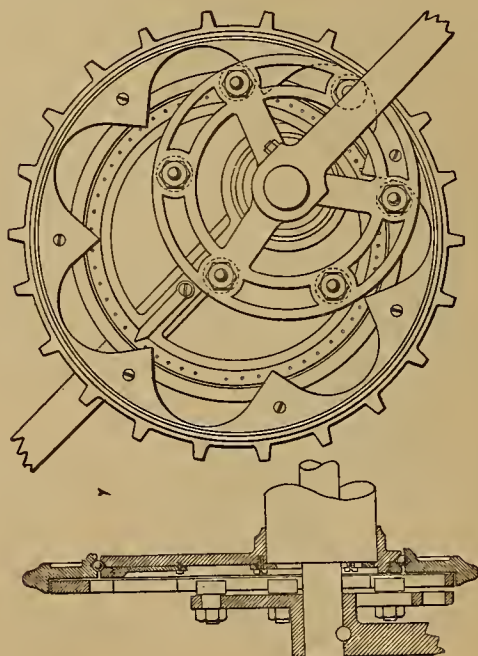
**Combination Bevel Gear Mechanism.**—The mechanism provides an up and down pedal movement in which the stroke of the lever cranks is adjustable while riding. The cranks stand normally vertical on the ends of the shaft and are bent so that the movement of the pedals may be approximately vertical instead of in an oblique path. Between the shaft and the bend in the crank a hinge connection is made with a hollow thrust shaft which incloses in a slidable manner a spirally grooved solid shaft connected at its rear extremity with a bevel gear meshing with a bevel pinion on the rear wheel hub. One or more balls are recessed in the hollow shaft in such positions that they may roll in the spiral grooves in the inclosed shaft, the movement of which is

limited by the balls coming in contact with the respective ends of the spiral grooving. The bevel gears operate on ratchet devices so that when the pedal is pressed downward and the hollow thrust



rod moved forward accordingly, the balls will turn the spirally grooved shaft and drive the bevel gears in the direction suitable for the driving of the bicycle. The upward return movement of the pedal, which is accomplished by the aid of a spring, has no effect upon the running of the machine, the gears sliding on their ratchets. The mechanism is alike on both sides of the machine. The fulcrum box connecting the hollow thrust shaft with the pedal lever arm is arranged on the latch principle, so that by pressing with the foot on a small operating latch-piece the fulcrum may be raised or lowered on the lever and the stroke of the pedal thus correspondingly shortened or lengthened. The inventor of the device made his original patent application on a bicycle which, besides the driving gear, embraced such questionable advantages as screwed-together frame parts, hub shells in two pieces and wheel rims and tires also made in two parts and fastened together by quick action hand latches. The wheel hubs are hung in the frame on vertical spring cushioned rods of an old and abandoned type. The inventor is W. O. Campbell, of Sulphur Springs, Ark.

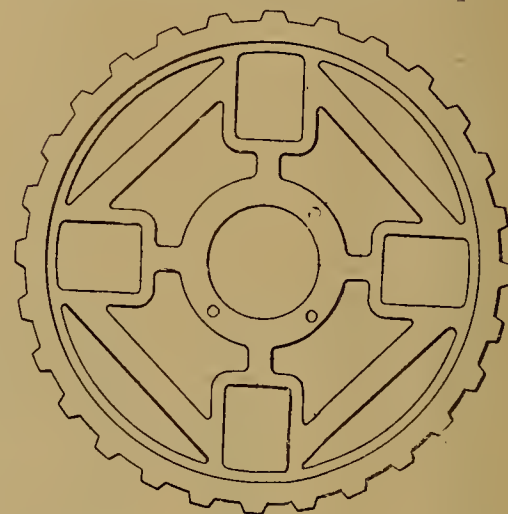
**Cam Acting Sprocket.**—The front sprocket instead of being mounted on the crank axle revolves on a row of balls



in a periphery race in a disk fastened to the crank bracket but eccentrically arranged to the axle. The shaft carries a ring which is of smaller diameter than the sprocket and which has on its inner face near the circumference a series of—say, six—roller-studs. These rollers travel

in an equal number of semi-circular cam ways cut around the inner circumference of the sprocket rim. The same system of sprocket mounting and driving is applied to the rear wheel, the roller studded wheel, which here carries the sprocket teeth, being revolvably mounted in the frame and the cam rimmed ring being secured to the rear hub. The inventor's claim for this construction is that the diameter of the front sprocket can be considerably increased without lessening the ratio between crank length and sprocket radius as the power is applied near the rim of the sprocket. It is supposed that the friction in the driving chain joints will be thus greatly lessened. In reality the result of this arrangement The inventor is Georg Hess, Nuremberg, Germany.

**Front Sprocket Design.**—The main features of the design are the central ring which fits over the sprocket hub, the four short radial arms with rectangular extensions which reach to the sprocket rim, and the straight bars connecting these rectangles. The general effect of the spokes and extensions is that of a



Maltese cross. The design patentee is Fred Patee, Peoria, Ill.

## Age of the Pneumatic Tire.

The tenth birthday of the pneumatic tire occurs this year. The pneumatic was first used at a race meeting held at Belfast, Ireland, in May, 1889. A pair of one and one-half inch "rag" tires fitted to flat wood rims were made after considerable difficulty. On the machine thus equipped, which weighed 36 pounds, W. Hums started from near the limit position in two handicap races and won both with great ease, no one being within 100 yards of him at the finish. Soon after the market was flooded with orders for pneumatic tires.

## Bullis Gear Company Incorporates.

The Bullis Ball Gear Company, of Rochester, N. Y., has filed articles of incorporation with capital stock of \$75,000, divided into 750 shares, for the purpose of manufacturing and selling the Bullis ball bearing gear for bicycles and also bicycle sundries. The company begins business with \$60,000 paid up capital. The directors are: F. O. Bullis, A. J. Fish, T. J. Swanton, S. A. Service and Horace McGuire, Jr., all of Rochester.

## Duthie Factory Damaged by Fire.

The room in the Duthie Chain Company's factory in Indianapolis, which was used for dressing bicycle chains, was completely destroyed last month by fire, which originated in the furnace room of the building. Many finished chains were rusted from the water used in putting out the fire, so that the total loss to the company is estimated at \$5,000, fully covered by insurance.

**Arnold, Schwinn & Co.**  
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**BARNES**  
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**The Barnes Cycle Co.**  
 SYRACUSE, N. Y.

## NEW MOTOR VEHICLE PATENTS INDUSTRY AHEAD OF EXAMINERS

### Claims Allowed on Frame Construction, Variable Speed Friction Gearing and Double Cranked Shafts.

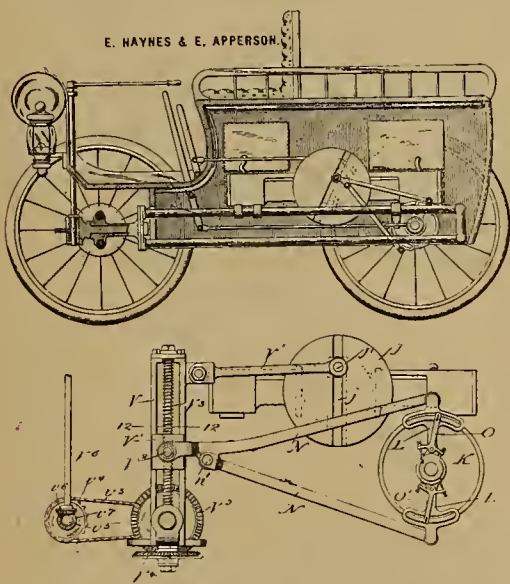
Since the earliest motor vehicle patents, up to July 1898, were published in this paper, the motor vehicle industry has made great bounds toward the solution of the practical problems connected with its development, and it has become generally recognized that the most important improvements are being quickly embodied in actual commercial construction before the knowledge of such construction can possibly be obtained through the Patent Office.

In many cases improvements of the greatest value are not patentable, and in other cases the protection afforded by the patents is doubtful. As an index of progress the list of patents has therefore lost most of its value. Until conditions change, the most valuable information for motor vehicle constructors and the public must be obtained through analysis of vehicles which are actually built, and the patents serve chiefly the purpose of recalling to mind the various expedients which may be employed for overcoming minor difficulties and suggesting new combinations which it may be profitable to have at one's finger ends when considering new construction of any kind.

#### Later Developments Hold Attention.

To the public at large the radical innovations such as the successful application of steam or condensed air, are of the highest significance, dwarfing by comparison the minor points covered by patents. Constructors and patent attorneys, on the other hand, will, as a rule, require the complete specifications in order to determine to their own satisfaction whether contemplated construction will infringe on patents already issued or applied for.

In this and subsequent issues of this paper motor vehicle patents will for these reasons be treated with great brevity, the



list and illustrations serving mainly the purpose of suggesting to the reader whether or not it will be advisable for him to obtain more detailed information by procuring copies of the patent documents for special examination.

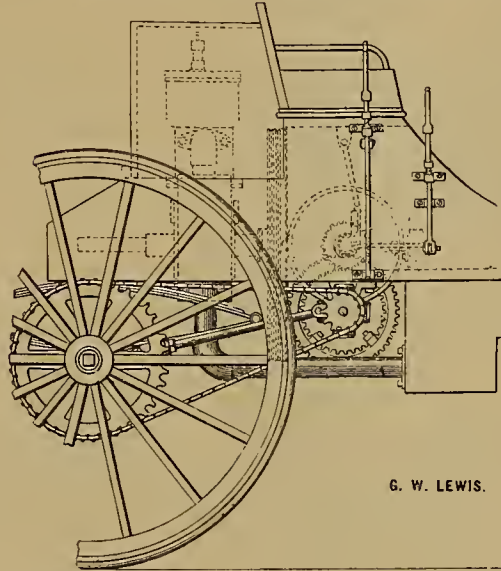
#### Haynes-Apperson Speed Change.

No. 607, 116. July 12, 1898. Elwood Haynes and Elmer Apperson, Kokomo, Ind. Motor vehicle.

This patent carries claims relating to details of frame construction, and claims on details of the variable travel pawl, which constitutes the speed change of the Haynes and Apperson motorcycle.

The crank J on the end of the engine shaft drives the rod V1, which in turn drives the slotted arm V, pivoted as shown and carrying the sliding block V1, which carries the rods N, N1, which operate two vibrating arms provided with friction dogs adapted to grasp and variably rotate the disk K, all in a well-known manner. The block V1 is moved by a hand operated screw, V3, to vary the travel of the arms L, L1, and thus vary the speed of the vehicle, the speed of the explosion motor which drives the wagon remaining constant. Thirteen claims.

No. 607,308. July 14, 1898. Leigh Watkins, Denver, Col. Wagon steering and driving mechanism. This patent covers



a curious arrangement of linked bevel gearing and segments. It carries twelve claims on detail construction.

No. 607, 318. July 12, 1898. William O. Worth, Chicago, Ill. Motor vehicle.

Worth employs a pair of explosion engine cylinders working on one shaft with cranks at 180 deg., and on the end of this shaft places a friction disk, operating radially adjustable friction pinions so as to produce a variable speed gear, all in a manner many times before shown. Nine claims.

#### Lewis' Improved Variable Gear.

No. 609, 443. August 23, 1898. George W. Lewis, Chicago, Ill. Vehicle motor.

In this patent Lewis covers some improvements in his former traversing friction pinion variable speed gear, by placing the friction pinion on a first counter shaft, and thus transferring motion from the first counter shaft to a second counter shaft by means of toothed gears, and from the second counter shaft to the driving wheels by means of sprockets and chains, apparently with a view to using a very high surface speed on his friction pinion, which is undoubtedly correct. Two claims, minutely detailed.

No. 609, 811. August 30, 1898. Charles M. Johnson, New York, N. Y. Motor vehicle.

Johnson shows a pair of explosion cylinders working on cranks 180 deg. apart on the same shaft in connection with a double train of gearing, one high speed, one low speed, leading through various clutches to the rear axle. In one of his claims Johnson specifies a 3-crank shaft instead of the ordinary 2-crank shaft for his cylinders to operate upon, and appears to think himself the first to work two pistons opposite each other on cranks set at 180 deg. to each other.

Peter Tierney, of Bay City, Mich., who has one of the largest and best equipped retail stores to be found in that state, has opened a large retail store at 207 Genesee avenue, Saginaw, Mich. His jobbing business will be handled entirely from the Bay City store.

## HEAT IN DRIVE WHEEL RIMS OBSERVED ON MOTOR VEHICLES

### Peculiar Fact Which May Explain Creeping of Rear Tires on Pacemaking Machines.

A curious phenomenon in connection with motor vehicle driving is noted by Gilbert J. Loomis, a cycle dealer of Westfield, Mass., who owns a gas engine driven carriage. He states that the steel rims of the rear wheels always get heated above the temperature of the atmosphere when he is driving the carriage, while the front wheel rims never get warmer by driving than they otherwise would be.

Desirous of an explanation, he furnishes the following data: "The carriage I have is driven by a four horse power gasoline motor with two cylinders. The rear hubs never get warm, neither do any of the bearings, although I have run it fifty miles without stopping. The spokes are not wire spokes and do not get warm. The bearings are four rows of balls, two on each side in the rear shaft. The carriage weighs 1,400 pounds and about two-thirds of this load is on the rear wheels. The rims are steel rims, and seem to get warm, but never beyond a certain degree, while the front rims never get warm. I simply asked the question in regard to the cause from knowing the complaint of tires creeping on multicycles. It seems a very peculiar thing, though it gives no trouble."

#### The Flexion Transformed to Heat.

The carriage is rear-driven, and the resistance against propulsion is therefore mainly sustained by the rear wheels at their points of contact with the ground. The tires are pneumatic, and the strain of the rubber and fabric in them must be considerable, and must find its expression in successive compressions and relaxations of the tire material as the wheels revolve. In accordance with the usual rule that lost motion is transformed into heat under such circumstances, it seems likely that this heat will be liberated along the "lines of the smallest resistance," and will be communicated to the steel rims, from which it will then disappear gradually by radiation.

#### Heat Absorbed by Expanding Air.

With a low degree of inflation of the tires, it might first take effect in the expansion of the air contained in them, but with the increasing resistance of the tire material to such action, the condition would soon be brought about when the escape through the rims would represent the smaller resistance.

In the front wheels, which are idlers in a rear driven machine, the resistance to motion at the points of ground contact is so much reduced, partly because the load on them is only half of the load on the rear wheel and still more because they do not sustain any of the stresses arising from atmospheric resistance and engine friction, that the same results could not be expected.

#### Wood Rims the Cause.

The reference made by Mr. Loomis to tires on multicycles, which so frequently show an inclination to creep, assumes an interesting aspect if the above, popularly worded, explanation of the motor vehicle phenomenon, may be accepted as essentially correct. The heavy work sustained by the single rear wheel tire when a quint or sext is driven at racing speed and the lost internal motion in the tire has no chance to escape through a steel rim, which is a good conductor of heat, would apparently be most likely to take effect on the cement by which the tire is fastened, softening it and thereby bringing about the condition which leads to

creeping of the tire and accidents and delays in the racing.

The employment of steel rims for the rear wheels of multiple machines would seem to be the most obvious remedy, unless mechanical fastening of the tire should be preferred, and in this connection it would be of interest to know if the troubles which have been experienced in this country with creeping tires have also been observed in Europe with pace-making machines on which steel rims are used.

**PERMIT FOR MOTOR CAB LINE**

**District of Columbia Commissioners Doubtful About Granting License to Proposed Service.**

Washington, Jan. 30.—The District commissioners have under consideration a proposition made by E. T. Semans of this city to establish in Washington regular lines of oil motor carriages or cars for public passenger traffic, to be run over the streets of the city and collect fares not exceeding the rates now charged by the local street railways. The projector of this scheme also proposes to establish for general use motor vehicles to be used in urban and suburban service. It is said that the motor cars will be especially built for this purpose, and will be capable of carrying fourteen passengers each. They will be provided with 2½-inch solid rubber tires and with oil motors manufactured by the Daimler Motor Co., Limited, of London, England.

Mr. Semans has assured the commissioners that these cars will be noiseless and odorless and that they will be provided with all modern appliances for safety and convenience. The projector claims that the speed of both the larger and smaller motors will be under perfect control, and while they will be capable of a much higher rate of speed, they can be positively regulated so as not to exceed the regulation limit of twelve miles an hour.

The question has arisen whether it would be necessary, under existing laws, for the promoter to secure a special permit or license for such public vehicles, other than the ordinary license prescribed. The commissioners have decided to lay the matter before the attorney for the district for his opinion before taking any action.

**Remarkable Automobile Speed Record.**

In a motor vehicle match race that took place at Acheres, a few miles from Paris, on January 18, the speed record for all kinds of machines except railroad locomotives was lowered. The distance covered was two kilometers (1¼ miles), and the time 1 minute 47.3-5 seconds, from a standing start. The contestants were W. C. Jenatzy, the challenger, and Count de Chasseloup-Loubat. Jenatzy made the first trial and lowered the existing motor vehicle record for two kilometers by seven seconds. Then de Chasseloup-Loubat made the attempt and reduced Jenatzy's time by fifteen seconds. At 200 meters from the finish the motor became overheated from the terrific speed, which was more than forty-three miles an hour. The count's vehicle was a double seater. Jenatzy's was a road vehicle of four seats, the same with which he has won previous races.

**Steam Omnibus Line for France.**

Steam motor cars are to replace horse locomotion in April in the omnibus service between Hyeres and Toulon in France. The omnibuses are to be mounted on rubber-tired wheels and will comprise first and second classes, capable of carrying twenty-eight passengers with luggage. The average speed will be twenty-two kilometers an hour. It is said that there will be almost complete absence of smoke, noise and vibration.

**ALCOHOL MOTORS IN FRANCE**

**EXHAUST ODOR NOT OFFENSIVE**

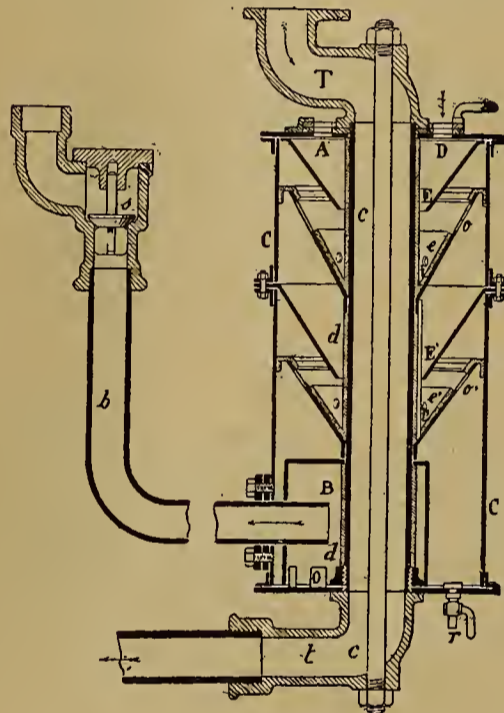
**Operation Differs from That of Gasoline Motors Only in the Form of Carburetor.**

The first motor vehicle driven by alcohol made its appearance in the streets of Paris January 11. It belonged to Mr. Henriod, a Swiss engineer, who had converted his former petroleum motors to the purpose. The only perceptible change in the vehicle that could be remarked was that no odor of gasoline was given off, but instead thereof the ordinary and more agreeable odor of alcohol—the kind that is sold all over Paris for 4 cents a liter.

**First Experiments With Alcohol.**

The first experiments with alcohol as a substitute for gasoline date back about two years. Those made by Mr. Ringelmann for a French agricultural society led to the result that alcohol could never compete economically with gasoline.

The German government is said to have given it into the hands of the Koerting company of Hanover to conduct a series of experiments with alcohol,



hol, the cost of which is to be defrayed by the German syndicate of alcohol manufacturers.

**Advantages of Alcohol.**

It is admitted that the calorific power of alcohol is inferior to that of gasoline and that the development of a given power should ordinarily be expected to require a larger and more cumbersome motor with alcohol than with the kerosene oils. The advocates of alcohol on the other hand contend that it is practicable to compress the alcoholic gas mixture nearly twice as much as the explosive mixture of gasoline vapors, and that the heat produced by combustion in the new motors is reduced to one-half, and that by doubling the length of the cylinder it should therefore be possible to obtain practically the same piston pressure from a given quantity of alcohol as from the same quantity of gasoline. The combustion with the longer stroke should be more perfect and the exhaust should take place at a pressure not exceeding that governing the admission of the gas to the cylinder.

**Henriod and Petreano Motors.**

The Henriod motor, according to press reports, has no carburetor, but delivers the alcohol in a fine spray in the valve chamber, where a current of heated air

vaporizes it without further mechanical arrangement.

The Petreano carburetor which is shown in the accompanying illustration consists principally of the metallic cylinder C, through the length of which passes the large tube c, which is the exhaust pipe. The latter keeps the temperature throughout the cylinder at a uniform heat. The tube c is surrounded by a wick of porous material.

The liquid alcohol enters at D and the air at A. The alcohol runs onto the distributors E, and from these falls to distributors e, which are coated with porous material similar to that surrounding the exhaust pipe. This material absorbs the liquid.

**Accurate Regulation of Feed.**

The air passes first from E to e, then rebounds and passes below through the holes o, facilitating vaporization by its whirling motion. The excess of liquid runs down through the holes i, falls on the distributors E1, and thence on e1. The gaseous mixture follows the same devious course and finally issues from the holes ol and penetrates through holes O into the interior chamber B, from which it is led through b to the valve chamber s of the motor.

The carburetor is arranged close to the motor. Any excess of liquid alcohol may be removed through the cock r, but it is found in practice to be easy to regulate the feed of alcohol so accurately that the bottom of the carburetor remains dry. The absence of foreign substances in the alcohol, as compared with gasoline, offers the advantage of freedom from residue and assurance of perfect evaporation.

**MOTOR OMNIBUSES FOR PEORIA**

**Citizens Are Forming a Company to Establish Suburban Lines of Twenty-Passenger Vehicles.**

A company of wealthy citizens is forming in Peoria, Ill., for the purpose of establishing a regular residence line of motor omnibuses for the residence portion of the city.

The vehicles will be built at the Duryea factory, especially for such traffic, and will carry passengers for the same price as charged by the street car company, with much superior accommodations, it is reported. The only bar in the way of the project is the chance of hostile legislation by the city council, a majority of which is dominated by the Illinois Central Railway company.

If this trouble arises, however, the promoters of the motor carriage line will wait until after the spring elections before asking for a license.

The buses are to be rubber-tired vehicles, carrying twenty passengers. They will run from the center of the city to all the suburbs.

**Outlet for Peoria Motor Vehicles.**

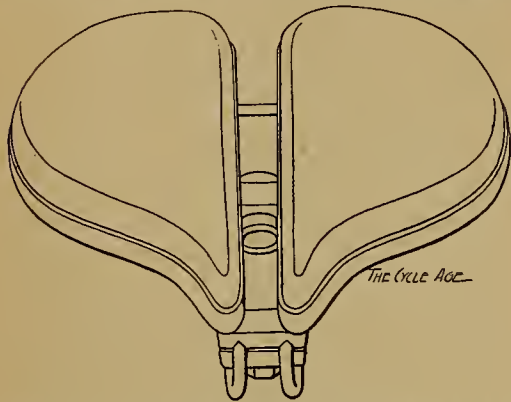
The bicycle factory property of Rouse, Hazard & Co., at Peoria Heights, Ill., has been transferred by Joseph Miller & Sons, contractors, who built the plant on mortgage, to Monroe Seiberling for \$20,000. The buildings are to be fitted up for the manufacture of the Duryea motor vehicles. An anonymous gentleman from New York is stated to have visited the town for the express purpose of looking over the site and examining into all that pertains to the production of the Peoria-made vehicles and to have offered to take the entire output of the Peoria Heights factory for the season that is now opening. Work is to begin as soon as machinery can be installed and other necessary arrangements made.

The Eaton Motor Carriage Company has been incorporated in Maine, by Boston men, to manufacture motor carriages. The authorized stock issue is \$500,000. Paul Askenasy and A. M. Sheehan are named as the incorporators.

# INFORMATION FOR BUYERS

## THE CHRISTY ADJUSTABLE SADDLE.

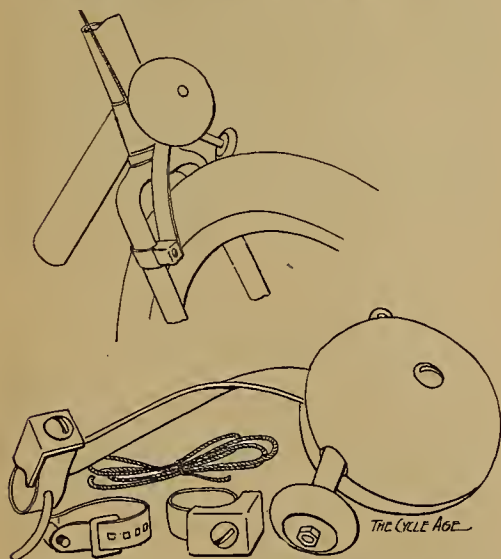
Many new friends will doubtless be gained for the Christy saddle through the introduction by A. G. Spalding & Bros. of Chicago and New York, of a new pattern which is adjustable. The saddle, shown in the illustration herewith, can be adjusted from the rear, making it very much wider, should the rider desire it, and at the same time retaining the normal width in front. The cups in which the cushions rest work on a pivot at the pommel. Heavy weight riders who desire a broad, comfortable seat and those who, after riding in one position



for some time, wish a slight change will especially appreciate the advantages of the new Christy. The Spalding Company exhibited alongside of its latest chainless models of bicycles at the recent cycle show the first bevel gear chainless of the modern type that was ever placed on exhibition. The machine was originally shown at the cycle shows in 1897 and has been in constant use ever since, having been ridden, it is stated, more than 36,000 miles altogether. Placed side by side with the most improved chainless Spaulding it furnishes an interesting illustration of the progress that has been made during the last two years in the design and construction of bevel gear machines.

## MOSSBERG TIRE ACTUATED BELL.

The illustration below shows the new tire bell recently brought out by the Frank Mossberg Co of Providence, R. I. The bell is placed directly in front of the steering head where it is out of the way and looks symmetrical on the machine. The rotating shaft is placed in a position radial to the center line of the bell, and this shaft with its friction wheel is caused to swing downward slightly to permit the wheel to come



in contact with the tire. The striking mechanism consists of a loose, freely sliding hammer. No spring is used in connection with the mechanism, the rotating shaft causing the hammer to strike the bell, and gravity, aided by rebound, causing the hammer to return to its normal position, when the rotating shaft will be ready to give it a new impulse. There being scarcely any resistance to the operation of the striking mechanism the shaft requires very little power and so the contact between the roller and the tire may be very light. It is claimed by the makers that owing to the absence of springs the bell will not wear out. It is guaranteed for one year.

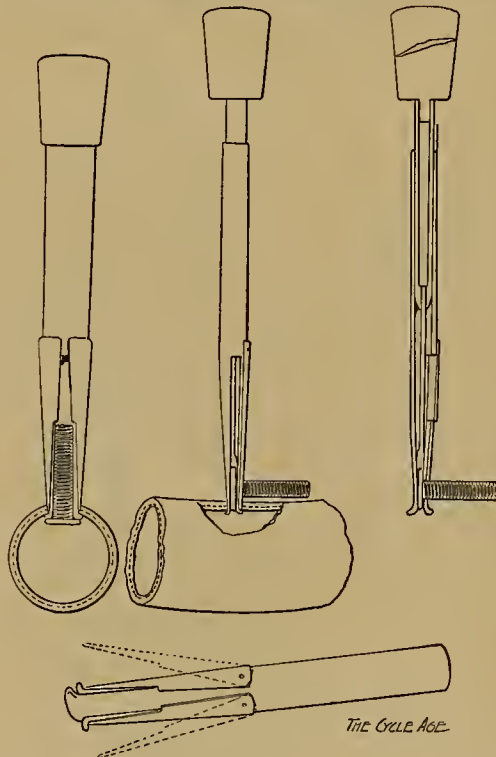
The bell shown in the cut has a double stroke chime action. A single chime bell is also made on the same principle. It is

the intention of the company to bring out several other novelties in the line of bells and similar goods in the near future. The Coe Mfg. Co., 50 Warren street, New York City, is the sole selling agent for the Mossberg bell in the United States.

## METAL VALVE STEM INSERTER.

The Kelly Mfg. Co. of Greentown, Ind., which manufactures the Kelly rubber band tire repair tool, has arranged to make and market a tool for inserting metal valve stems into tires. The tool, which is illustrated herewith, is the invention of A. Whisler, and is doubtless the only form of such tool extant. Its utility will be readily appreciated by repairmen who have experienced the difficulty of inserting metal stems with the aid of pliers, screw drivers, etc., and have been often compelled to unduly enlarge the hole in the tire in order to get the stem in place.

The tool comprises a hollow casing having a stationary finger on one end and a pair of swinging fingers pivoted to the same end, the pivoted fingers being cut away upon their adjacent edges to allow the passage of the valve stem between them. As will be seen from the illustration, the stem is placed in the tool at right angles to the barrel with the head held between the sta-

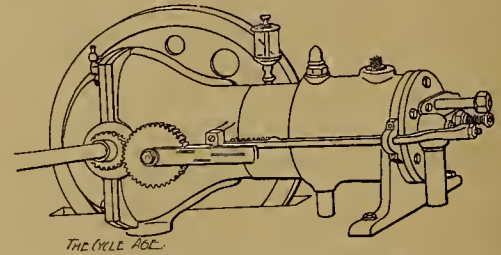


tionary and the pivoted fingers. Each of the fingers is provided with an outwardly extending flange to catch on the under surface of the tire after the tool has been inserted through the valve hole. A plunger is arranged in the casing by means of which the valve head may be pushed down into the tire, the pivoted fingers spreading while this is being accomplished and closing again after the valve is through so that the tool may be withdrawn. With this tool, valve stems may be placed in the tire without the least difficulty and without enlarging the hole.

## THE ST. LOUIS GASOLINE MOTOR.

The gasoline motor shown in accompanying illustration is manufactured, either horizontal or upright, by the St. Louis Gasoline Motor Company at 115 South Eleventh street, St. Louis, Mo., and is of a construction which fits it especially for all who are experimenting with motor vehicles, being of light weight but absolutely safe and always ready for instant service. The two horse power motor weighs 89 pounds and occupies a space of 24 by 11 inches. One sight feed oil cup lubricates all bearings. Naturally, these features which make the motor available for motor vehicles, are of equally great value in the shop for driving lathes, drill presses, air blast, charging air tanks, etc. The cost of operating the two horse power motor is stated to be less than 1/2 cent per hour, and it requires practically no attendance while running. The ignition is electric. Some of the construction details are explained by the manufacturing company as follows: "The governing device works on a supply of air and gas so as never to shut the charge off entirely. All working parts run in oil. The mixture of air and gasoline

is maintained by an improved valve, which gives way to the suction caused by the movement of the piston on the admission stroke, and having only this single valve covering, the gas and air openings maintain the proper proportion at all times. Besides the throttle for governing the speed, a governor of special design is operated on the inlet valve and governs the supply of air and gas. The improved electric igniter is entirely automatic in its work, and is so constructed that, in case of wear, it can be adjusted in a few moments. It is also constructed so as to clean itself of corroding matter. If at any time it is necessary to examine it, it can be taken out and replaced in one minute. The crank shafts are forged of solid steel bars, and are without any weldings; the connecting rods are made of the best brass bronze.



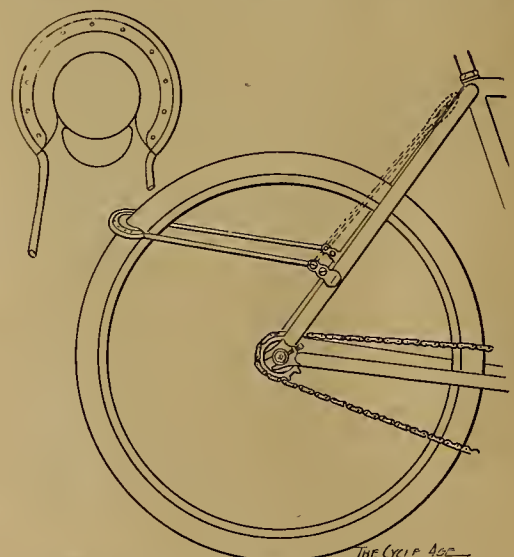
The flywheel on the two horse-power motor is 17 inches in diameter, and is a suitable weight for the power of the motor. By means of a special circulating device the amount of water used in the cooling jacket is reduced to two common pailfuls for a full day's work." The company furnishes complete directions with every machine sold.

## THOMPSON'S NEW FORKSIDE STEMS.

The diamond shaped front and rear forks manufactured by the Geo. L. Thompson Mfg. Co. of Chicago are already familiar to the trade. A new fork of substantially triangular cross section with the base of the triangle on the inner or wheel side of the fork blade has been recently covered in a design patent allowed to G. L. Thompson. The flat side of the fork is given a slight convex curve. The appearance of the outside of the blade is similar to that of the diamond shaped fork.

## NEW FOLDING MUD GUARD.

J. B. Campbell, of 324 Dearborn street, Chicago, is bringing out a new mud guard, the general appearance of which is shown in the accompanying illustration. The guard possesses the notable advantage of being



extremely light and of presenting a neat appearance when on the bicycle. In fact, it is so small and light that even the most confirmed scorcher could not honestly refuse to use it on the ground of appearance. It comprises a narrow U of nicked spring wire bent at the outer end to conform to the section shape of the wheel tire. Thin metal plates hold a layer of rubber cut to conform to the outline of the tire. The free ends of the wire rod are attached to clips which clamp on the rear stays of the machine. By placing these clamps properly on the stays the guard frame may be turned on its frictional joints at the clamps so that the rubber shield almost touches the tire. All mud and water thrown up by the rear wheel will then be stopped at the shield and the rider's back protected. When not in use the guard



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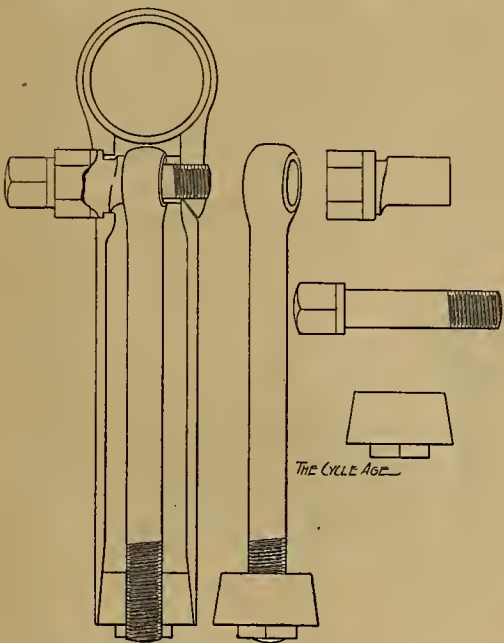
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may be turned up on its hinges till it lies flat against the rear stays, where it will be hardly noticeable.

#### CHICAGO HANDLE BAR CO.'S GOODS.

In reporting the exhibits at the New York cycle show omission was made of the goods of the Chicago Handle Bar Company, which were displayed in the booth of the Manhattan Storage Company, which latter concern looks after the eastern interests of the big Chicago handle bar house. The new adjustable bar with patent internal expander, shown in the accompanying illustration, is the distinctive feature of the line of the Chicago Handle Bar Company. It will not turn in the head or become loose by jolting. The expander is operated entirely in the lower part of the stem, thus not interfering with the adjustment of the top bar. A one-third turn of the short eccentric bolt draws the expander rod and the tapered plug upward, producing an effective expansion of the lower slotted part of the stem and making the stem rigid in the steering head. A turn of the threaded clamping bolt tightens the stem securely around the ferrule of the top bar. The price of this bar with round top bar is \$5 and with the octagon top bar \$6, both without grips. Five other adjustable bar patterns are made at prices ranging from \$3.60 to \$5. Five patterns of down-turned bars are made at prices ranging from \$3 to \$3.20, five patterns of up-turned bars at prices ranging from \$3 to \$3.20, six patterns of ram's-horn bars at \$3.20, ten racing patterns at prices ranging from \$3.60 to \$4, and four patterns of Schinner bars at prices ranging from \$3.20 to \$4.

The firm also manufactures seat posts, reversible and plain; bent tubes for frames in women's machines, rear fork sides, bent handlebar tubes, adjustable stems for any style of top bar, seat post stems in the rough made of seamless tubing, handlebar stems for rigid bars made of seamless tubing, in-



ternal expanders for rigid bars, and the "Independent" external handlebar and seat post expander.

The Schinner patterns introduced by the firm last year continue to be extremely popular, owing to their beauty of outline and their particular adaptability to low frame bicycles.

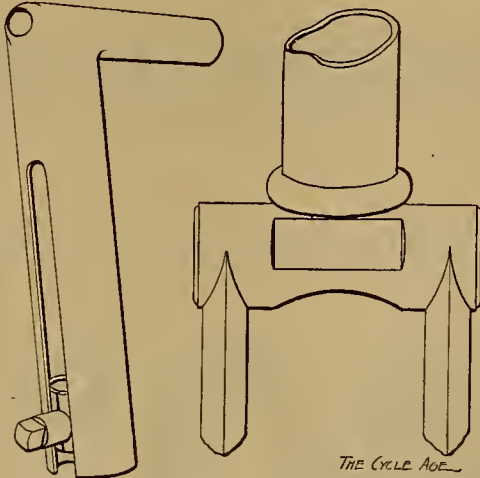
#### POPE'S IMPROVED LIGHT MOTOR VEHICLES.

Hartford, Jan. 30.—The Pope Manufacturing company, which has the construction of several new models of motor carriages under consideration, will soon place upon the market a quadricycle with a gasoline motor. The vehicle is of light construction and is particularly trim in appearance. The smoke and objectionable odor of the gasoline, which are caused by partial combustion, have been practically done away with in this model. The company reports receiving many inquiries for the gasoline tricycle which was put on the market last fall and is being used for delivery purposes by department stores in the large eastern cities. In the latest models an improved form of electric igniter supersedes the hot tube and lamp, obviating the difficulty which was formerly occasionally experienced during a high wind.

#### READING STANDARD IN THREE GRADES.

The Reading Standard Mfg. Co. of Reading, Pa., is cataloguing three grades of machines each of which is built in men's and women's patterns. The Reading Standard, which is fitted with the company's new seat post clamp, the operation of which is shown in the accompanying illustration and which affords a positive and readily acting clamp, lists at \$50. The fork crown on these models is of tubular construction and special de-

sign and presents an entirely new feature, which while small in general purpose still adds to the utility and value of the machine. It comprises a flat nicked place left upon the front of the crown upon which the owner of the machine may have his name or initials engraved. The Reading Standard Roadster and the Royal Reading, selling respectively at \$40 and \$30, are fitted with flush nicked arch crowns and have features and equipment in keeping with the best possibilities in machines of their classes. Two-piece hangers are used on all of the models, though each grade of ma-



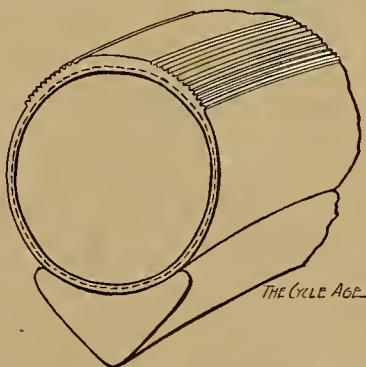
chine has a hanger slightly differing from the others and designed for its especial use. Options on all patterns are liberal and in keeping with the times and the demands of the market.

#### NEW FALCONS IN TWO GRADES.

The catalogue of H. C. Tillotson & Co. of Toledo, successors to the Yost Mfg. Co. in the manufacture of Falcon bicycles, bears reproductions of two union labels. One is that of the Allied Printing Trades Council, showing that the booklet was published in a union shop, and the other is of the Bicycle Workers' Union and is the same as that placed on all Falcon bicycles. The New Falcon bicycles illustrated in the catalogue are all made in the old Yost factory, in which special machinery and modern methods are enabling the operators to turn out machines in larger quantities than ever before. The New Falcon is made in two grades, one selling at \$45 and the other at \$35. The hanger used is of the two-piece construction with square cranks having beveled edges. The seat post is held by an internal expander and can be used with the horizontal saddle support either in front or behind the post. Kelly handle bars are fitted to the \$45 models. The higher priced patterns are enameled in black, maroon or Brewster green. The cheaper machines are finished in plain black. The fork crown is a single piece drop forging of semi-arch pattern.

#### EXCELSIOR GUARANTEED TIRES.

Special care has been taken in designing this tire to get the tread of such a character that will be serviceable and neat in appearance. It will be noticed in the drawing that the tread is plain and the sides corrugated, putting the rubber where it is most used. The tire is made from a high grade of rubber, and the duck used throughout is of the best. The tire is fully guaranteed for three months from date of sale by the Excelsior Supply Co., 98 Lake street, Chicago, for whom it is manufactured by the India



Rubber Co., of Akron. The company supplies a pump and repair kit with each pair of tires, and the price is such that it will interest close buyers for a guaranteed cheap tire which will be serviceable and give good satisfaction.

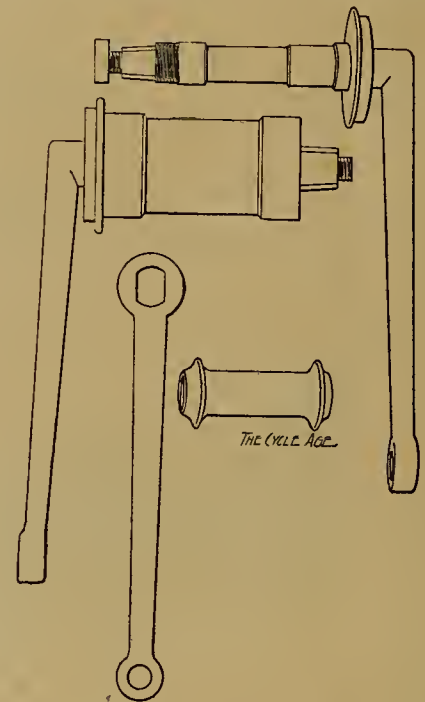
#### VALUABLE TREATISE ON FILES FREE.

"File Philosophy" is the subject of a dainty and at the same time very practical booklet just issued by the Nicholson File Co. of Providence, R. I. It treats briefly and yet comprehensively of the general classification

of files and definition of file terms, the proper methods of handling and using files so as to secure the best results, and gives a description of the most common files and the ordinary uses to which they are applied and for which they are best adapted. It thus covers all the points which most interest and concern file-users and will be found by them a readable and valuable book. It is really an abridgement of the Nicholson company's "Treatise on Files," which was published in 1878 and which has always been accepted by the craft and trade in general as the authority on all matters pertaining to files. It is in response to a continued demand for this treatise, now out of print, that the present "File Philosophy" is published. The matter is carefully compiled and edited, illustrated with helpful plates, and affords a valuable addition to the body of popular literature on scientific subjects. Moreover, its brevity and convenient size render it the more acceptable. It may be had upon application to the Nicholson company's main office in Providence.

#### THE NATIONAL CRANK HANGER.

The National Cycle Mfg. Co. of Bay City, Mich., is using a crank hanger on its National bicycles which is a development along the same line that the company has followed since 1894. The leading principle of the hanger is the "slip in" feature, the bearings being incased in a sleeve which can be removed from the bracket without disturbing the adjustment of the bearings. The company is the original patentee of this type of hanger. The cups are heavy and are ground inside and out after tempering, and being held in place in the sleeve which is accurately machined, it is impossible for them to be out of line. Another desirable feature of the hanger is the extraordinary



great distance between the two rows of balls. The cranks and axle are of the two-part construction, the right crank and the shaft being integral and the left crank being attached by means of a taper seat and end set screw.

#### MEILINK'S VIEWS ON EXPANDERS.

The Meilink Mfg. Co. of Toledo, which is one of the pioneers in the making of seat post and handle bar expanders, has had many inquiries from dealers and jobbers on the subject of what points should be most considered in the making of successful expanders. In order to give such parties and all others interested in the matter the benefit of its manufacturing experience, the company has compiled the following list of what it considers the six most important points: 1.—The expander should be independent of the frame so that no abuse on the part of the rider or repairman will result in injury to the frame through the improper replacement of the expander after removal. 2.—It must bind positively by its own action and draw apart in the same way. Otherwise when it becomes rusty, as it is very likely to do, the repairman's first remedy is very liable to be the hammer and cold chisel. 3.—The binding surface of the expander should be as small as possible. The greater the binding surface the more force it takes to tighten the expander. 4.—An expander in which each sleeve can be set independently of the other may be made to overcome many variations in the diameters of both seat post and frame lug. 5.—The greater the thread surface in the expander the greater are the binding possibilities and the insurance against abuse by inexperienced persons. 6.—That it may hold properly and securely the expander should clamp the seat post or handle bar around

## Graceful Staunch Reliable



What you get for your money is as important as the amount you pay.

### National Bicycles

have an unblemished reputation. They have always given dealer and rider satisfaction. They have always been sold at a stable price. They have always carried the greatest number of practical yet simple improvements. They have a market of their own. No National dealer ever suffered cross competition. Every National dealer gets the benefit of his efforts in increased sales and a growing number of satisfied customers.

Price is relative. Profits are predicted by good business men on something besides first cost. It's the NET profit you want. Our catalog is readable.

### National Cycle Mfg. Co.

Bay City, Mich.

A NATIONAL RIDER NEVER CHANGES HIS MOUNT.

## Plain Talks on Andrae Cycles

VII—Road Racer, \$60.

The Andrae Road Racer is built a little heavier than the Track Racer because it ought to be.

A rider can cover more ground, any kind, on the Andrae than on any other wheel.

There is no power lost—every bit of exertion counts—there isn't any weak spot, any useless friction to counteract energy.

A 51-year-old rider won the Chicago Road Race two years ago because he rode an Andrae—not because he chewed a plug of tobacco every day.

Mr. Smedley said so himself.

The Andrae Road Racer is better to-day than it was then. As much better as two years of Andrae mechanical skill can show up.

Every cyclist who is determined to be fast on the road will buy it. Every wheelman who wants an easy running wheel will do the same.

The Andrae Road Racer and 15 other models are all good sellers.

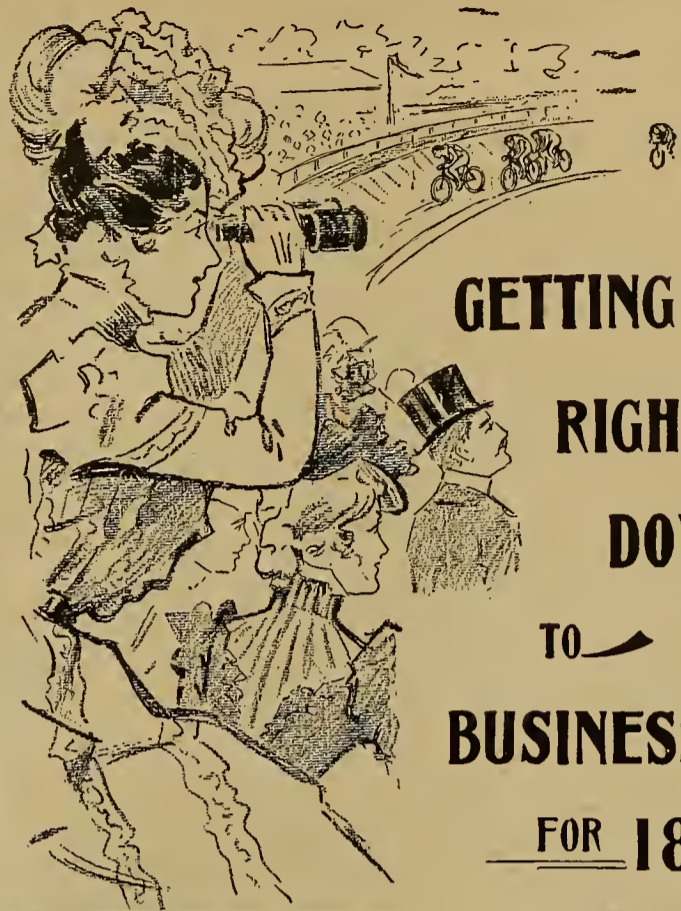
Want to sell them?

### Julius Andrae & Sons Co.

MILWAUKEE, WIS.

"The Andrae Agent," A Monthly Journal of Andraeism, Free.

Mention The Cycle Age



GETTING  
RIGHT  
DOWN  
TO  
BUSINESS  
FOR 1899

Waverley agents made money last year. Did you? Waverley Bicycles were built so that when they were sold they stayed sold and helped to sell other Waverleys. We got right down to business and made the best bicycles of the season and sold them at right prices. For 1899 we are building better bicycles and selling them at even more popular prices.

# Waverley BICYCLES \$40

IVANHOE SPECIALS, - - - \$35  
IVANHOE BICYCLES, - \$25 and \$26

The same liberal treatment of agents that has been so popular in the past is continued. There are "talking points" all over the Waverley line, and there is a bicycle for every requirement of taste and purse. Write us at once.

### INDIANA BICYCLE CO.

INDIANAPOLIS, IND.

its entire periphery. Devices which clamp only two points will bind the post against vertical but not against lateral movement, and if forced to clamp tightly will compress even 16-gauge tubing.

#### HUGE WESTERN BUSINESS IN TUBING.

Herman Boker & Co. of New York have placed more than 3,000,000 feet of tubing through the eastern and western offices, the latter being under the direction of F. A. Hastings & Co., at 159 Lake street, Chicago. The tubing carried is for the most part imported, the brand being Mannesmann, of German manufacture. Mr. Hastings stated last week that the demand was such as to make it necessary to have carload lots shipped direct to Chicago in bond, and deliveries made direct from car to factory. In this way double handling is obviated and the rate per foot is kept down. The price of the tube is such as to command trade, especially where purchasers cannot buy in large lots, yet proportionate advantages are afforded those whose capacity is such as to warrant them buying in large quantities. Besides tubing of foreign manufacture the company handles the product of the Ellwood Ivins Tube Company, Philadelphia.

A feature of the business of the western office is a line of handlebars made up of tapered tubing, the bars being one inch at the stem connection and seven-eighths of an inch at the ends. A complete line of grips, hubs, pedals, Stockton and Baldwin chains, rims, guards, etc., is carried by Hastings & Co., all being of high quality and latest design.

#### NEW STEEL BALL MAKING CO.

The Cleveland Ball & Screw Co., 446 The Arcade, Cleveland, O., is a recently organized firm of which Leo Mayer is president and G. J. Bailey, secretary and treasurer. The parties in charge are men of ability and years of experience in the ball-making industry, and all the workmen are thorough and capable mechanics.

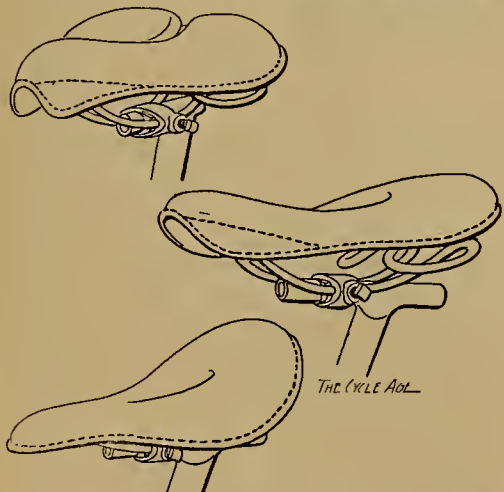
In announcing to the trade and public that it owns and controls valuable patents on machinery and methods for producing steel balls of all sizes from 1-16 inch to 4 inches diameter, and also patents on special automatic screw machinery, this company desires to call attention to the fact that it is putting same into practical use and will be in position very shortly to fill orders for strictly high-grade tool steel balls, properly hardened and tempered, accurate and uniform in size, carefully inspected and gauged, and at prices that will be interesting, considering the superior quality and finish of the product. The methods of manufacture are far advanced toward perfection, and the accuracy, uniformity, strength and finish of the tool steel balls are in the same degree superior.

This encouraging fact has led to the organization of the above new company with ample capital.

The company will not confine its production to tool steel balls alone, but will manufacture to order balls of such other material as customers may desire, as brass, bell-metal, clay, composition, etc., and will also make automatic screw machines of its own design and under its own patents; also all kinds of automatic machinery to order, as well as screw machine products.

#### NEW PATTERNS OF HUNT SADDLES.

While several of the saddle patterns which have proven popular in the past are still

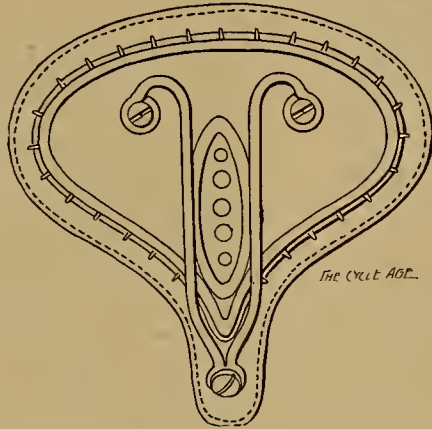


carried with slight improvements in the new line of saddles made by the Hunt Mfg. Co. of Westboro, Mass., several different forms have been added which possess distinctive features. Styles 76 and 77 are said by the Hunt people to be the handsomest models they have ever produced. The padding is very thick and is composed of interlaced hair. The wood base is on approved lines and affords beauty of outline as well as comfort to the rider. The spring has an easy riding coil at the rear. Model 77 is shown in the uppermost illustration here-

with. Models 52 and 53 are wood base patterns nicely padded and furnished with easy coil springs. The base is finished in natural wood giving unique and striking appearance. The second illustration shows model 53.

Patterns 50 and 51, the former of which is shown in the third illustration, have a novel method of fastening the leather cover to the nickel plated base. This is effected by clinched prongs that hold the leather securely, and with the depressed border around the edge of the base, produce a very neat effect when viewed from underneath. The bottom of this saddle is shown in the last illustration.

Patterns resembling 76 and 77 are also furnished but are not so thickly padded nor supplied with the same coil spring. The Hunt company is also furnishing a line



of spiral springs which may be applied to either its hygienic or rigid base patterns when it is desired to obtain a more comfortable seat than is afforded by stiffer springs. The well known "S" spring will still be supplied on hygienic patterns if desired.

#### ARTISTIC KEATING CATALOGUE.

The catalogue of the Keating Wheel Co. of Middletown, Conn., has an artistic cover with relief effect and shows one rider pointing out to another the advantages of the curved seat mast which has long been a distinguishing feature of Keating bicycles. The new Keating factory, a picture of which is shown on the back cover of the catalogue, is of a kind which is becoming popular among manufacturers in localities where plenty of ground space is available. It is but two floors in height and being long and narrow with several projecting eaves, each of which is devoted to some special operation in the manufacture of the product, it furnishes ample floor space and is devoid of such nuisances as darkness and poor ventilation. All of the machine work is done on the ground floor, and the brazing, blacksmithing, grinding, polishing, etc., are entirely separated from the main building. The Keating company is making a specialty of repairing in its own factory with view to giving better satisfaction than is common to agents and riders who return defective and injured parts.

#### THE EWALD ONE-PIECE HANGER.

The Ewald Mfg. Co., 215 S. Clinton street, Chicago, is now making its one-piece hanger in several patterns for use in different styles of machines. For single machines the hanger is furnished with regular and with eccentric barrels and choice of connecting lugs for different sizes of frame tubes is offered. The eccentric bracket is also put out with shells and sprockets arranged for tandem driving. In this hanger the inside sprocket is placed close to the tandem frame and hangs between the bearings. With the Ewald combination three and four-point bearing it is possible to have the axis of rotation of the balls perpendicular to the spindle and also to have each end of the bearing independent and with separate adjustment. Lately a new single star sprocket design presenting a very light and tasty appearance has been brought out by the company.

#### LARGE LINE OF ANDRAES.

While filling up its line to an unlucky number, the Julius Andrae & Sons Co of Milwaukee has no need to fear that the thirteen patterns which it lists in its advance circular will prove unlucky machines, for all present the same careful design and construction which have made Andrae cycles popular among all kinds of riders. The line includes the standard models of men's and women's road machines, listing at \$50; a chainless fitted with the Sager roller pin gear at \$75; a 30-inch wheeled machine at \$55; racer and road racer at \$60 each; single and double steering double diamond tandems and a combination tandem at \$85 each; men's and women's roadsters at \$40 each, and two patterns of the Andrae Sunbeam at \$30 each. The machines are fitted with various patterns of the Andrae padded sad-

dle and on some models the Hollenbeck rawhide saddle is offered as an option. Unguaranteed Clipper tires are used on the \$30 patterns and on the other machines Defender, Morgan & Wright, Hartford, Goodrich, Palmer and Andrae tires. The standard color is Andrae pea green.

#### W. & E. CYCLE MATERIAL.

The Walker & Ehrman Mfg. Co., Washington and Union streets, Chicago, which has always been known as a firm of careful, conservative manufacturers of high grade bicycle parts, has issued a complete catalogue of the goods it now makes and markets. Two grades of single machine hubs are made by the W. & E. company. The higher priced hub, the W. & E. Special, adjusts by means of the cups which screw into the barrel but are not inverted as in the ordinary disk adjusting hub. The adjustment locking device is positive in its action and does not depend for its security upon the binding power of nuts, which may loosen. Frame parts, already machined, for single bicycles and for multiplets, are furnished both in drop forgings and castings. Other important specialties in the line are the W. & E. expanders and pedals. The firm also sells the Fauber hanger and furnishes its frame fittings in angles to match those on the Fauber bracket. As well as selling the various frame parts, complete frame sets already fitted and ready to be built up are supplied at figures a little less than those which the separate buying of the parts would foot up to in the end. The frame sets include besides the lugs and cut tubing and forks, hubs, hanger parts, seat post and handlebar expanders, head fittings and seat posts.

#### CROWN AND CYRUS CYCLES.

The John Lonn & Sons Co. of La Porte, Ind., shows in its catalogue several patterns each of Cyrus and Crown bicycles, ranging in price from \$30 to \$60. The cheaper Cyrus patterns have outside joints. The other machines have flush joints throughout and some of the Crown models have diamond shaped front and rear forks. Crown Model 33, which has 30-inch wheels, is fitted with a frame of the three-crown construction in which the diamond forks are nickel plated, giving a striking contrast to the enameled portions. A men's and a women's cushion frame are included in the line, and tandems with either double diamond or combination frames will be built to order when the factory is not too busy on single machines. Cyrus models have the Thompson two-piece hanger, while the Crown patterns are fitted with the Fauber hanger. The options throughout are generous and where certain fittings not included in the regular list are wanted slight additional charges are asked, thus making it possible for the buyer to be supplied with almost anything desired without the company having to furnish at its own expense more than its regular wide list of options.

#### SPALDING FINISH DESIGN PATENTED.

Lewis T. Smith has been granted a design patent on an enamel finish, the patent being assigned to the Lamb Mfg. Co. of Chicopee Falls, Mass. The design implies the use of a bicycle steering head enameled in a color different from the frame, and provides for this second color extending out upon the frame tubes and terminating on each tube in a series of long sharply acute



points. The form of the two-color enameling covered in the design is shown in the accompanying illustration.

#### THE COLUMBIA CATALOGUE.

In point of letter press and artistic embellishment the catalogue of the Pope Mfg. Co. of Hartford, Conn., is in full keeping with the company's previous publications. The cover presents in unique color effect a Venetian scroll design. The interior embellishment comprises tinted half-tones showing the models and carefully drawn etch-



## A MOWING MACHINE...

costs more than a scythe—but it cuts more hay.

A fine tire costs more than a cheap - but it rides faster and farther. What made the solid tire give way to the cushion—the cushion to the pneumatic? For precisely the same reason the slow pneumatic is bound to give way to the fast.

Nobody wants slow tires; nobody buys them knowingly. And it isn't good, sound business to let people do it unknowingly. If you don't tell them, somebody else will, and they get the impression that they've been cheated.

League Tires need no explanation. Nothing goes into them but the finest rubber and fabric; nothing comes out but speed and staying qualities. "Get there and get back" tires look well in the store, ride well out of the store and, present or absent, are working steadily in somebody's interest—yours, if you handle them.

### LEAGUEKIT

mends any single tube tire. Quick and sure cement repair for small punctures, quick and sure plug repair for large ones. Only tool that does the work of two kits at price of one. Write for prices.

New York..... 25 Park Place.  
Boston..... 24 Summer Street.  
Philadelphia..... 308 Chestnut Street.  
St. Louis..... 210 No. 12th Street.  
San Francisco..... 509-511 Market Street.

#### WESTERN DISTRIBUTING AGENTS.

A. G. Spalding & Bros., 147 149 Wabash Ave., Chicago.

#### NEW ENGLAND DISTRIBUTING AGENTS.

Geo. F. Kehew & Co., 129 Pearl St., Boston.

**NEW YORK BELTING & PACKING CO. LTD**

Mention The Cycle Age

The Guaranteed Quality  
The Latest Styles and Designs

## In Decalomania Transfer Decoration

are combined in Meyercord Double Paper Transfers. They are incomparably superior to any other kind of transfer in ease of handling and beauty of results.

**ENAMELERS** are badly handicapped in their business if they are not prepared to show their customers a nice line of Transfers for selection. Our Double Paper kind, the guaranteed kind, will secure work, save time and improve prices.

**DEALERS** should never let a bicycle go out of their store or repair shop without their name and location on it in some place. Our nameplate transfers—furnished in lots as small as fifty—afford the only tasty and decorative means of keeping the dealer's name before the public.

**ALL THE TRADE** wants transfers for one purpose or another, hence **Jobbers** should catalogue them and illustrate them. Electros and samples free.

### The Meyercord Co., Inc.

American Manufacturers, Guaranteed Decalomania Transfers,

NEW YORK OFFICE:  
805 St. James Bldg.

Main Office: Chamber of Commerce Bldg., Chicago.

ST. LOUIS OFFICE:  
621 Holland Bldg.

ings illustrating the details of construction in Columbia and Hartford bicycles. The Columbia chainless, which of course occupies the position of honor in the book, is recommended indiscriminately to all riders by the company as an ideal mount. One of the prominent features of the catalogue is the double page illustration showing the factories of the Pope Mfg. Co.

#### CHICAGO TUBE CO.'S LINE.

The Chicago Tube Co., 217 Washington street, Chicago, is cataloguing frame sets, frames, complete and stripped bicycles and all kinds of builders' material, sundries and tools. Frame parts are offered for both outside and flush joints and for 28 and 30-inch wheels. Tandem frame sets of three styles are also included. Fauber hangers and the company's own two-piece hanger comprise the parts in this line handled. The line of small fittings, parts and such equipment sundries as saddles, pedals and handle bars is very large, including in each instance several lines of standard goods. The complete bicycles range in price from \$40 down to \$29, and include several styles of machines sold under the name Pirate. They are made from the fittings sold by the company and are staunch machines, finished and equipped in popular mode and offered to dealers at prices which allow comfortable profits to be made.

#### DROP FORGINGS THROUGHOUT.

The familiar 'claim of Iver Johnson's Arms & Cycle Works that it produces "Honest cycles at honest prices" is made the subject of the text in the company's catalogue. The construction of Iver Johnson cycles is carefully illustrated and described with the intention of demonstrating to the reader the care and skill used in the manufacture of the bicycles. Half tone illustrations from photographs show the connections and parts used and clearly bring out the extent to which the company carries out its policy of using nothing but drop forgings in the making of the parts. The new combination double plate and arch crown used on Iver Johnson machines is illustrated both in its finished form and as a rough drop forging before machining.

#### CLIPPERS GOING ABROAD.

Fifteen of the most improved pattern chainless Clipper bicycles made by the Grand Rapids Cycle Co., were shipped some days ago to Bombay, India, and may be ridden there before the spring weather here permits riding on the city streets. A short time ago a small shipment was made to Buenos Ayres, South America, but roads as yet in that country are undeveloped and cycling is not popular. Two Clippers are on their way to Johannesburg, South Africa, five were recently sent to St. Petersburg, Russia, and a dealer in Sweden has written to the company asking for prices on 5,000 of the chainless machines.

#### DUDLY TUBE CUTTERS ABROAD.

The Dudley Cycle Works, of Menominee, Mich., which make a line of cycle working tools, the leaders of which are the Dudley tube cutter and the Perfect nipple grip, are finding an appreciative market for their goods in Europe. Recently good sized orders have been received through four New York export houses for tube cutters and grips to be shipped abroad. The company also reports an excellent business in this country, its frame jigs and truing stands meeting with the same favor that has been granted the other devices.

#### NEW PERIODICAL FOR SPALDING AGENTS.

A. G. Spalding Bros., of New York and Chicago, have issued the first number of "The Spalding," in which they explain their new policy and make an earnest appeal for the support of the retail trade. An interesting feature is the synopsis of letters received from retail merchants in regard to the policy. The opinions of a great many merchants in all parts of the country are thus brought together, expressing almost unanimous approval of the new method, many of the writers commending it enthusiastically.

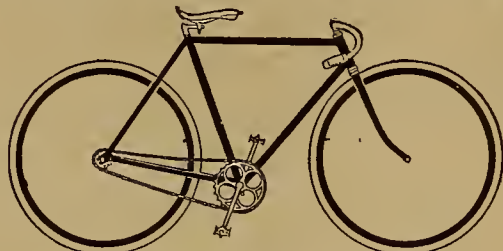
#### BARNES CATALOGUE WELL ILLUSTRATED.

Following its tasty little advance agent, the Barnes Cycle Co. of Syracuse has issued its regular catalogue. The brochure is the work of the Chasmar-Winchell Press, of New York city, and contains handsome half-tone cuts made from air brush drawings which display the White Flyer models and the constructive features in a most attractive and artistic manner. Taken as a whole, from cover to type composition, the catalogue is emblematic of the highest grade of the designer's and printer's art.

#### OLIVE CYCLES IN FIVE PATTERNS.

The Olive Wheel Co. of Syracuse, builds but one grade of machine and its carefully

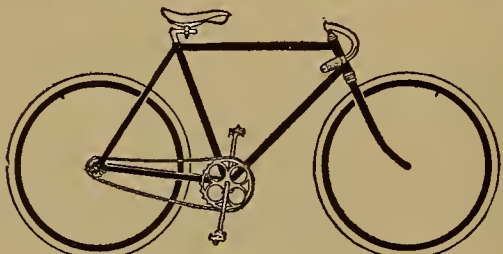
written and neatly illustrated catalogue is devoted to the description of the models which comprise this one line. Great care has been taken in designing the models in order to not only obtain staunch machines but to give that grace of lines and neatness of construction which brands the product as first-grade. The standard road machines for men and women are respectively Models 32 and 33, and sell at \$50. The women's pattern is fitted with a celluloid chain guard completely covering the chain and offering absolute protection for skirts. The track racer, Model 34, has an extra low drop at



Model 35—30-inch wheels. Price \$60.

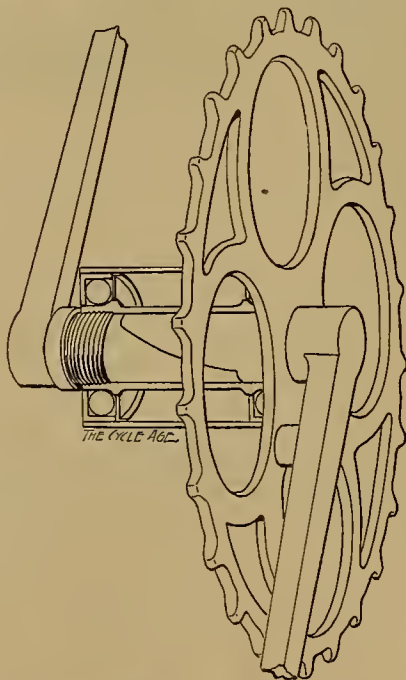
the hanger and is designed solely for racing purposes. It weighs complete 22 pounds and lists at \$60. Model 35, the 30-inch wheeled pattern, follows in general design the lines of the racer and also sells at \$60. The company offers in addition a chainless pattern fitted with the Sager roller pin gearing and embracing in other particulars the regular Olive construction. It lists at the standard chainless price of \$75.

The Olive company is justly proud of its hanger construction which is not only sim-



Model 32—Roadster. Weight 24 lbs. Price \$50.

ple and light but gives the extremely narrow tread of  $\frac{3}{4}$  inches without sacrificing wheel strength through the use of an excessively narrow chain line, the latter being in the Olive  $1\frac{1}{2}$  inches. The hanger is of the two-piece order and is fitted with square cranks. Its interior construction is shown in the accompanying illustration. All patterns are fitted with Record pedals and regularly with Victor tires, though Morgan & Wright, Goodrich, Dunlop, and on the racer and special, Palmer tires, are offered as options. Several patterns of rigid steel bars of popular shapes, as well as the Kelly adjustable, are offered to choose from and saddles of the various standard patterns are



supplied as desired. Frames are regularly enameled in the distinctive olive shade used by the company, but black is offered as an option if desired.

#### TWO OTIS CATALOGUES.

The Otis Bicycle Co., 114 Dearborn street, Chicago, is sending two catalogues to the trade. One of them is devoted entirely to the interests of the 30-inch wheeled machine, and on its title page the cause of larger wheels is introduced by the couplet, "Antiquity should not privilege error, nor should

novelty prejudice truth." The Otis Special is made in both men's and women's patterns and is fitted with either Ewald or Fauber hangers, the former being supported in an eccentric bracket. Stockton Gem pedals are supplied. The options in handle bars and saddles is liberal, and either the Watson seat post or a plain seat post secured by an expander is offered. The second catalogue shows the Model A patterns and the Otis "Leader," selling at \$35 and \$27.50, respectively. These machines have 28-inch wheels and standard up-to-date lines and equipment.

#### ECLIPSE BRANCH FACTORY IN OPERATION.

The Empire State Cycle Co., of Oneonta, N. Y., which will this year build the medium grade machines of the Eclipse line for the Eclipse Bicycle Co., of Elmira, N. Y., has begun operations, work being pushed through on such parts as the material already shipped to its plant will permit. About twenty-five men are already at work and shipments of material are arriving daily so that the working capacity of the plant will be increased immediately.

#### BURT REPAIR TOOL IN DEMAND.

The J. H. Burt Mfg. Co. of Springfield, Mass., reports that its traveling men are meeting with great success in selling the band tire repair tool made by the company. It is stated that almost every prominent dealer has catalogued them and in accordance with the hearty reception being given the tool plans have been laid for the manufacture of 500,000 during the season.

#### GROWTH OF FRONTENAC COMPANY.

Three years ago the present Frontenac Mfg. Co. was organized as the Syracuse Specialty Co., but a year later changed its title to the present one. Now it has a plant that covers one and a half acres of ground and consists of fine buildings thoroughly equipped with modern machinery. The \$75,000 capital stock of the company has been fully paid in.

#### KEATING SHOPS BUSY.

The works of the Keating Wheel Co., of Middletown, Conn., have been put into full operation and the bicycles familiarly known as having "that curve" will soon be ready for shipment in large lots. The rush work at the plant began last week, when the company posted a notice that 300 men and 25 girls would be given employment at once.

#### BETWEEN PURPLE COVERS.

The preliminary story about Barnes White Flyers is told in a tasty little booklet of specifications and outline drawings of models. The cover is original and artistic, the background being purple and the lettering white. White doves in flight are effectively symbolic of the title "White Flyers" bestowed upon the Barnes bicycles.

#### CARLOAD OF RAMBLERS FOR SPOKANE.

Spokane, Wash., last week received the first carload lot of bicycles ever shipped to that city. The car, which is one of the large vehicle or furniture type, now stands in the railroad yards there waiting the completion of the new store of the Fred T. Merrill Cycle Co., to whom the goods were consigned, and contains 365 Rambler machines.

#### CORRECTION IN FIRM NAME.

The advertisement in the last issue of Cycle Age of the Kling Power chain, erroneously stated that the chain was manufactured by the Upson & Hart Co. The correct firm name is the Kling Power Chain & Wheel Co., Unionville, Conn., to whom all communications should be addressed.

The Werner Company of Akron, O., known to many in the bicycle trade as a first-class printing house which has in the past printed some of the best catalogues issued by cycle concerns, announces that on January 26 it was formally released from the charge of the receiver and now with increased facilities and opportunities at hand is better able than formerly to serve its customers well and deserve their patronage in the future.

Hastings Bros. of Central City, Neb., say that the tool for loosening sticky inner tubes recently described in Cycle Age and which is controlled by a patent granted to Phelps & Brenner, of 729 Main street, Quincy, Ill., is a valuable and successful one for use in repair shops, a similar one made by them having been in almost constant use since 1895.

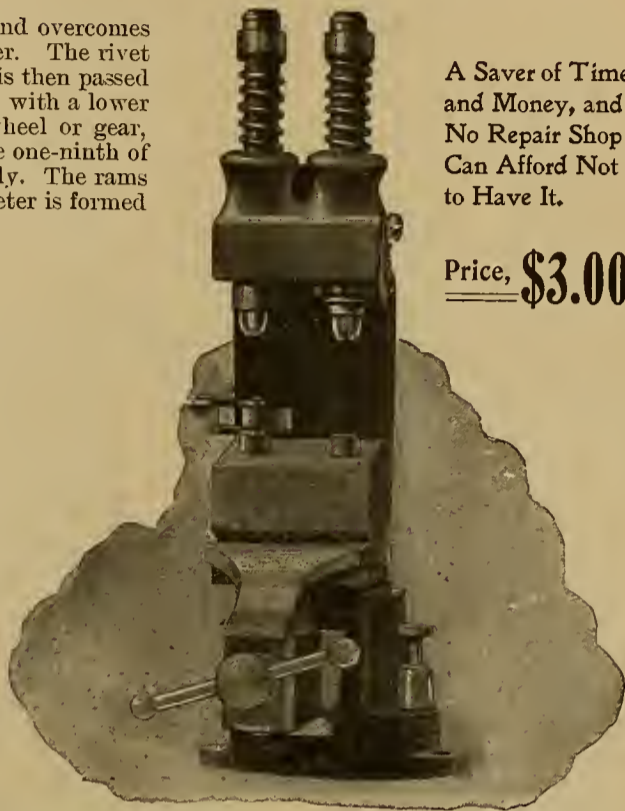
The W. R. Rollins Mfg. Co. wish it stated that their proper address is Harvard, Ill., instead of Chicago, as was erroneously given in the recent report of the New York cycle show.

# The Zamboni Chain Riveter

It is designed as a convenient, low-priced tool for repairmen, and overcomes the difficulties arising from the misdirected blows of a hammer. The rivet is first upset by the ram at the left, by a blow of a hammer. It is then passed to the other ram, the die of which is quartered and cup-shaped, with a lower die, plainly cupped. This finishing ram has a ratchet cut wheel or gear, which, in connection with the side spring, turns the heading die one-ninth of a complete turn at each blow so that the head is put on uniformly. The rams are lifted automatically by the springs after each blow. The riveter is formed so that it can be held in the jaws of a vise.

A Saver of Time and Money, and No Repair Shop Can Afford Not to Have It.

Price, **\$3.00**



## Just Notice These Points, Mr. Repairman

That it is as complete a riveting machine as those used in chain factories; doing the work as effectively, as perfectly and as quickly.

That it will rivet a link in less than one-tenth the time taken to do it with a hammer by hand, which is the usual method in repair shops.

That the inserted link or links will move as freely and with as little friction as the factory riveted links, it being impossible to compress the rivet in the chain block, the riveting action of the hammer being wholly on the outer periphery of the rivet, the center of rivet being left intact.

That when the link is seated on the anvil it is impossible to rivet it imperfectly, or to compress the rivet in the chain block.

That no other machine or device, other than those in the chain factories, will do the work as quickly or as perfectly.

That the saving in time alone will defray the cost of the machine when it has been used less than a week.

MADE BY THE **MCCABE HANGER MFG. CO.** 540 W. 22D ST., NEW YORK CITY

## WE WIN 40 WAYS

If you will take the time to examine our bicycle, the only one we make,

## The Elfin Juvenile

All our time, our energy and our experience is bent upon manufacturing the best possible children's wheel. It is simple then to see why the Elfin leads all other juveniles,

WM. SOMERVILLE'S SONS  
66 W. Broadway, New York  
Agents for Greater New York and  
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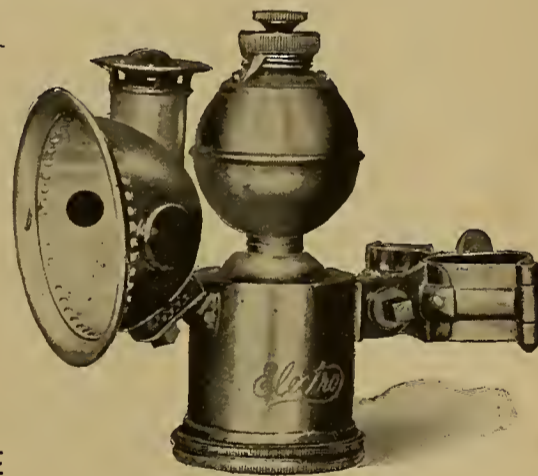
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**FRAZER & JONES CO.**

353 W. Fayette St.

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Old  
Adage—  
Nothing  
Succeeds  
Like  
Success.



## An Old Lamp—The Electro

ALSO A SUCCESS.

A well and long-established business means long and hard work, but it represents **SUCCESS**. Success means good judgment. Good lamp judgment means

## ELECTRO LAMPS

TESTED AND NOT FOUND WANTING.

A few good jobbers wanted in each section of the country.

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1 & 3 Union Square  
NEW YORK  
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W. J. Buckley & Co.  
204 Dearborn Street  
CHICAGO, ILL.  
CENTRAL AGENTS

N. Pendleton Rogers  
San Francisco and  
106 Wall St., New York  
WESTERN STATES AGENT

WRITE FOR CATALOG

# THE PASTIME AND SPORT

## THE N. C. A. ORGANIZES

**Racing Men and Track Owners Get Together, Adopt Constitution and Elect Officers.**

New York City, Jan. 30.—Last Wednesday the meeting of the elements that do not like the way the League has run racing matters for the past two or three years and which was called to amalgamate them in one homogenous mass and devise methods that would be more to the liking of all concerned except the public, convened in this city with the following delegates present: Arthur Gardiner, representing the American Racing Cyclists' Union; P. T. Powers, the American Cycle Racing Association; J. Lockwood, Berkeley Oval; Nate Salisbury, Ambrose Park; J. D. Lasley, Washington Athletic Park track; W. J. Corcoran, Waltham, Mass., track, and by proxy the St. Louis Athletic Park track.

It was understood the movements of some of the minor promoters would depend on the action of the Manhattan Beach management. Jubilation was therefore emphatic when the owners of the Manhattan Beach, Berkeley Oval and Ambrose Park tracks announced their intention to affiliate with the outlawed pros. The delegates then proceeded to adopt a constitution and by-laws. Election of officers followed, the positions of president and second vice-president being left vacant, the question of filling them to be referred to the nominating committee for a mail vote. H. J. Bloemicke, of Newark, was made first vice-president, and F. B. House permanent secretary. A board of racing control was appointed without consultation with or permission of those put into office for the various districts and A. G. Batchelder was made chairman of that board. Tom Cooper will represent the racing men on the board. Arthur Gardiner is quoted as authority for the statement that Sterling Elliott may become president.

Upon application of the St. Louis track management the National Cycling Association, as the organization is called, will extend its jurisdiction to take in that part of Missouri lying west of the Missouri river. Otherwise the body modestly limits its jurisdiction to territory east of the Mississippi.

## Winter Riding Growing Popular.

Buffalo, Jan. 30. — Winter riding has grown vastly in favor here with those riders who use the bicycle for business purposes. Buffalo has been favored, thus far this winter, with most exceptional weather conditions. There have been few days that a bicycle could not be used, and for the past ten days the pavements have been free of snow. This has brought out hundreds of bicycles that had been stored for the winter and incidentally set hundreds of minds to thinking of new mounts for the coming season. While the chainless is receiving much attention at this early day, the chain machine is not being slighted by any means. There are many riders who like the chain arrangement because it can be used with the "floater," as the automatic brake and coaster is known here.

## Algerians Show Interest in Racing.

A race meet on the Southern Europe winter circuit was run in Constantine, Algeria, on January 15, and was largely attended. The feature of the meet was the prize of Constantine race, for which Grogna, Tommaselli and Banker qualified in the three heats. In the final Banker

took the lead for the last two laps, but, entering the homestretch, Grogna started his sprint and won the race by half a wheel from the American, with Tommaselli third. In the 1,000-meter handicap Banker broke his chain and again Grogna won. The 3,000 meter tandem event was won by Banker and Tommaselli by half a length from Grogna and Coquelle.

## TRACK OWNERS ABANDON LEAGUE

**N. C. T. A. Casts Its Fate With the Outlaws—Others Await Assembly Action.**

New York City, Jan. 30.—The National Cycle Track Association held its annual meeting here last Friday and adopted a resolution dropping from its constitution all reference to the League of American Wheelmen and substituting therefor the words, "National Cycling Association."

Resolutions were adopted to the effect that the National Cycle Track Association appreciates the good work accomplished in the interests of bicycling by the League, but that for the future the best interests of the track owners will lie in affiliating with the National Cycling Association.

The Manhattan Beach, Berkeley Oval, Newark Riding Park, Charles River Park, Providence, Buffalo, Wilkesbarre, Washington, Racine, Wis., Louisville, and Willow Grove tracks were represented directly or by proxy.

The Philadelphia tracks were not represented at the meeting, but are awaiting the action of the League at the National Assembly. Any resolutions of the L. A. W. delegates to continue the control of the sport will be of no avail unless liberal concessions to the dissatisfied are made, as the track owners are in business for financial returns and will join any movement that offers the best promise of success. That the League is losing prestige rapidly in racing matters must be apparent to everybody.

## Canadians Discuss World's Meet.

Officers of the Canadian Wheelmen's Association met in convention in Montreal last Saturday with the committee appointed to discuss matters pertaining to the international meet next summer. Representatives of sixteen clubs were also present. The result of the meeting was to dispel all differences between the C. W. A. and the Montreal Wheelmen regarding the conduct of the meet. The Montreal people are very enthusiastic over the meet, and as they have one of the finest tracks in the world, the attendance should be phenomenal.

## Canada Sending Delegates.

Montreal, Jan. 30.—The C. W. A. has appointed two delegates to attend the annual L. A. W. convention to make arrangements of mutual advantage between the two bodies and to propose that the National League meet be held just after the international championships here. The object is to secure the presence of the European cracks at the championships first, whence they will go to Boston.

All motorcycle records from one to forty kilometers were broken by a young amateur named Bourguin at Paris on January 9. He rode a petroleum tricycle and would probably have placed the hour record close to thirty-two miles had not an accident at the forty-fourth kilometer prevented his continuing. His time for forty kilometers (nearly twenty-five miles) was 45:24 3-5, beating the best previous time by 2:20 3-5.

## CONSIDERING TAX PROBLEM

**Washington Collector of Taxes Favors Levying \$1 License—Wheelmen Object to Measure.**

Washington, Jan. 30.—The collector of taxes has made a report on the proposition to impose a tax on bicycles, which says in substance that if there is a popular demand on the part of bicycle owners for the proposed legislation, with a view of securing protection for their machines, the collector can see no objection to it. Owing to the fact that the bicycle is so universally used for both business and pleasure, he is of the opinion that regulations should be adopted whereby police supervision could be exercised over this increasing method of travel, and at the same time protect the owner from loss.

The chief of police, who first suggested the tax and who has worked hard to secure the passage of a law imposing the same, has come out with a suggestion that the rate should be 50 cents per annum instead of \$1, as first suggested. The collector of taxes, however, thinks that the rate should be \$1, as he believes that amount would be necessary to cover all the cost of registering and tagging machines.

The question will probably not be finally decided by the commissioners of the District until they have had a joint conference on it. In the meantime the wheelmen will bring all their influence to bear to defeat the proposed legislation.

## Southern Cyclists' Association Meet.

New Orleans, Jan. 30.—The first race meet of the Southern Cyclists' Association was run here January 23 and attracted 3,000 spectators. The riding was of a good order and the local riders held their own against the visiting racing men very well. The S. C. A. took occasion before the commencement of events to explain, through its president, John Dymond, Jr., the objects of the association and to distribute road maps and explanatory pamphlets. The S. C. A. is a local organization working on the same lines as the L. A. W. to protect the rights of wheelmen and promote the cause of good roads. Racing is only a side issue to increase interest in the work.

The summaries of the principal events follow:

Half-mile open—Bob Walthour, first; Miller, second; Bert Repine, third. Time, 1:10.

Mile open—Miller, first; Walthour, second; D. Kraemer, third. Time, 2:54.

One-mile S. C. A. championship, amateur—O. L. Adams, first; Benedict, second; Everard, third. Time, 2:47.

Two-mile handicap—Pattison, 400 yards, first; Mohan, 480, second; Gonzales, 290, third. Time, 4:27 3-5.

## Sunday Meet in California.

San Jose, Jan. 30.—The Garden City Wheelmen gave a Sunday race meet here today, in which Orlando Stevens defeated Harry Downing in a series of match heats, winning two straight heats at one mile in 2:10 1-5 and 2:06 1-5 respectively. Floyd McFarland and Charles Miller rode exhibitions, the former going a paced mile in 1:49 3-5. Bald acted as starter.

## Governor Who Favors Cyclists.

Governor Rollins, of New Hampshire, who recently took the oath of office, is a practical cyclist. In his inaugural message he advocated the building of a bicycle path along the entire sea coast of the state, the construction of a state highway from the Massachusetts state line to the summit of Mount Washington, with



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Their price will be strictly maintained. They'll increase your sales and revive your business.

These are not "EXTRAVAGANT CLAIMS," but FACTS and Facts are stubborn things.

## Waltham Manufacturing Co.

"They All Ride  
The Famous Orient."

315 Crescent Park, WALTHAM, MASS.

## Eclipse Cycles

ONE GRADE—ONE PRICE

**\$50.00**

## Waldorf Cycles

ONE GRADE—ONE PRICE

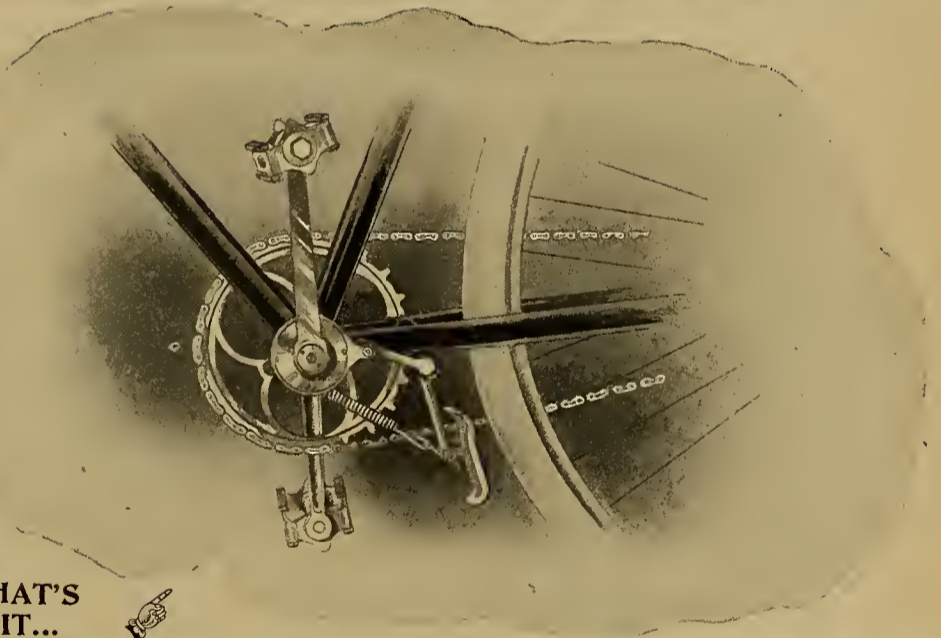
**\$35.00**

Fitted with the Morrow Automatic Coaster and Brake.

Mr. Agent—They will put you in a position to control the trade in your city. Secure the agency. Write for quotations to-day.

**ECLIPSE BICYCLE COMPANY,**  
Elmira, N. Y.

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**CHICAGO**  
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THE DIAMOND SPECIAL

**SOLID VESTIBULE TRAIN.**  
Daily at 9.00 p. m. from Chicago. New and elegant equipment, built expressly for this service. Train lighted throughout by gas. Tickets and further information of your local ticket agent, or by addressing **A. H. HANSON, G. P. A. Ill. Cent. R. R. Chicago, Ill.**

## YOUR '99 TRADE WILL WANT An Easy Running and Durable Chain



In our new **Twin Roller Chain** the rocker joint eliminates the friction from this point while the friction between chain and sprockets is avoided by the rollers which turn as the chain feeds off and on the sprockets. This gives you a frictionless and hence a durable chain.

This chain fits the standard 1-in. pitch sprockets and runs smoothly and noiselessly even in mud, water or dust. It makes friends wherever used and will be a great favorite for '99. Write for prices and full description.

**MORSE CHAIN CO., TRUMANSBURG, N. Y.**

branch roads through other sections of the White mountains, and recommended better roads generally, suggesting in furtherance of the plan that experts be employed at all colleges to give instruction in the making of good highways.

### CYCLING IN WEST INDIES

Riding is Growing Popular in Trinidad and Surrounding Islands—Racing Young Yet.

Cycling is widely popular in Trinidad and the neighboring islands of the West Indies, and is securing a constantly increasing number of devotees. Nearly everyone who can afford it possesses a bicycle; even a bishop in full canonicals is frequently seen. The roads in some of the islands are excellent in the dry season, and an early morning spin up one of the lovely valleys in Trinidad, shaded by arches of giant bamboos, is a happy contrast to the weary plough through the dust and glare which must be encountered in less favored localities. Of course, for the century rider these islands afford little scope, but even he, after a few hours' trial of a tropical sun, would be glad to join the peaceful little army that haunts the valleys and more shaded roads, with the prospect very often of a delicious plunge in some cool, clear mountain stream at the end.

The "scorchers," of course, exist, but he is mostly confined to the irresponsible Portuguese and negro, who take advantage of the present want of legislation with regard to lights and pace and rule of the road to do their best to make such legislation, when it comes, harsh and unsatisfactory.

Racing is still young in Trinidad, but in spite of that a very successful race meeting was held last year on a fair, though insufficiently banked, track surrounding the principal cricket ground in Port-of-Spain, and will in all probability be repeated when the ground opens shortly for the season. Valuable prizes are offered and really excellent form is shown.

### RACING CENTER SHIFTING

European Interest Passes from England to the Continent—Major Taylor Lauded.

Commenting on the past season's racing, one of the daily papers of Paris attributes the loss of interest in racing in England to the bickerings between the amateurs and professionals and to the larger prizes offered in the other European countries. While two years ago England was foremost in racing affairs, the center of interest shifted across the channel to France, thence to Germany, where \$25,000 was given in prizes last year, and now seems to be concentrating in Russia.

Bourillon is singled out as being the best and most notable European rider, as no man since Zimmerman's time in Europe has shown such extraordinary form for so long a time, defeating every man of prominence on the European path and winning the great prizes of Italy, France, Germany, Belgium, Russia, etc. General regret is felt because he did not compete in the world's championships in Vienna, where it is believed he would have won great laurels for his country.

After Bourillon, only one other rider in Europe is felt to have proved himself a great rider—Paul Albert, the German amateur champion of the world. After these come Jacquelin and Deschamps, and then in about the same class Meyers, Broka, Grogna, Protin, Parlby, Pontecchi, and Verheyen.

Comparison with the American riders is impossible, since none of the best Europeans visited the United States and none of our top-notchers went abroad

last year. Major Taylor, however, is proclaimed a phenomenon and is felt to stand above all other Americans. The Frenchmen think him a most extraordinary man and predict that he will be the wonder of the nineteenth century among riders, and that he will have an incomparable season this year. They express a great desire to see him ride in Europe, believing that he is a worthy successor of the great Zimmerman. Harry Elkes is also conceded worthy of being classed among the notable men of the past season.

### NEWS IN BRIEF.

"Plugger" Bill A. Martin is racing at Cape Town, South Africa.

The Belleair, Fla., quarter-mile track has been remodeled and resurfaced.

George H. Collett has accepted the invitation to coach the Yale bicycle team the coming season.

The Cyclists' Touring Club of England now has 54,300 members, of which number 21,000 joined the club in 1893.

A. A. Chase was recently suspended for two months by the N. C. U. for competing in a road race, which is prohibited by the union.

The oldest cyclist in the world is said to be F. E. Richardson, member of the Amateur Cyclists' Club of England, who has ridden the bicycle since 1862.

The municipal council of Gratz, Austria, has voted a special reward to a policeman for recovering twenty stolen bicycles during the past two years.

A proposition is afoot to take a party of racing men to Brazil, where it is believed that even second raters might pick up good purses among the South Americans.

The Austrian railroad association has decided to build special cars for the transportation of bicycles and has given orders to employes to handle bicycles carefully.

It is rumored that Nat and Frank Butler have received an offer from a manufacturer of chainless bicycles to join his outfit of pacemakers, they to be equipped with a motor tandem.

The Western passenger association has unanimously agreed to maintain the old rule of charging excess baggage rates on bicycles, with a minimum charge of 25 cents for any length of haul.

The judiciary committee of the New Hampshire legislature has declared the proposed law to tax or license bicycles to be unconstitutional and has rendered an unfavorable report upon it.

Bouhours, the French middle distance crack, won twenty out of thirty-five big races in which he competed last year, winning \$9,400 in prizes and receiving \$1,200 from the firm whose machine he rode.

George Banker expects to return to America next summer to compete in the world's championships at Montreal. All his successes have been won abroad, and he is anxious now to win a big race on this side of the Atlantic.

It is asserted positively that George L. Cooke of Providence, chief consul of Rhode Island, will be a candidate for the position of second vice-president of the L. A. W. in opposition to Kingsbury of New Hampshire and Locke of Illinois.

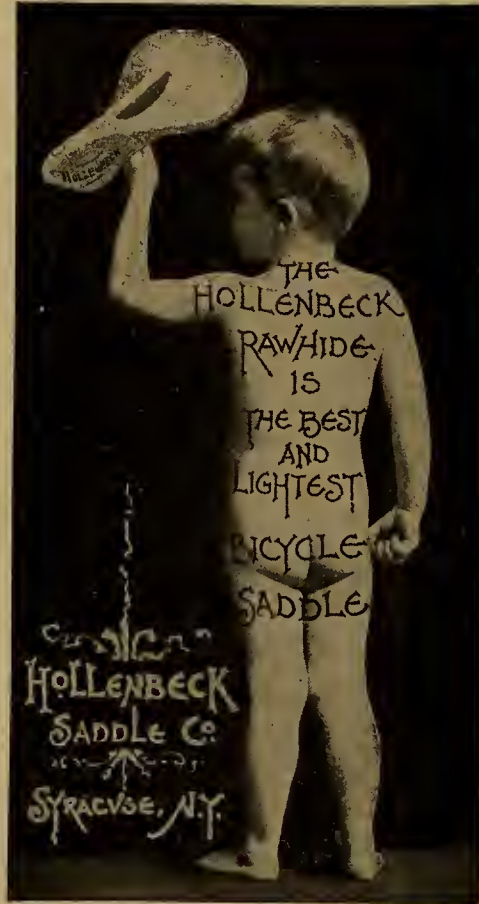
It is reported that Bald, Elkes, Owen Kimble and the Turville brothers are forming a racing team to go to Europe for an extensive tour this year. Both Tom Eck and John West are mentioned as prospective managers of this trip.

Arrangements for the entertainment of the delegates to the National Assembly which meets in Providence, R. I., on February 8, are practically completed. The convention will probably be in session during Wednesday, Thursday and Friday.

Buffalo, Jan. 30.—According to reports in circulation here, Bald has not had enough of the stage, but will try his hand at vaudeville. This report comes from no less a personage than Mr. Leuscher, Bald's old manager, who made the statement to a local newspaper man last week that the actor-rider had signed a contract and would take the third act of "The Twig of Laurel" into vaudeville next season, following the Grau circuit. Earl Kiser and Nat Butler, Mr. Leuscher said, would go with him. Mr. Leuscher also stated that Bald would ride

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We manufacture a saddle that will prove a leader, one that is in no sense an experiment, but the result of the experience and talent of good saddle makers. It is the lightest, prettiest and most durable saddle in the market, we refer to the UUUUUUU

## Hollenbeck Rawhide Saddle

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## TANDEMS, TRIPLETS AND QUADS

CAST STEEL AND DROP FORGED

W & E Expanders for Seat Posts and Handle Bars.

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HIGHEST GRADE AND MOST COMPLETE LINE MANUFACTURED.

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**WALKER & EHRMAN MFG. CO.,** Washington and Union Streets, **CHICAGO**

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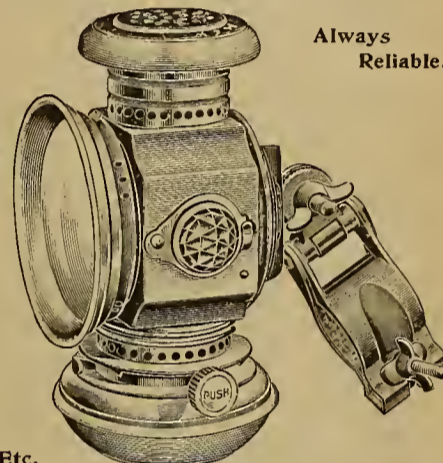
Gives brilliant white light 100 feet ahead, 50 feet wide; has patent water trap and gas seal, rendering unsteadiness impossible. No gas is wasted in heat, lamp always keeps cool. Charge can be graduated as desired; flame under instant control. Lamp easily cleaned.



M. & W. "Lancaster" Gas Lamp.  
Burns Carbide in any form.

#### M. & W. '99 OIL LAMP.

Improved in several important features; oil-pot lock; perfect combustion; absolutely automatic wick lock; the handsomest lamp ever put on a wheel.



Always  
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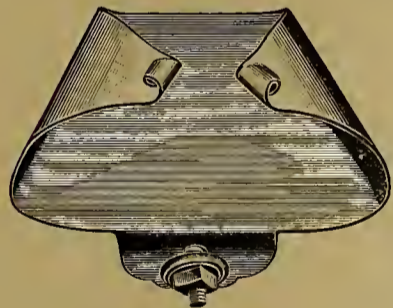
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Catalogue showing complete line, also full line of Bells now ready. ❀❀❀❀

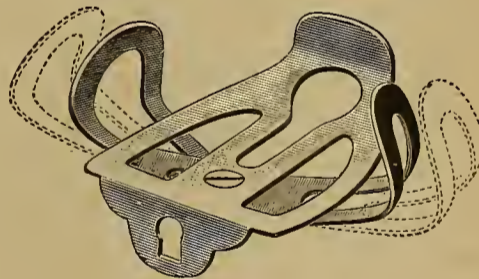


EXCELSIOR SUPPLY CO.  
276 Wabash Ave., Chicago, Western Agents.



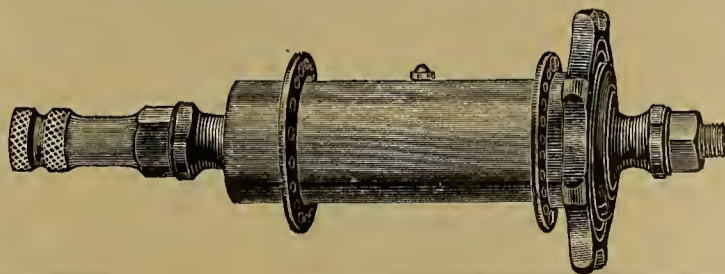
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## THE "CROWN"

Good Value  $\equiv$  Low Priced



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EVERY PART GUARANTEED.  
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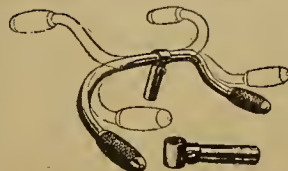
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Opens like a Knife  
No tools used to take apart  
Thames Chains



IDEAL ADJUSTABLE and EXPANSION HANDLE BARS  
High Grade only.  
Prices and catalogue on application.

**IDEAL PLATING CO.,** 3, 5, 7, Appleton St., Boston, Mass.

Mention The Cycle Age

abroad the coming season—a statement which comes in the nature of a surprise to his Buffalo friends, in view of his connection with the outlaw association.

Wheelmen of Terre Haute, Ind., have organized an independent political body to support candidates who will pledge themselves to support the best interests of the cyclists, especially with a view to defeat the proposed measure to tax bicycles \$1 each per year.

Brady, Kennedy and Hurst are arranging to run a six-day race in Denver in which the long distance men now in San Francisco will compete on their return trip east. It is also contemplated to have them stop in Chicago and perhaps in St. Louis.

The two leading cycling clubs of Minneapolis and St. Paul are intending to unite in promoting and controlling racing in the Twin Cities the coming season. The object of the combination is to give outlaw racing in those cities a recognized and substantial backing.

Out of the twenty-three racing events arranged for France the coming season nine are for motor vehicles or motor bicycles and tricycles. These latter events are all road races, the last one, to be run October 9, being a contest between vehicles driven by alcohol motors.

Two Austrian racing men who won some local fame on the tandem are now doing police work on motorcycles in Vienna, where their duty is to enforce upon wheelmen and users of automobiles the regulations prohibiting fast riding and requiring the carrying of registered tags.

Joe Downey, cyclist Michael Junior, has returned to grammar school from which he will graduate this year. When Harry Gibson defeated him in Madison Square Garden at their last meeting the crowd yelled to Downey, "Better go back to school," and he took their advice to heart.

The French minister of commerce has signed a decree for the organization of a series of ten athletic prize competitions to be run while the Paris exposition is in progress. The bicycle and automobile races will be run on the municipal track of Vincennes and on the road surrounding one of the lakes in the exposition grounds.

According to an eastern man with Sherlock Holmes tendencies, Boston has won the '99 League meet. While all of the ballots of the mail vote have not been received enough have been sent in to settle the question and the man who made the statement that Boston had won discovered that the ballots were printed in very heavy type and inclosed in thin envelopes. By holding the envelopes to the light it could be easily seen how the delegates had voted.

Representative Adams of Arapahoe county, himself an ardent wheelman, will introduce into the Colorado legislature a bill to create a state highway commission of three members to gather statistics regarding the mileage of Colorado wagon roads, the percentage of taxes applied to the improvement of roads and providing that at least one member of the commission be required to visit each county annually and hold a general meeting for the discussion of the improvement of the country road system.

The Wisconsin division of the League decided at its recent annual meeting that its delegates to the National Assembly should make a strong fight to secure in the apportionment of L. A. W. funds a greater share for the divisions and less for the national organization. The plea will be made that while there is more than \$18,000 tied up in the treasury of the League, the divisions are on the verge of bankruptcy. The meeting was also productive of action in favor of waging the fight for the free carriage of cycles by the railroads, and of the decision to present a bill to amend the general city charter so that bicycles shall not be licensed by cities. Janesville secured the state meet.

The Secretary of the Interior, who has jurisdiction over the Yellowstone National Park, has issued instructions for the information and guidance of parties traveling by bicycle through the park. As many of the horses driven in the park are unused to bicycles and liable to be frightened by them, wheelmen must in meeting teams always dismount and stand at the side of the road—the lower side if the meeting be on a grade. In passing teams from the rear, riders will ring their bells as a warning and inquire of the driver if they may pass. If it appear from the answer that the team is liable to be frightened, they may ask the driver to halt his team and allow them to dismount and walk past. Wheelmen touring in the park will be held responsible for all damages caused by failure to properly observe these instructions.

MISCELLANEOUS.

Advertisements under this head 5 cents per word first insertion, 8 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received.

WANTED

**MANUFACTURERS**—Gentleman, trained engineer with central London office, many years' experience in the cycle trade, large connection amongst manufacturers, factors, shippers and agents, is open to take up and thoroughly work through travellers and himself a good sole agency for cycles, components or stampings, etc.; best firms only entertained. R. M. P., care Cycle Age.

**WANTED**—An experienced bicycle salesman who is also acquainted with the harness business. A live man acquainted with the trade in the southwest preferred. JOHN DEERE PLOW COMPANY, Kansas City, Mo.

**WANTED**—Bicycle dealers and repairmen to send us 25c in stamps or otherwise and we will send them a receipt for making the best and cheapest puncture proof fluid in the country; easily made. Very effective; prolongs life of rubber. FT. WAYNE NOVELTY CO., Ft. Wayne, Ind.

FOR SALE

**FOR EXCHANGE**—High class hubs and two-piece hangers for machinery. Address C. H. B., care Cycle Age.

**TO MANUFACTURERS** of Bicycles and Bicycle Fittings; also Jobbers of Fittings. On account of retiring from business are closing out at bargain prices bicycle parts and fittings, also factory equipment, consisting of machinery, standard small tools in great variety, special bicycle tools, general line of equipment and supplies. All in first-class condition. Send for catalogue. Something in the lot sure to be of interest. Address THE MOORE CYCLE FITTINGS CO., 50 Mechanic St., Newark, N. J.

**FOR SALE**—Lady's '98, 24-inch Wolff-American. PERFECT, care Cycle Age.

**FOR SALE**—A lot of 238 high class wood handle bars in perfect condition. The best offer takes them. Address E. C. S., care Cycle Age.

AGENCIES WANTED. AUSTRALIA AND NEW ZEALAND.

Frank Grimley, 263 and 264 Clarence St., Sydney, N. S. W., importer of bicycles and their accessories, bicycle makers' materials and tools, for trade buyers, is open to negotiate for exclusive agency for manufacturers of those lines and to introduce and push the sale of their goods throughout Australia and New Zealand on manufacturers' account or to purchase right out. Quotations and samples of novelties invited. Unquestionable references on application to the proprietors of this journal.

**VIM BICYCLES**  
Best Wheels on Earth  
**LOWEST PRICES**  
Agents Wanted. Cat. Free  
**VIM BICYCLE Co. INC.**  
CHICAGO.  
LIST PRICES, \$25.00 and \$35.00.  
**NINE MODELS.**

**ADLAKE BICYCLES**  
THE WHEELS OF HIGH DEGREE.  
THE ADAMS & WESTLAKE CO. MAKERS. CHICAGO.

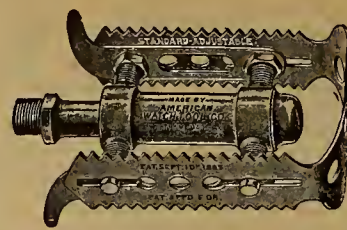


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and save trouble and expense. 5-frame Enterprise Enameling Oven costs 1c. per hour for gasoline fuel. Several sizes and kinds. Also built to order.

Write us.

A. WILLEY,  
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PEDALS

We make high grades only.  
Standard Adjustable Standard Racer.  
**AMERICAN WATCH TOOL CO.**  
Waltham, Mass.

Stearns Bicycles

E. C. STEARNS & COMPANY,  
Syracuse, - - - New York.



HANDY CYCLE POCKET FOOT PUMP

Best Pump for home or road use.  
Price 50c. Liberal discount to the trade

Handy Cycle Pump Co.,  
112 Clark St., - CHICAGO, U. S. A.

**Hubs!** Hub Shells  
JULIUS HEINEMANN & CO.  
193-7 Van Buren St.,  
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Graphite Lubricants

ALL KINDS, ACCORDING TO WANTS.

Joseph Dixon Crucible Co., Jersey City, N. J

Stormers, Pennants AND Mars

A COMPLETE LINE.

Acme Manufacturing Company,  
READING, PENNA.

A NEW LIGHT ON AN OLD SUBJECT  
It saves from 55 to 50% propelling force.

Notice to...  
**BICYCLE MANUFACTURERS.**  
The riders of 1899 will insist upon their wheels being equipped with  
"The Star Ball Retainer."  
Send us samples of Cups and Cones and write for prices.

THE STAR BALL RETAINER CO. LTD.  
LANCASTER, PA. U.S.A.

ALL ROADS ARE EASY WHEN THE STAR BALL RETAINER IS USED

**STAR BALL RETAINER**  
IS USED

Patented in U.S.A. and other foreign countries.

# THE CYCLE AGE

VOL. XXII—No 15.

CHICAGO, FEBRUARY 9, 1899.

NEW SERIES No. 64.

## PERSECUTING CYCLE DEALERS

### Buffalo Dogberrys on Edge — Excuses Brought By Buyers to Evade Paying for Machines.

Buffalo, Feb. 7.—Ever since the close of the riding season the dockets of the courts of Buffalo have been liberally sprinkled with cases wherein the bicycle has figured. Hardly a day passes that one or more cases are not heard in the different courts, and with few exceptions they are suits brought by cycle tradesmen against delinquent customers. Nearly all are products of the long-time payment plans which were followed extensively in this city last year, principally by concerns that put out cheap goods. Of the various pleas put in by defendants, that of misrepresentation largely predominates. As a rule, the courts sympathize with the defendant, or buyer, and this feeling is perhaps justified on account of some cases savoring of sharp practice that are occasionally brought to light. Unless it is shown that there is intent to defraud, the dealer usually gets the worst of it.

#### A Venomous Judge.

As an illustration of how the courts feel towards bicycle dealers, the following is a fair sample: J. L. McGraul, a bicycle dealer, had an 11-year-old boy arrested for selling a bicycle that he rented the boy last August, and the court, in sentencing the lad, said:

"I suppose I must convict this boy, but let me tell you that you are about the meanest specimen of humanity on earth. You don't care if a child is sent to the lower regions, so long as you can make twenty-five cents. If you did, you wouldn't let a boy of this age have a wheel without an order. It was a despicable trick to swear out a warrant for this boy. I will send him down, for I guess he has sold several rented wheels, but I only wish I could send you to prison. You are worse than a receiver of stolen property. I'll get you some day."

#### Variety in the Programme.

The programme varied from the usual recently when a man brought suit against a firm of side street dealers to recover the price paid for a bicycle on the ground of misrepresentation. The complainant testified that the machine was sold to him upon the representation that it was made in 1898. He contended that he was deceived because it was not fitted with ball retainers. All machines made in 1898, he declared, were made with ball retainers. But upon the testimony of several cycle people that bicycles were now being made that were not fitted with retainers, he lost the suit.

#### An Important Legal Precedent.

A suit was tried before a judge and jury in the supreme court here last week which is unique and important because

it is the first time in local history that the municipal ordinances pertaining to the travel of vehicles on the city streets were passed upon by a judge and jury. Last May a man was run down while riding a bicycle by a brewing company's wagon. The man received injuries that incapacitated him from work and his bicycle was wrecked. He brought suit against the owners of the wagon to recover \$5,000. The jury promptly returned a verdict for \$600.

## SINGLE TUBE TIRES ABROAD

Deviation from American Form of Manufacture Made Necessary in Order to Secure Trade.

Renewed effort is being made to educate the British public to the use of single tube tires. When the Single Tube Tire Company, composed of the makers of Hartford, Goodrich and Vim tires, was formed a year ago for the purpose of invading Europe and Great Britain, it was freely predicted that they would spend a twelvemonth in vainly endeavoring to force their goods upon continental and British riders, and in the end would recognize the fact that they would be unable to compel an appreciation of the American style of manufacture.

The prophecy has come true, and it is now announced that, owing to the thorns and flints to be found on all English roads, as well as to the influence which English tire manufacture exercises on the minds of continental buyers, tires especially made for British and continental roads will hereafter be supplied by the Single Tube Tire Company, which implies considerable deviation from the American products of the establishments making up that concern. Two patterns of tires will be made, one having a very open fabric, which will be supplied for speed work, the other with a close fabric intended for road work.

The company has made careful arrangements for helping the agents. They make a feature of vulcanizers for the heavier forms of repair work and send them to agents with full instructions for use.

The Decauville bicycle and automobile factory situated at Evry - Petit - Bourg, near Paris, France, was burned January 24, the loss amounting to more than \$160,000.

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## PLAINTS OF THE CANADIANS

### Despite High Advalorem Duty They Ask for Additional Duty on Each Machine Imported.

The Canadian cycle trade is now complaining that the Dominion is being used as a dumping ground for the product of American bicycle factories. It is said that the Canadian Bicycle Manufacturers' Association has vainly attempted to arrest the shipments of our machines by petitioning the Canadian government to place a specific duty of \$9 on each machine in addition to the ad valorem duty of 30 per cent, irrespective of grade of manufacture.

#### Find Fault With Cheap Construction.

There is not a part of an American machine which is not subject to bitter criticism across the border. For using pressed cups instead of turning them out of the solid bar; for employing fork sides which are not seamless; for constructing frames of tubing naively alleged to be of "indifferent quality;" for equipping saddles of the most "flimsy construction"—for these and many more sins of commission and omission our manufacturers are roundly abused. But they are given credit for being able to put a lustre on frame enamel which brings the purchaser to book.

#### Cannot Compete With Low Prices.

"There are tricks of the trade, too," says a daily newspaper which has taken up arms in defense of the Canadian manufacturers. "For example, a machine the retail price of which should be \$25 will be catalogued at \$60, and then sold at \$35 or \$40 on the plea of over-stocking. More cheap bicycles than ever are being received from the United States and they are seriously interfering with Canadian manufacture. Canadian makers do not object to the importation of high-grade American bicycles, as they can compete against them. But the trash is getting into the trade, and already has been instrumental in reducing the wages of cycle factory labor. Canada is the dumping ground for cheap and bankrupt stock.

"As an incidence of the rubbish that is offered, it may be stated that a representative of an American tire house was in Canada not long ago offering tires at \$1.75 a pair."

#### Conditions Common in United States.

Considerable surprise is affected over the fact that one of the invaders is offering bicycles to the trade at \$10 without tires and \$15 with tires. A little familiarity with the conditions in this country would show the grumblers at this state of affairs that such an incident is an every-day occurrence in the United States, and yet no great outcry is heard.

A carload of bicycles recently passed through Kansas City on the way to Manila.

**EXPECTED BIG TIRE PROFITS**

**ENGLISH PROMOTER TOO SLOW**

**Slips Up on a Deal to Sell Morgan & Wright Patents Abroad—Sues for a Million.**

Some years ago Morgan & Wright, through the medium of a Chicago attorney, agreed to sell the patents on their well known tire in every country in the world except America to an Englishman named Joseph. The purchase price was fixed at \$1,000,000, payable one-half in cash and the remainder in shares in a company to be formed by Joseph. A deposit of \$15,000 was to be paid by November 30, 1896. This sum was tendered, but on November 20 of the same year Morgan & Wright served notice upon Joseph that they repudiated the agreement, and accordingly Joseph entered suit for \$1,000,000 damages, which he estimated as the sum he would have cleared by the promotion of the company.

**Wanted to Sell Outright.**

The case was recently aired in the British courts. Morgan & Wright's solicitor contended that the firm had never authorized the Chicago attorney to enter into such a contract, but had sent to England to try to find a purchaser for the European rights of their patent. The solicitor stated that Morgan & Wright were willing to accept \$500,000 cash for their patents, but distinctly declared that the firm did not wish to be mixed up in the promotion of any company.

Judgment was given in favor of Morgan & Wright. The court, in rendering his decision, stated that it was obvious that the company which Joseph intended to float would have been ruinous to all who had anything to do with it.

**Movement to Lessen Cycle Thieving.**

An organized movement is afoot in Michigan to make bicycle theft grand larceny, irrespective of the value of the machine. While the special police of Detroit have done much to prevent cycle

stealing and to bring thieves to justice, there is still in the eyes of the cyclist room for efforts which will further protect the riding public. More than 400 bicycles were stolen in Detroit alone last year. One of the main difficulties in the way of bringing cycle thieves to merited justice is the inability to satisfy a jury that the stolen machine was worth more than \$25, the dividing line between petit and grand larceny. On account of the rapid depreciation in market value of second-hand bicycles, it is seldom proven that a machine is worth, were it placed for sale, anywhere near what it is worth to the owner. Further than this, it is stated as having been the case in many instances that the defense in cycle thieving cases have brought into court as expert witnesses agents and dealers selling some rival make of bicycle to that stolen. These dealers, in order to "knock" the make of the stolen machine, would swear that it was not worth \$25.

**Opposing the Canadian Shows.**

In its opposition to the cycle shows which promoters are attempting to arrange for Montreal and Toronto, the Bicycle Manufacturers' Association of Canada is advertising that, with the acquiescence of each of its members and other makers, it has decided not to exhibit bicycles or parts thereof at such shows, nor to permit any agent or agents of its members to make an exhibit. No other explanation is offered than that each manufacturer has large showrooms in these cities where his machines and products are at all times on exhibition free of charge to the public.

**Boston Cycle Supply Men Organize.**

The cycle supply men of Boston recently met and organized the Cycle Dealers' Supply Association. Ten firms were represented at the meeting. The object of the organization is to conserve the business interests of those who sell bicycles, parts and sundries. A committee consisting of Daniel S. Pratt, Joseph A. Cushing and J. F. Scott was appointed to prepare by-laws. Dealers desiring further information are requested to communicate with Secretary King at 69 Purchase street.

**TO OPEN THE SEASON'S TRADE**

**LOCAL EXHIBITIONS PLANNED**

**Space for Philadelphia and Washington Shows Well Taken—General Opening in Cleveland.**

Every foot of exhibition space in the local show promoted by the Philadelphia cycle board of trade, to be held the week of February 18 to 25, has been taken, the more desirable booths having been auctioned off at a premium. Every Philadelphia dealer, without exception, will be represented, and a dozen out-of-town manufacturers of bicycles and sundries will have exhibits there.

A very few of the booths at the Washington, D. C., cycle show remain to be disposed of. Manager John Woerner visited the New York show and closed contracts with about twenty exhibitors there to make generous displays in the capital city during the week beginning February 27. The manager also expects to visit the Philadelphia show and secure additional contracts for space.

**Cleveland Decides Against Show.**

The Cleveland cycle board of trade, at a recent meeting, decided not to hold a local show, but to repeat last year's experiment of a general opening of all the stores, to be held during the week of February 20. A committee was appointed to handle the matter. The annual election of officers of the board resulted as follows: President, George Collister; vice-president, H. S. Covey; secretary, George S. Waite; treasurer, H. K. Taylor.

The proposition of the Hartford Wheel Club to hold an exhibition of bicycles and sundries in Hartford, Conn., has fallen through, owing to opposition which developed. The plans contemplated renting spaces for \$1 per front foot and charging only fifty cents for a season ticket. The low price of admission was expected to swell the attendance very materially, to the direct benefit of the exhibitors.

**Baltimore Promoter at Work.**

The owners of the Coliseum building near Baltimore are endeavoring to arouse interest among the dealers of that city to the point of holding a local exhibition of bicycles and sundries.

A proposition has been advanced as a feeler to determine the attitude of the dealers of Portland, Ore., toward the holding of a local cycle show in that city, not so much in the nature of an exhibitor's display as a cyclists' carnival, with the show feature added.

The bicycle dealers in Grand Rapids are planning for a formal opening of the season's trade during the last week of this month.

**Rochester Pedal Co.'s Plant Scorched.**

A slight fire occurred in the power room of the Rochester Pedal Company's plant in Rochester, N. Y., last Thursday, which will delay the work of the company for about a fortnight. The machine and assembling rooms were not injured, the greatest damage having been done in the case-hardening department. The company is working twenty-three hours a day to minimize the interruption as much as possible.

**Trade in the Northwest.**

The cycle trade in Oregon, Washington and Idaho last year was twice as great as that of 1897. A flourishing trade is done by dealers with the better class of people throughout the entire northwest. It is said that many of the agents in Portland, Ore., who are doing a heavy busi-

**CONDITION OF ENGLISH CYCLE INDUSTRY.**

Company.	Capital Stock.	Net Profits.		Per cent Dividend on Ordinary Shares.		Total reserve.
		1897.	1898.	1897.	1898.	
Abingdon Works Company	£ 60,400	£ 18,301	£ 10,399	20	15	£ 3,000
Joseph Appleby & Co.	60,000	16,003	5,833	20	5	.....
Alldays & Onions	84,110	18,301	10,174	15	10	20,000
B. S. A. Co.	406,300	83,796	60,192	20	20	50,000
J. B. Brooks & Co.	200,000	40,051	30,119	10	10	35,000
Bayliss, Thomas & Co.	80,000	14,237	5,510	10	10	.....
Centaur Company	125,000	20,261	15,130	10	7½	10,500
Coventry Cross Company	60,700	11,753	1,838	10	..	.....
Cycle Components Company	175,000	66,639	7,553	20	..	183,000
Dunlop Tire Company	4,500,000	592,618	461,896	10	5	420,100
Eadie Manufacturing Company	141,095	.....	9,491	..	..	.....
Eadie Chain Company	65,000	4,286	3,171	10	5	.....
Enfield Cycle Company	125,000	29,484	9,459	10	10	10,000
Elswick Company	250,346	16,100	7,215	8	..	.....
Fleuss Tire, Ltd.	250,000	.....	.....	..	..	.....
Humber & Co.	500,000	62,760	14,808	10	2½	27,000
Humber & Co. (Extension)	175,000	22,705	3,509	10	..	10,000
Jointless Rim Company	227,000	18,346	26,678	10	7½	14,500
New Rapid Company	149,000	11,422	.....	5	..	.....
Osmond Company	188,543	.....	.....	..	..	.....
Premier Cycle Company	700,000	82,483	54,102	7½	5	100,000
Quadrant Company	50,572	9,335	4,703	20	7½	.....
Raglan Company	170,000	39,325	15,521	15	6	23,500
Raleigh Company	200,000	19,783	.....	10	..	.....
Riley Cycle Company	40,000	10,832	4,642	10	5	1,500
Rubber Tyre Company	140,400	19,327	10,979	15	6¼	6,000
Rover Cycle Company	200,000	21,945	12,789	10	5	10,000
Rudge Whitworth	205,491	38,037	21,223	10	10	25,000
Singer & Co.	800,000	76,118	27,053	10	4	50,000
Star Cycle Company	120,000	16,476	5,616	17½	5	.....
Swift Company	375,000	51,045	33,945	10	4	15,000
Starley Brothers	110,000	27,841	.....	10	..	.....
Townend Brothers	80,000	12,298	1,831	10	2½	.....
Triumph Company	170,000	16,936	9,522	7½	5	2,000
Total	£11,248,432	£1,489,954	£889,122	..	..	.....

The condition of the English cycle manufacturing industry is fully revealed in the table given above, which shows how roughly many of the leading concerns have been handled in the past year.

ness, make a practice of crying hard times and poor business. This in a measure accounts for the stories being circulated in other cities of the northwest that cycle trade affairs are very dull in Portland. In reality there is not a city on the Pacific coast which enjoys a more thriving cycle trade, and the authority for this statement is one of the largest dealers in Portland.

**STEALING AMERICAN DESIGNS**

**Machine Tools Are Imported by Austrian Shops Simply as Models—Protection Available.**

The introduction of American machinery and tools into Austria has created a larger demand for machine tools of increased capacity and greater accuracy, which has caused the native manufacturers to make especial efforts to reach the high standard of many lines of American origin. The desire to supply this demand has led some of the prominent Austrian shops to the extreme and reprehensible practice of taking orders for a number of machines of special design and then buying one from the United States, either direct or through an agent, taking it apart, having drawings and patterns made, and, in short, imitating it down to each screw and pin.

A great number of prominent machine tool builders on the European continent advertise their tools as being built on American plans. This means they improved their regular patterns to the best of their knowledge, adopting some American ideas. Nobody could say anything against this if it is done in a fair way, but the competition referred to above could not be called fair.

Everyone who attempts to imitate a certain machine tries to improve it a little, and if he does not find anything to do he puts in a little more weight here and a little less there, or replaces a worm gear by a bevel gear, or anything else which in his opinion might give a little feature in addition to those the machine already possesses.

This seems to be but human nature. Now one could say that in very many cases such an "improved" machine fully resembles a previous stage of the original construction, and that it shows anything but an improvement; in some parts even just the reverse.

American manufacturers will find perfect legal protection in all the European countries where such imitations could be expected. The patent laws of the principal industrial countries afford protection, and manufacturers should not spare the cost, which is not too high, of having their improvements thoroughly protected. A few machines that they will sell in preference to foreign imitations will be sufficient to indemnify them in every respect.

**Trade Change in Wichita.**

The partnership heretofore existing between J. R. Mead and A. J. Musselman in Wichita, Kan., known as the Mead Cycle Co., has been dissolved, J. R. Mead, the senior partner, disposing of his interest to Jos. W. Musselman, the new firm taking charge of all accounts and business of the old firm and the new firm being known as Musselman Bros. A general jobbing and agency business in bicycles will be carried on in connection with a repair shop and general supply depot.

A Pennsylvania bicycle maker has received an order for 200 bicycles to be used by the government in Sydney, New South Wales.

A Chicago bicycle maker is exhibiting a tandem with 30-inch wheels, one of the first double-seated machines to be thus equipped.

**EXPORTS FOR ELEVEN MONTHS**

**HEAVY INCREASE IN NOVEMBER**

**Our Foreign Trade for the Past Year Likely to Exceed the Business Done in 1897.**

Delayed governmental returns on the exports of bicycles, parts and material for eleven months ending with November (1896, 1897 and 1898 in comparison) are here given:

	1896.	1897.	1898.
United Kingdom...	\$1,233,199	\$2,041,191	\$1,631,214
France ..	124,714	259,224	479,236
Germany ..	233,886	1,199,915	1,474,277
Other Europe ..	426,848	1,062,826	1,184,605
Brit. N. America...	536,263	721,483	580,481
Central America ...	68,013	20,568	6,687
Mexico ..	46,773	63,941	54,818
San Domingo .....	1,033	3,915	598
Cuba ..	4,830	8,262	4,496
Porto Rico .....	8,179	3,968	2,561
Other West Indies..	47,718	117,757	65,523
Argentina ..	19,951	46,198	113,026
Brazil ..	21,544	45,011	93,738
Colombia ..	19,980	19,960	7,372
Other S. America...	34,558	56,616	47,188
China ..	8,213	25,426	26,321
Brit. East Indies...	10,105	27,705	142,434
Hong Kong .....	.....	6,829	9,289
Japan ..	35,652	72,424	125,625
Australia ..	456,822	424,438	220,707
Other Asia .....	30,749	63,059	69,115
Africa ..	39,532	153,584	164,771
Other countries ...	.....	762	1,699
Totals ..	\$3,408,612	\$6,445,062	\$6,505,781

**Exports for the Month of November.**

The official returns on the month of November (1897 and 1898 in comparison) are as follows:

	1897.	1898.
United Kingdom .....	\$ 73,681	\$ 33,874
France ..	12,181	15,701
Germany ..	52,139	62,316
Other Europe ..	35,089	292,512
British North America.....	23,681	18,677
Central American States and British Honduras .....	1,810	152
Mexico ..	4,081	1,835
Santo Domingo .....	135	.....
Cuba ..	786	566
Porto Rico .....	413	210
Other West Indies and Bermuda .....	7,924	5,120
Argentina ..	4,940	11,514
Brazil ..	14,502	5,037
Colombia ..	2,089	.....
Other South America .....	4,618	4,441
China ..	3,240	5,600
East Indies: British.....	2,403	22,077
Hong Kong .....	891	.....
Japan ..	6,903	10,731
British Australasia .....	27,870	35,557
Other Asia and Oceanica.....	4,290	3,257
Africa ..	21,552	18,391
Other countries .....	.....	.....
Totals ..	\$305,218	\$547,568

**British Exports for Twelve Months.**

The total exports of bicycles and materials from the United Kingdom for the twelve months of 1898 are, compared with the complete returns for 1897 and 1896, as follows:

Month.	1896.	1897.	1898.
January ..	\$ 624,435	\$ 763,820	\$ 480,465
February ..	706,125	688,195	474,225
March ..	891,875	855,830	482,245
April ..	786,335	698,085	522,340
May ..	798,765	697,940	434,700
June ..	772,285	583,050	371,280
July ..	716,755	566,850	383,475
August ..	650,140	483,165	287,535
September ..	683,560	430,460	316,870
October ..	893,320	497,845	314,565
November ..	720,600	446,410	339,480
December ..	1,060,555	444,785	362,749
Totals ..	\$9,278,020	\$7,155,645	\$4,669,129

**American Exports for the Week.**

Exports of bicycles and bicycle materials from the port of New York for the week ending January 31 are recorded as follows:

	Bi-cycles.	Mate-rials.
British East Indies .....	\$15,909	\$1,138
Canada ..	.....	15,762
France ..	10,737	3,583
Argentina ..	10,285	630
England ..	2,759	8,616
Sweden ..	7,575	.....
Denmark ..	.....	4,571
Africa ..	1,441	1,351
Brazil ..	807	281
Belgium ..	340	653
British West Indies .....	680	302

Mexico ..	787	54
British Guiana .....	769	14
Other South America .....	344	53
Scotland ..	.....	297
Dutch Guiana .....	200	.....
Tasmania ..	125	.....
Chili ..	150	.....
Austria ..	115	.....
Cuba ..	120	.....
Holland ..	100	.....
Russia ..	75	.....
Totals ..	\$53,278	\$87,305

**Week's Exports from England.**

The total exports of bicycles and sundries from England for the week ending January 13 are recorded as follows:

Adelaide .....	\$ 586
Auckland .....	48
Bombay .....	2,493
Bordeaux .....	73
Boulogne .....	2,454
Calcutta .....	1,486
Cape Town .....	315
Christchurch .....	53
Colombo .....	68
Delagoa Bay .....	218
Durban .....	4,115
East London .....	290
Flushing .....	1,234
Freemantle .....	4,143
Hamburg .....	73
Hiogo .....	179
Kurrachee, British India .....	87
Launceston ..	232
Lisbon ..	353
Madras ..	484
Malta ..	48
Melbourne ..	3,282
Ostend ..	165
Penang ..	136
Perth ..	165
Port Elizabeth ..	2,062
Santos ..	97
Singapore ..	213
Sydney ..	1,418
Trinidad ..	92
Wellington ..	1,258
Westport ..	68
Yokohama ..	111
Total ..	\$28,104

**Bicycles Exempt in Minnesota.**

The Minnesota state senate has passed a bill exempting from execution one bicycle for each person. Despite this recognition of the bicycle as a necessity, there are still many localities where they are considered a luxury and efforts are being made to tax them. With the various recent rulings against the legality of a tax and the above bill as precedents, organized effort should experience little difficulty in defeating future efforts to tax bicycles.

**Canadian Jobbers Revolt.**

Canadian hardware jobbers have decided to boycott manufacturers who sell direct to retail dealers. It seems that the Canadian jobbers and manufacturers had an agreement to the effect that the latter should not sell the retail trade. This agreement the manufacturers have violated, according to the reports, and now the jobbers are up in arms against the offending manufacturers. Representative firms from all parts of the Dominion were present at a meeting recently held at Montreal when the plan to boycott the manufacturers was determined upon.

**Stanley Wagons Under Construction.**

There has been a rumor afloat in regard to the organizing of a \$300,000 company to handle the Stanley steam wagon, but nothing has yet been actually done.

It is expected that the first of the new model Stanley steam wagons will be completed by the 1st of March, and that the remainder of the hundred under construction in the first lot will follow rapidly.

The case of the B. F. Goodrich Company against Humber & Co., Limited, et al., has been removed from the superior court to the United States circuit court on motion of the English stockholders.

Austrian cycle fittings makers are petitioning their government to increase the duty on these goods.

# THE CYCLE AGE

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

Published every Thursday at 324 Dearborn Street, Chicago.  
Eastern Offices, American Tract Building, New York City.

Subscription price in the United States, Canada and Mexico, \$2.00 per year; in foreign countries \$6.00 per year.

ALL remittances should be made to THE CYCLE AGE COMPANY.

## DIP BRAZING ENDORSED

"The new process of dip brazing enables us to guarantee the perfect union of all members of the frame, and the flush joint is therefore a feature of Sterling construction as well as the outside connection." With this straightforward reference to dip brazing as a method assuring superior mechanical results, the Sterling Cycle Works company takes rank as the first well known cycle manufacturing concern which makes it a point to acknowledge openly in its catalogue that it considers the new method as something more than a measure of economy, and, indeed, as a distinct improvement which, in the company's opinion, is indispensable for any conscientious bicycle manufacturer who desires to guarantee his customers that all flush joints in the frames of his manufacture are sound and reliable. The company emphasizes its statement by adding that it has been slow to adopt flush joint construction, as "we felt we could not be assured that the parts were thoroughly united."

The reputation which the Sterling company has earned in the past for high-class work, careful selection of material, and cautious testing at every new step, cannot but add to the importance which the trade at large will attach to its endorsement of dip brazing.

As a money-saving method, whose value to the rider was undiscussed and therefore of doubtful value from a commercial standpoint, the practice of dip brazing was hedged with reserve and secrecy until The Cycle Age, firmly convinced that the method had virtues which should recommend it strongly to riders of bicycles, undertook to place it before the whole trade.

Now, with the ice once broken by a highly reputable firm of bicycle makers, it seems safe to predict that other manufacturers who have reached results with dip brazing which were satisfactory to themselves, will speedily make their agents and patrons conversant with all the claims that can be made for the method in regard to safety against burning of tubing, non-flowing of spelter, and other causes of unforeseeable breakdowns which in the aggregate have done much to diminish the popularity of cycling.

## DEFENSE FUND NEEDED

Every bicycle maker in this country is haunted and made nervous by the fear that the exact measure of his legal liability for accidents resulting from defective construction will one day be harshly and definitely fixed

by a court of competent jurisdiction. The same dread is felt by English makers. But the German manufacturers, more rash than either the Americans or English in seeking light on the subject, have already found to their great dismay that there are more common law rights granted to buyers of bicycles than it is wise to exploit—indeed, have ascertained that though a machine may be guaranteed for a year or longer, yet this guaranty in no way implies an abrupt termination of the period of responsibility, which is held to extend for five or six years.

There is little doubt concerning the anxiety of our makers to see this important question settled, but the difficulty in the way of a decision is one which might naturally be anticipated from the risk which would inevitably attend a prosecution. Aside from the fact that martyrs are scarce in the cycle trade, there is but too much reason for believing that the courts would hold the low factor of safety in construction to be adequate cause for pronouncing adversely against the defendant in a case which was vigorously pushed. The guaranty is no shield; on the contrary, it is merely a proclamation of good intention on the part of the maker, and if legally accepted by the purchaser, does not

constitute a waiver of right to sue for damages if, after the expiration of its period, the machine shall prove defective. It is of no more value in defense against suit for damages than the acceptance of the conditions attached to a railroad mileage book, which commonly is supposed to act as an effectual barrier against legal proceedings in the event that the holder is injured while being transported over the road.

There is quite a distinction as to liability on the part of a manufacturer and of a dealer, the first being responsible for latent defects, while the latter is not, if he buys from a well known maker whose reputation is established, and he is permitted to rely upon that reputation. This is also true of the manufacturer, where he buys his parts, such as tubing of a well known make; in this case, the maker of bicycles is not responsible for invisible defects, all that is required being that he buys the best in the market and uses care and skill in putting it together.

The number of reputable firms which have paid hush-money rather than be dragged into court may never be known, but it is doubtful if they would have resorted to such tactics were they assured that others, similarly victimized or threatened, would come to the rescue with money and counsel. It is not alone in this matter that the cycle making industry stands in need of a defense fund. There are other dangers, and far greater, threatening.

## CREDIT IN COLONIAL COUNTRIES

When the question of allowing or not allowing credit in export deals is put as broadly as it usually is, it loses its point. "Foreign" trade includes a big scope of country, and it is hardly possible to apply the same rule to all of it. Yet the cry for credits, as voiced by our consuls, comes with almost equal vigor from all parts of the world.

What really most puzzles our exporters is not, however, the well-meaning admonitions of our representatives abroad, which may be taken with a grain of salt, but the observation that those markets where trade follows liberal credit methods are precisely the same where the danger in allowing credits is greatest and where our facilities for protecting accounts are most meager.

As a general rule, it may perhaps be said that where the means of communication and transportation are lagging behind the progress of civilization in other respects, there the demand for credit is peremptory, while the protection afforded creditors depends upon facilities which the American exporter usually does not possess. The liberal prices which prevail in these markets furnish the inducement for European colonial traders, who hold the key to the credit situation, to buy American bicycles for cash and either reship them to their colonial customers or have them shipped directly from New York.

This applies to the colonial countries, where the tide of new enterprises runs high and where cash capital is made scarce by the constant demand for it. South and Central America and Mexico, while not colonies, belong to this class, and British India and Java on the other hand, though colonies, have reached a point in development which makes credit less imperative for trade than quality and price.

In European countries where the creditor is well protected it might seem as if the system of selling for cash against documents were not indispensable; and, in fact, deviations from it have been freely made in the past year or two. But the question has two sides: In the colonial countries much trade would be gained if credit could be generally conceded with safety. In Europe credit is practicable, but hardly altogether desirable.

The European importer who, in the midst of a comparatively easy financial market, is incapable of producing cash at a rate of interest much below the discount that our manufacturers can afford to allow for cash, is readily distanced by the many who can do better, and under such circumstances extension of credit is practically a bid for unsafe trade and therefore a confession of weakness.

With all its undisputed drawbacks, the cash system is probably for the present best adapted to our commercial position: in new countries because ye cannot yet get around it, and in older foreign communities because the risk and expense inseparable from a credit system are not offset by prospective rewards in the form of high prices or much increased volume of business.



# CRESCENT BICYCLES 1899 CRESCENTS ARE NOT '98 MODELS

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NEW TESTIMONIALS EACH WEEK.

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## PUNCTURE PROOF

Pneumatic

Resilient



Single Tube

Easy Riding

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PRESENTING TESTIMONIALS:

Office of Judge of Probate of Menominee County, Eugene Grignon, Judge.

MENOMINEE, MICH., Jan. 12, 1899.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
 Dear Sirs:—I take great pleasure in testifying to the worth of your "PUNCTURELESS TIRES," a pair of which I rode all last season, without a puncture, and with perfect satisfaction. I weigh two hundred and seventy-five pounds, and never before have been able to get a tire that would hold for any length of time, besides being punctured from one to three times a week. I am riding your tires and feel perfectly safe, and they do not require inflating oftener than once in two weeks. I shall recommend your tires to all my friends.  
 Yours respectfully,  
 (Signed) EUGENE GRIGNON, Judge of Probate.

MANISTIQUE, MICH., Dec. 11, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
 Gentlemen:—In reply to yours of recent date, would state that I am very well pleased with your tires. My boy is hard on a wheel, and they have stood it the best of any tire I have yet used.  
 He has ridden the tires all season and the tires are as good as new.  
 Very truly,  
 (Signed) JOHN WOODRUFF.

Representatives Wanted.

Write for Prices and Other Information.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.

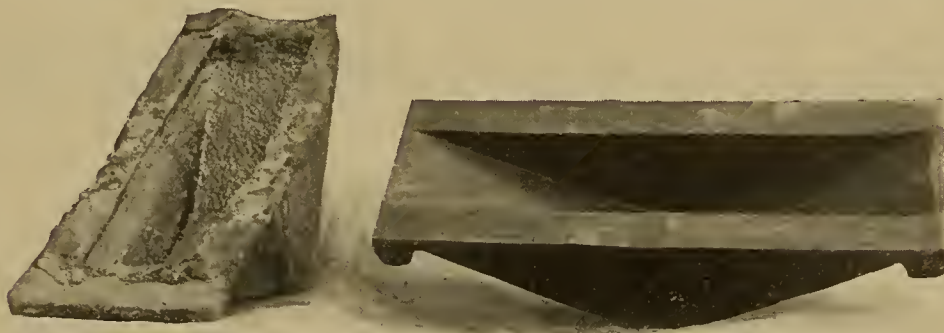
## BRAZING BY IMMERSION

### Requirments of a Crucible—Effect of the Flux Upon Its Walls—Method of Removing Spelter

Crucibles for bicycle brazing are made in triangular shape for the purpose of allowing the four corners of the frame to be dipped in a comparatively small body of molten spelter. Any other shape would necessitate the heating of twice or three times the amount of spelter, for the frame tubes are immersed to a depth of five or six inches. If the crucible were round, it would need to be of large diameter to furnish sufficient immersion of all parts.

#### Purpose of the Flanges.

The flanges of a crucible would at first thought appear to be superfluous except on the ends, for the side flanges are not used to support the crucible as are the



OLD AND NEW CRUCIBLE, FORMER SHOWING EFFECTS OF FLUX.

end flanges. But the side flanges play a very important part in the control of the heat. As the heat arises alongside the crucible it strikes these flanges and is checked and diverted, passing around over the top of the flanges and out through an opening not over half an inch wide. If the flanges, which are  $2\frac{1}{4}$  inches wide, were not there, the flames would pour out without anything to check them, and the operator would have difficulty in preventing his face from being scorched, and the fuel would burn up in half the time. The inside measurements of the crucible are about 24 inches in length, 6 inches in width, and 9 inches in depth.

#### The Best Fuel to Use.

The best fuel to use in a brazing furnace is hard coal. It produces an intense heat, with very little smoke. The lumps, being of uniform size and not too large, can be fed into the furnace more readily than coke, and the fire is more compact. Gas would require a furnace of different construction. It has a tendency to shorten the life of a crucible and produce an uneven heat if not scientifically handled.

#### Heating and Cooling Uniformly.

A crucible should be heated and cooled uniformly. More depends upon the regularity of the temperature at all points than upon sudden changes to extremes of heat and cold. To illustrate: A crucible heated to a white heat can be suddenly plunged into a tub of ice water without breaking, because all parts of the material cool and contract evenly. On the other hand, if a draft of cold air be allowed to strike one part while the rest is hot, it is likely to crack at the point where the cold air strikes.

#### Drying Crucibles Before Use.

Crucibles are susceptible to dampness and gather moisture very readily. They are annealed before leaving the factory. When received, they should be imme-

diately unpacked and stored in a warm, dry place. Before using they should be re-annealed to remove any moisture gathered in transit. This can be readily accomplished by placing them in the enameling oven and gradually bringing the heat up to 212 degrees. If this is not done, they may scalp or flake off on the first heat.

#### Removing Spelter from Crucible.

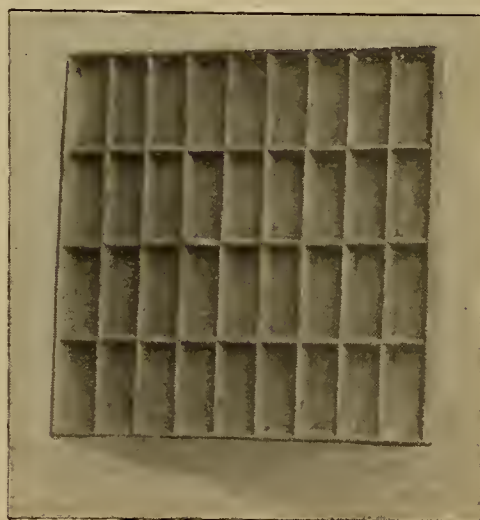
Spelter should never be allowed to cool in a crucible, for when it is re-heated it expands and breaks the crucible. It should be dipped out and poured into a mold like that shown in the illustration. The bars in the mold will re-melt much more readily than if the spelter is re-

moved from the crucible by other means.

The crucible should be placed in the brazing furnace with the two end flanges resting on the brick work and the side flanges unsupported. Projecting bricks from the side walls of the furnace should engage the bottom of the crucible so that the weight is evenly distributed. Some prefer to set a brick directly under the bottom of the crucible; others claim this interferes with the fire.

#### Action of Flux on Crucible.

The flux which floats on the top of the spelter in a crucible gradually eats its



MOLD FOR SPELTER.

way into the walls, as may be noticed in the illustration, and eventually would cut clear through if the crucible did not first crack or give way at some other point. A good practice is to lower the surface line of spelter occasionally and allow the flux to attack a new level, and thus prolong the life of the crucible.

If a crack should develop and allow a little of the spelter to run into the fire,

a blue flame would appear. The spelter should be dipped out at once, the old crucible removed, and a new one substituted. It rarely happens that a crucible breaks suddenly. It has occurred in brass foundries, but has never been reported in bicycle practice. The average life of a brazing crucible can be conservatively estimated at ten days. Instances have been reported where twenty and even thirty consecutive days' use has been obtained. Much depends upon the manner of handling. As the operator becomes familiar with the peculiarities of his crucible, he will be able to obtain more efficiency. A broken crucible cannot be repaired.

#### Graphite is the Best Material.

No other material is so well adapted for use in crucibles as graphite. It is the form of carbon nearest to the diamond form and is unaffected by heat or cold, or any known chemical. It is an excellent conductor of heat. As it comes from the mine, it contains from 50 to 60 per cent of sulphur, silica, and other impurities, which are eventually set free.

Melung pots have been made of clay, glass, platinum, lime and, for very low fusion metals, of iron. Glass on account of its brittle nature, platinum on account of the enormous expense and the fact that it corrodes if heated with alkalides, and fuses with the oxides of metals of easy reduction, lime and iron for obvious reasons, all have been used only for special work, but can never come into general use and hence deserve but casual mention in this article.

#### Development of the Crucible.

An English patent was granted in 1762 to William White for the manufacture of clay crucibles. They stood the heat fairly well, but had to be heated slowly. If plunged suddenly into an intense heat they would crack. They would not stand alternate heating and cooling. Flux ate them up very quickly, and altogether they were not to be compared with the established standard for crucibles of today. Slight improvements were made from time to time by the addition of coke, etc., but the clay pot of today is very little different from that of 1762. In 1827 Joseph Dixon discovered the plumbago crucible and revolutionized the business of melting metals.

#### Suggestions Are Plenty.

Many suggestions are made to the crucible bakers for alterations in shape, changes in the thickness of ware or flanges, etc. These suggestions will all receive due consideration, but it must be remembered that there are many reasons why they may not be practical and cannot be adopted. Crucibles cannot be made in a day. It is a tedious process. After the materials are prepared and fashioned into the proper form, a week is required to dry them thoroughly. Another week must elapse before they are out of the kiln, to say nothing of the time necessary to transfer them from one department to another, pack, ship, etc.

Crucibles are not all made of the same mixture. They vary in nature according to the composition of the metals to be melted, the intensity of the heat to which they are to be subjected, the flux, the style of furnace, the draft, etc.

#### Combined Cycling Hose and Garter.

Albert Gutschne, of Philadelphia, has invented a means of weaving strands of rubber together with the yarn of a woolen stocking and of fastening the ends so as to cause the top of the stocking when rolled down, as in the usual golf pattern, to cling firmly to the leg. Many local wheelmen are already using these hose. The process is also applicable to hosiery of all kinds.

## COMMERCE IN FOREIGN MARKETS

### BELGIUM CYCLE MAKERS ACTIVE

A prominent Belgian tradesman is endeavoring to form some of the largest cycle concerns in his country into a syndicate for the purpose of exporting to South America, Asia and Australia. It is the intention to procure the services of a first-class traveling salesman, who will be provided with samples of bicycles, fittings, equipments, sundries, etc., and he is to make a tour of South Africa, the West Indies, Australia, New Zealand and South America. At the most important points he is to make special displays of his wares in order to make known the low prices of Belgian cycle products. Price lists and catalogues printed in the languages of the countries in which he may happen to find himself will be distributed. It is expected that the Belgian government will give financial aid to the project and that the consuls will lend all assistance in their power.

Belgian cycle imports for the past year show a great decrease as compared with the two previous years, as the following figures prove: 1898, \$379,100; 1897, \$436,975; 1896, \$637,305. The exports, on the other hand, have considerably increased, the figures for the three years being: 1898, \$537,060; 1897, \$484,195; 1896, \$334,725.

### TRADE POSSIBILITIES IN RUSSIA

Notwithstanding the rapid progress Russia is making in the establishment of manufactories, which are being encouraged by the government, she is not able to keep pace with the increased demand for iron, locomotives, cars, coast steamers, battleships, elevators, electrical apparatus and supplies, woodworking machinery, tin plate, agricultural implements, rosin, cotton, roofing slate, leather, scales, heavy ordnance, typewriters, tools, bicycles, sewing machines, hardware, coal and other machinery, photographic materials, as well as in other lines in which our supremacy is unquestioned.

Ambassador Hitchcock has been consulting American residents of St. Petersburg and Moscow, as well as American manufacturers who have visited the former city during the past year, as to the advantages to be derived from an American exposition to be held in St. Petersburg in 1901, immediately after the Paris exposition, as the best method of introducing and advertising goods and affording American manufacturers an opportunity to become acquainted with Russian merchants, and familiarize themselves with the kind of goods adapted to the Russian market and the methods of doing business. Such an exposition would result in the establishment of a Russo-American bank to handle American business, a commercial agency to report on the standing of business men in both countries, as well as an international express company and parcels post, all of which are essential to the proper development of trade with this rapidly growing country.

English firms give a credit of from nine to twelve months, the buyer usually accepting a draft payable at a London bank, without interest, that being included in the price. Some English firms of German extraction give even longer credits and keep open accounts with regular customers, the buyer remitting at his convenience during the year.

The custom of German firms, where money is very cheap, is to give six months' credit and frequently from nine

to twelve, while open accounts are common.

American exporters usually require payment at an American bank on the presentation of bills of lading, showing the freight to have been delivered on board of a steamer at some leading seaport in the United States, which is well enough for cotton, rosin, and such other cash articles, for which the United States is the leading market; but where there is sharp competition from England, Germany, Austria, Belgium and France, the terms offered by these countries must be met to secure business.

### EFFECT OF CARACAS WAREHOUSE

The Caracas warehouse is one of the largest and most convenient business buildings in that city. At the present time ninety manufacturers have their lines of samples shown there or now in course of shipment. In addition to these exhibits, the library in the warehouse contains catalogues of hundreds of manufacturers, all classified and indexed. The library also contains files of all the leading trade papers published in the United States, which prove of great interest to the business men of Venezuela. The attendance at the warehouse has been surprising, both as to number and character of the visitors.

Within an exceedingly short time this warehouse has become recognized as the headquarters for American goods in Venezuela. Although an active and aggressive factor in developing American trade in Venezuela, the warehouse does not occupy the position of a competitor with any of the existing business houses, but acts in the most complete harmony and co-operation with all of them. Its aim is not to divert or intercept their trade in any manner, but to aid them, and this fact has won for the warehouse the friendship and co-operation of the important business interests of that country.

Many of the manufacturers whose lines are shown are represented by resident agents, who make their headquarters in the warehouse and act as salesmen for the firms they represent; consequently, a large amount of business is constantly passing through the warehouse, being handled by these resident salesmen. In this manner it has been possible to watch the actual development of business and to trace to some extent the influence of the warehouse, although a large amount of business has been developed which cannot be traced with any degree of accuracy.

The exports from the United States to Venezuela in December, 1898, were 60 per cent greater than in the same month of the preceding year, and the warehouse in Caracas is entitled to credit for a very considerable portion of this increase.

### JAPANESE JEALOUS OF FOREIGNERS

The Japanese are attempting to imitate all civilized nations as regards government in judicial, social, naval and military matters. They are attempting to put into operation full judicial machinery with judges having no previous training. It is extremely difficult for a foreigner to accomplish what he would in other countries. Judgments attained are seldom satisfied, as in such contingencies the Jap changes his name and disappears.

The present tendency of all legislation and business is to crowd out the foreigner. It is against their law to give any government contract to a foreigner, and

it is necessary to resort to subterfuges to get around it, some of the foreign houses keeping Japanese representatives regularly at Tokio as their agents to secure government business. The typical Japanese sees no value in a contract except as it binds the other party to it.

### CHINESE AS MERCHANTS

Chinese merchants are shrewd, sagacious, enterprising and, as a class, upright and honorable. They fully realize the importance of a reputation for commercial integrity and scrupulously maintain their credit. They delight, however, in broad generalities and a bargain is a contest of wits in which the keenest wins. Generally speaking, the co-operative system is in vogue throughout the empire. Every person engaged in a trading firm, from the proprietor down to the errand boy, has his share of the profits, which are carefully graded to correspond with the position he holds.

The empire will not disintegrate, neither will it be divided up. Not that the government is incapable of being overthrown, but it is a cube, and when it capsize it simply falls upon some other face, and to external appearances, as well as interior substance, is the same that it has always been. Repeated experience of this process during the past 4,000 years has taught the Chinese that this result is as certain as that a cat will fall upon its feet.

### CHANGE IN PORTO RICAN TARIFF

The manufacturers and merchants of the United States now have for the first time equal access with other parts of the world to the markets of Porto Rico. Under Spanish tariffs a very large proportion of the imports into the island almost necessarily came from Spain, the duties on goods from that country being but a small fraction of those on goods from other parts of the world. The new tariff which went into effect on February 1 places all countries on precisely the same footing with reference to their goods imported into the island, and thus for the first time the Porto Ricans will have an opportunity of exercising their judgment and wishes free from control as to where they shall purchase.

Porto Rico offers an annual market for \$15,000,000 worth of goods, and this will be very materially increased as the conditions of the people improve and the market is judiciously cultivated by American energy and intelligence.

The Japanese are now inflated with conceit, says a Yokohama paper. The progress made by them in the past twenty years was the result of being humble and working earnestly to supply their deficiencies. With the loss of humility and the development of a conceited mood, progress has ceased.

Apparently Austria is suffering from over-production in the cycle trades. At a recent meeting of workmen dismissed from the principal cycle factories, it was stated that matters were assuming a most critical aspect.

The makers of the Acatene chainless bicycle in England have lost heavily in their trading. The company was organized in the fall of 1896 and the net loss for two years amounts to \$47,000.

## SUBJECTS OF GENERAL INTEREST

**WHERE TRUSTS ARE MANUFACTURED**

The fact has found its way into print that of the great combines organized as corporations under the free and easy laws of New Jersey sixteen have an aggregate nominal capital of \$616,100,000, or an average of over \$38,500,000 each. The scope of these aggregations to stifle competition is plainly indicated by their "national," "American" and "continental" names. They mean to be literally "the whole thing" in their respective fields. The smallest capitalization in the list—\$5,600,000—is that of the United Brewers' Company, which is too modest to pretend to be continental or even national.

These combines of 1898 find themselves in a very select circle of older ones which have the honor and pleasure of skinning the public under the laws of New Jersey. Sixteen of the earlier members of this circle have an aggregate capital of \$592,445,000, or an average of more than \$37,000,000 each.

The aggregate capital of thirty-two combines is \$1,208,400,000. The interesting statement is made that the stocks of combine corporations organized under Jersey law to the amount of more than \$1,000,000,000 does not represent a dollar of investment in New Jersey. This shows how obliging the state is in facilitating the organization of conspiracies against consumers. It should be stated, however, that the state is not altogether unselfish in this matter, for it is collecting a tax on about \$2,270,000,000 of stock representing capital of which the great bulk is invested outside of the state. During 1898 the state derived a revenue of \$2,359,198 from corporation fees and taxes, or about enough to pay the cost of the state government.

But it appears that the legislature of that state has under consideration a measure which may drive the business of manufacturing corporations into some other state. A bill has been introduced changing the tax from \$40 a year for each million of capital stock of any corporation over \$5,000,000 to \$500 for each million over \$5,000,000, or nearly six and a half times as much.

**CURIOUS RAILROAD STATISTICS**

Nearly one-half of the railroads in the hands of receivers at the beginning of 1898 were taken from the courts during the year. On January 1, 1898, according to the Railroad Gazette, there were 120 companies in the hands of receivers, owning 12,798 miles, or 7 per cent, of the entire mileage of the country, and operating 16,199 miles, or 9 per cent, of the entire mileage. The high water mark of receiverships was reached in April, 1894, when there were 210 roads, embracing 36,619 miles, or 20 per cent, of the entire mileage of the country, in the hands of receivers. On January 1, 1896, there were some 31,000 miles, or 17 per cent, of the mileage, in the hands of receivers. During 1898, of these 120 roads not less than 49, owning 6,050 miles and operating 6,639 miles, have had their receiverships closed. In addition, there have been added 18 roads during the year, owning 1,132 miles and operating 1,235 miles.

The net result is that on January 1, 1899, there were 89 roads in the hands of the courts, owning 7,880 miles and operating 10,795 miles. The mileage owned has dropped to about 41-3 per cent and the mileage operated to about 6 per cent of the entire mileage of the

country. The aggregate capital stock and funded debt under the courts at the beginning of 1898 was \$818,286,677, or about one-thirteenth of the entire railroad stocks and bonds of the country. At the end of the year the net aggregate of securities in the hands of the courts was \$568,261,144, or only one-twentieth of the railroad values.

With the Baltimore & Ohio operating over 2,000 miles, the Cape Fear & Yadkin Valley 333 miles, the Columbus, Hocking Valley & Toledo 323 miles, and other roads soon to be taken from the courts, it is not improbable that the end of this year will see the railroad mileage in the hands of receivers as low as it has ever been in the history of the country. Prior to 1894 the lowest percentage was a trifle over 4 per cent, which is about the proportion that now prevails.

**CAN CRUDE RUBBER BE CORNERED?**

Is it possible to corner the production of crude rubber? Suppose the trust people were really to buy up all Bolivia—

and it would only be a question of getting enough money together—the government would be powerless to protect them in a monopoly of rubber. The people already on the ground would claim some rights, and others would be sure to come in, without regard to the rights of the trust. Bolivia is a vast country, with a sparse population, limited means of communication, and a weak government. Under such conditions, any company which gained control of the rubber sources there through the expenditure of large sums of money would be worse off than the rubber handlers who went on buying in the old way, investing nothing beyond the amount of current purchases.

Suppose, too, that control of Bolivia should be gained by the trust; it would be only a beginning, so immense is the rubber district of South America alone. Only 4 per cent of all the rubber that comes through Para is grown in Bolivia. The Brazilian rubber belt is 2,000 miles long, and beyond that is Peru, with a rubber area that has never been measured. In all that country business methods are wonderfully complicated.

There are long established houses in the Para trade that don't know how they stand today, and that couldn't liquidate in ten years. They are making advances constantly of merchandise and provisions to operators up the river, against prospective supplies of rubber; they are receiving rubber constantly for which credit is given, but the accounts are never closed. When a partner in such a house wants to retire he sells his interest to another, who remains on the ground to look after it; if he can't sell, there is nothing to do but charge the unsettled accounts to "profit and loss" and go away and leave them. How could a combination be made of such houses? On what basis could they be brought together?

The leaders in Para rubber trade have reached their present position only after long experience, which has enabled them to know the people they have to deal with, and their peculiar trade customs, so that they are able to decide to whom to make advances and whom to refuse, and how to proceed to collect debts in a country where the courts afford no aid. A public company—such as this proposed trust—controlled by a board of non-resident directors, through salaried managers, could never conduct the rubber

business successfully, in South America or anywhere else.

The African rubber supply must not be forgotten. The production there is very large already, and seems to be growing, though it is hard for outsiders to learn anything about conditions in the interior. No one can say when the supply may begin to fail. Just now, however, immense profits are being made in Congo rubber. Shares in one of the Belgian companies having concessions for rubber in the Congo Free State, of 500 francs par value, were sold lately at 10,000 francs, and are said to pay 15 per cent on this valuation. This sort of thing cannot go on long without attracting a host of new explorers for rubber. If they can't get into the Belgian Congo territory, they have only to cross the river into French Congo, where the same kind of rubber doubtless exists.

There never will be any trouble about getting rubber so long as there are buyers for it, until rubber trees stop growing. The known rubber countries are too extensive, and the people now engaged in handling rubber have interests too diverse to render consolidation possible.

**GRAPHITE AND ITS MANY USES**

Few, even of the well informed, dream how indispensable graphite is to modern civilization. Not a single iron casting is

taken from its sand mould without the sand being first faced by graphite; not a gun projectile is cast but the steel is melted in a graphite crucible; not a tool nor a saw is made but from graphite crucible steel. Every pound of nickel, of copper, of composition metal, of brass, is cast in some way, the metal being reduced in a graphite crucible. Every printing house, for the perfection of its electrotypes, is absolutely dependent on graphite. Every electrician and every department of electrical work comes under the same tribute. Graphite lubricates friction ways, it is notably the most enduring paint pigment, and the bulk of the writing done on the globe today is done with a graphite pencil; it has ministered to the arts of peace and to the science of war. It saves labor and it proves a short cut to desired results.

Graphite is found in great abundance in the island of Ceylon, in the Indian ocean, and next in quality and quantity at the graphite mines at Ticonderoga.

**GREAT REDUCTION OF OUR IMPORTS**

Governmental statistics of the import trade of the United States in the year just ended show the smallest importation in

twenty years, with the single exception of the year 1885. The total imports for the year were \$634,958,229. This is \$100,000,000 less than the imports of 1897 and \$200,000,000 less than those of 1892. The reduction of imports is altogether in articles free of duty, the dutiable imports in 1898 being \$366,595,549, while those of 1897 were \$365,302,240, while the free articles imported in 1898 amounted in value to \$268,362,680, as against \$377,329,110 in 1897.

The reduction of more than \$100,000,000 in imports is apportioned among the great groups as follows: Articles manufactured for consumption, \$14,000,000; articles manufactured for use in the mechanic arts, \$22,000,000; articles of food and live animals, \$32,000,000, and articles in a crude condition for domestic industry, \$39,000,000.



TRADE MARK



72



MANUFACTURERS ARE FURNISHING

# Dunlop Detachable Tires



On their wheels AT NO EXTRA COST, either wholesale or retail.

Agents should see that the manufacturers whom they represent are among this number. Write us about it.



1899 IS GOING TO BE A DUNLOP YEAR



## The American Dunlop Tire Company

134 Lake Street, Chicago.

Belleville, (North Newark) N. J.

36-38 Lombard Street, Toronto.



TRADE MARK



# THE STERLING

## "BUILT LIKE A WATCH"

The True Sportsman is not satisfied with a Makeshift

Instinctively he buys the BEST regardless of a few extra dollars in cost.

His Horse and Dog are thoroughbreds—his Gun and Rod are unexcelled—and his BICYCLE is High Grade and a Standard make.

STERLINGS at \$50.00 are within the reach of every purchaser who takes a pride in being as well mounted as his friends.

Our 1899 campaign is a vigorous one and we want Energetic Agents to conduct it.

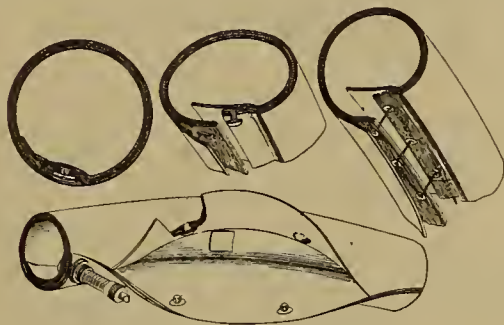
Send for our Catalog and Proposition.

### STERLING CYCLE WORKS, KENOSHA, WIS.

RECENT PATENTS

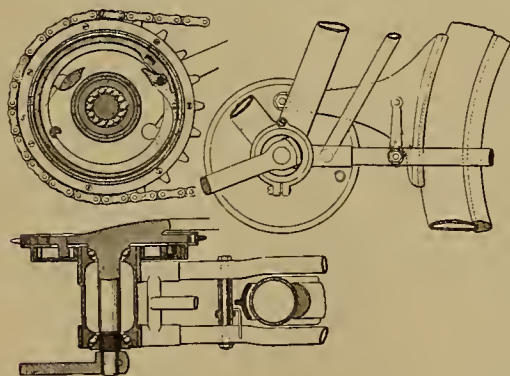
Flexible Rear Fork Connection—Featherstone's Handlebar  
—Ecaubert's New Brake—Tubeless Tire

Single Tube Detachable Tire.—Differing from the English tubeless detachable tires, this tire is made for applying to ordinary crescent shaped rims. The open side is formed so that the two edges overlap and so that the under lap may be cemented to the rim. The upper flap may be secured to the under in any of several different ways. The methods de-



scribed by the inventor include glove button fastenings and continuous lacing through eyeletted holes. All surfaces of the flaps are covered with rubber so that when the operator is closing the tire after fixing a puncture by patching on the inner wall, he can cement the adjacent surfaces of the flaps together with rubber solution and thus make the joint air tight. The inventor is A. J. Whisler, of Kokomo, Ind.

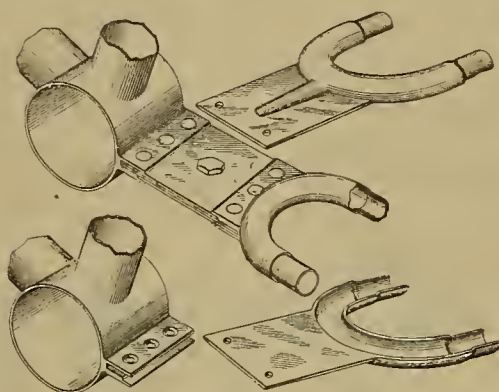
Back Pedaling Tire Brake.—The brake is a combination affair in which the braking is done both through a friction brake band acting on the sprocket and through a brake shoe acting against the tire of the rear wheel. The front sprocket is mounted on a disk attached to the crank shaft and rotates with the disk when the pedals are moving in a forward direction, the connection being through pawls and ratchets. Projecting inwardly from the sprocket rim is a flange lined on its inner periphery with cork, which forms the braking surface for a steel brake band carried by a disk secured to the hanger barrel. The expansion of the brake band depends upon the action of



pawls and occurs immediately after forward pedaling has ceased and the back-pedaling is begun. If the back-pedaling is sufficient, a small cam arranged on one of the pawls will be moved backward till it catches a stud projecting from the disk screwed on the hanger and turns the latter backward. In turning the disk backward, the connecting arm of the spoon brake pushes the latter against the rear wheel tire. The tire brake thus affords a second brake for use when the sprocket brake is not sufficient or when the chain breaks. The tire brake can also

be operated without having first actuated the sprocket brake, by back-pedaling suddenly so that the pawl cam will skip the first stud and catch a second stud on the hanger disk, which is independent of the band brake. The inventor is Frederic Ecaubert, of New York city.

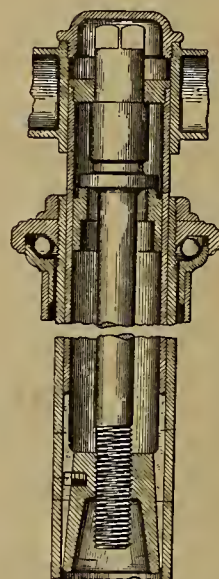
Cushion Frame.—The inventor whose well known cushion-frame construction is embodied in special models by several bicycle manufacturers seeks to strengthen the rear forks against lateral strains and twists and at the same time to afford elastic coupling between the forks and hanger by forming the connection with three flat plates. Projecting rearwardly from the crank hanger is a transverse web or flange in which is cut a slot extending from one end to the other. A recess is formed in the lower lip of the flange, but is not as deep as the main slot. The round arch which forms the front end of the rear forks has a similar flange and slot, with the exception that the recess is cut in the upper instead of in the lower lip. The middle plate extends back into both slots abutting against their respective ends, but the lower plate, while it extends to the bottom of the rear slot, merely enters the



recess in the front slot and does not quite touch its end wall. The top plate enters the recess in the rear slot in the same manner. Countersunk rivets passing through the webs secure the top and middle plates at the front and the bottom and middle plates at the rear. In the center of the plates holes are drilled for the passage of a bolt which is slightly smaller than the hole and which is provided with a shoulder at the bottom of its threading, so that the nut may be screwed down tight but will still not bind the plates. This construction allows the plates to bend either way on the same general curve without undue strain on any of the webs. The inventor has also worked the same idea of a flat plate back of the hanger into a rigid frame for the purpose of giving added lateral stiffness. The patent covering the latter construction specifies a round crown for the forks, which is made in two sections, the division being made on a central horizontal plane. From the front of each section projects a flat plate. These two plates lie together when the parts are assembled and enter a slot in a flange projecting from the hanger. On the top of the upper plate and on the bottom of the lower plate central longitudinal beads joining the crown surface are formed in the plates for the purpose of stiffening the construction against vertical strains. A design patent has also been obtained

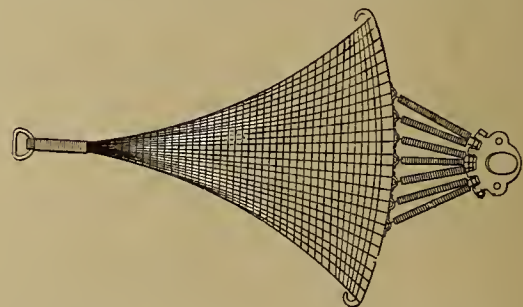
on the general form of these constructions. The inventor is C. L. Travis, of Minneapolis, Minn.

Featherstone Expander.—A shoulder is formed upon the inside of the handle bar stem, and near its top on this rests the expander by means of a flange. After the rod has been placed in the stem a ring is screwed into the upper end of the stem tube and abuts against a shoulder on the rod, thus retaining it against vertical movement in the stem. The tapered expander piece and split stem end are of the usual construction, but in order to keep the expander piece from turning in



unison with the rod when the parts are being loosened or before they are sufficiently tightened for the expander to bind, a small pin is screwed into the side of the expander taper, its projecting end engaging one of the slits in the handle bar stem. A distinctive feature of the device is the threaded cap which is screwed into the open upper end of the handle bar stem tee piece after the desired adjustment has been made, and hides the squared end of the rod from view. The inventor is Anthony Jerome, of Chicago, assignor to A. Featherstone & Co., same place.

Cantilever Cycle Saddle.—The saddle is that designed for and used on the Pedersen cantilever bicycle. It is composed of a series of cords or leather thongs attached at their front ends to an eye suitable for attachment to the forward end of the cycle frame, and at their rear ends to a curved cantle connected by a series of springs to the rear of the frame. The springs radiate from a socket to which they are attached by a curved bolt, and



spread sufficiently to steady the saddle, but not so much as to make it rigid. The inventor is Mikel Pedersen, of Dursley, Eng.

The French makers have declared that "the bicycle is now so near perfection that cycle shows are not needed." Moreover, it is added that "all the people who intend to ride are educated in bicycle construction." Both statements are very wide of the truth.

The post office authorities in Great Britain find use for 10,000 bicycles.

## NEW MOTOR VEHICLES

Light Weight Orient Electric—Tinkham Motor Tricycle—  
Hertel's Improvements in Motor and Running Gear

At the recent New York cycle show there were among the motor vehicle exhibits, besides the Pope electric carriages and gasoline carrier and the Riker electric vehicles, which have all been illustrated and described in detail in previous issues of this paper, also several new patterns which deserve more special attention than was accorded them in the show report.

## One Dollar Per Pound.

The one novelty exhibited in electrics was the four-wheeler for two passengers shown in Fig. 1, which is the first motorcycle turned out by the Waltham Mfg. Company. This Orient electric is, as shown by the engraving, a vehicle of good appearance, and its workmanship appeared to be excellent. The running gear is all of steel tubing, similar in general design to that of the Stanley

The brakes are of the band and drum variety, applied directly to the hub of each rear wheel, and are of ample power.

The battery weight is very small as compared with weights used in the Riker and Pope vehicles, but of course the light weight of the Orient wheels—only half that of the Riker and Pope average—makes a much smaller motive force sufficient. This Orient carriage is said to have a range of twenty-five miles on ordinary roads, and to be a good hill climber. The lightness of construction is not obtained by a reduction of overall dimensions, as the carriage has ample seating room, and is in every way a thoroughly comfortable road wagon.

## Two-Stroke Cycle Gas Engine.

A new explosion engine driven vehicle shown was the Tinkham tricycle, Fig. 2. The wheel base is 54 inches and the

A two-cycle gas engine is greatly desired, and it is to be hoped that the Dennison may prove to be all that is claimed for it.

Like all other motorcycle exhibits at the Garden, this Tinkham tricycle attracted great attention, crowds of spectators constantly surrounding it, eager for information in motorcycle matters.

## Accessible for Inspection and Repair.

The Hertel explosion engine driven wagon, built and shown by the Oakman Motor Vehicle Company, Greenfield, Mass., of which a side view and maker's description are given on page 320 of The Cycle Age, issue January 12, embodies original features at almost every important point of construction, and is evidently the result of independent thought long continued. In many directions this wagon is theoretically superior to anything else yet shown, and one extremely meritorious practical detail is to be found in the very complete exposure of, and access to, every part of the machinery, gained by simply raising the sheet metal tail board, as shown in Fig. 3. The tail board is supported in its elevated position by rule-jointed pivoted metal bars, and the mechanism is all disclosed, so that any part can be readily reached with a wrench or screw driver by a per-

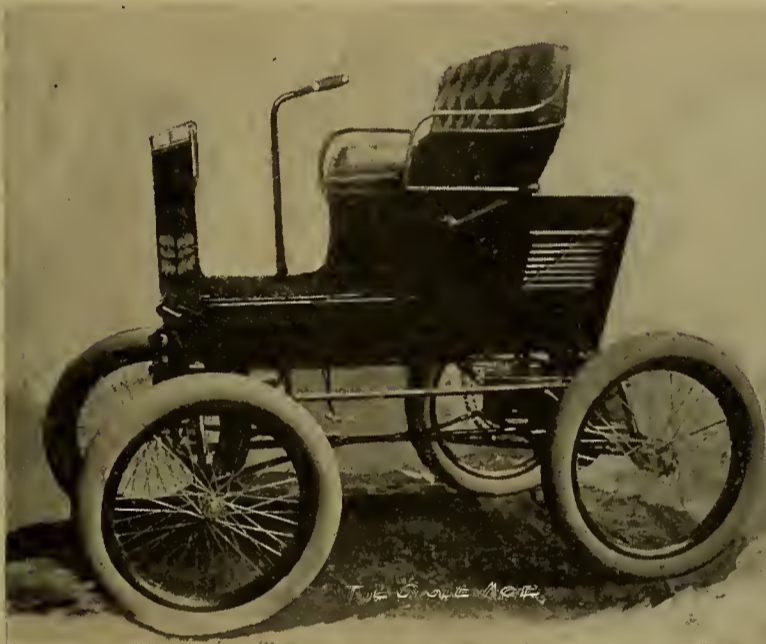


FIG. 1.—ORIENT ELECTRIC CARRIAGE.

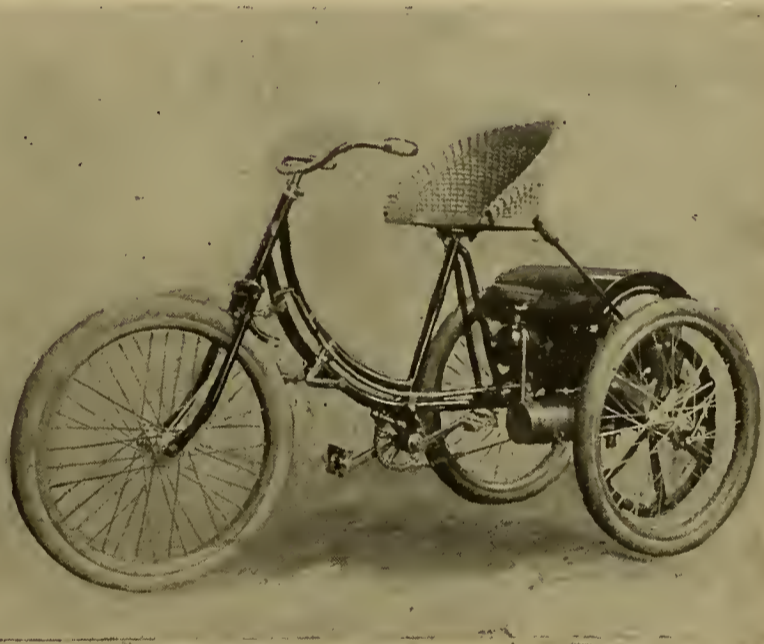


FIG. 2.—TINKHAM GAS ENGINE TRICYCLE.

steam wagon, which was fully illustrated in these pages a short time since. A peculiarity of this Orient frame consists in fitting the middle parts of the top side bars to turn in the end sections; this gives the frame sufficient twisting flexibility to enable the wheels to accommodate themselves to road surface irregularities. The weight of this wagon is 1,000 pounds, and the price is \$1,000.

The particulars of the Orient electric are as follows: Wheels, suspension; Fairbank's laminated wood rims, 32 and 34 inch diameter; rear wheels driven; front steering wheels, on the usual short pivoted axles; all wheel bearings on balls; the tires are 4 inch diameter, by Morgan & Wright, and can be furnished for \$100 per set of four. The wheel base is 60 inches and the gauge is 48 inches. The air pressure is 100 pounds. The batteries, by the Chloride Company, Philadelphia, weigh 550 pounds, and can be replaced for something under \$300. The motor is by Riker, 8-10 K. W., and weighs 100 pounds. The gear reduction from the motor shaft to the compensator gear disk is 8 to 1. The compensating gear is a special design by President Metz, of the Waltham Company, and is spoken of as a decided advance in the construction of that important detail.

gauge is 30 inches. The wheels are all 28 inch diameter and the pneumatic tires are 2½ inch diameter; price, \$15 for the set of three. The motor has a two-stroke cycle, and was designed and built by J. F. Dennison, New Haven, Conn. There have been many attempts made to produce a satisfactory explosion engine working on a two-stroke cycle, commonly written "2-cycle," but so far none of the two-cycle explosion engines have proved entirely satisfactory. Mr. Walton, who gave the information in regard to the details of this Tinkham tricycle, did not explain the construction of the Dennison engine to the writer, more than to say it was two-cycle, and had no puppet valves, a single disk valve, secured to and revolving with the engine shaft, answering for both cylinders. These cylinders are located opposite each other, are on each side of the engine shaft, and give one turning impulse for each half-turn of the crank shaft. The usual chain and sprocket transmission is introduced between the pedal crank shaft and the engine shaft, for starting the motor, and a pinion on the engine shaft meshes with a ring of internal gear on one driving wheel. The price of this tricycle is \$500. The Tinkham company will build all styles of automobiles.

son standing on the ground. This is in strong contrast to the French automobiles, the machinery of which is accessible only to a man lying flat on his back, underneath the wagon, a most unsuitable position for working comfort and cleanliness as well. This ready access to all of the mechanism is a very strong point in Hertel's favor, as it enables attention to be given to the machinery on the road by a man standing squarely on his feet and working at a natural height.

## Wheels Conform to Road Surface.

Perhaps the most original feature of Hertel's running gear is the independent wheel support given, which enables any one of the four wheels to rise or fall a considerable distance, without raising or lowering any other part of the mechanism.

This independent wheel rise and fall is obtained by mounting each wheel on an axle carried on the free end of a pivoted spring-controlled arm, so that the wheels rise and fall independently of the wagon frame. While these swinging axle supports do not give the eye an impression of superabundant rigidity of wheel axle support, Hertel states that in all of his five or six years of experience with it on the road he has never seen the smallest

indication of weakness in this direction.

Hertel obviates all the difficulties of the gear case by using V-grooved friction pinions, 3-inch pitch diameter, on the ends of his countershaft, which internally engage leather covered metal rings, 28-inch pitch diameter, secured directly to the driving wheel rims, thus greatly relieving the wheel spokes from tangent stress. This friction drive is still; it is also unaffected by road grit, and it is applied so near the wheel tread as not to require much pressure to make it drive efficiently, and it can be thrown in and out of action instantly, without noise or shock.

#### Description of Motor.

The Hertel motor is a pair of Otto-cycle explosion engines, 4 inch bore and  $4\frac{3}{4}$  inch stroke, both cylinders cast in one piece, as close together as possible, and both pistons working on one crank; the explosions alternate, so as to give a turning impulse during one-half of each turn of the crank-shaft. The clearance is  $2\frac{1}{2}$  inches, or something more than half the piston displacement. The large clearance makes a low compression, and gives, of course, a low initial pressure and a "soft" action. The cylinders are water jacketed over the extent of the piston-ring travel only; this gives the

inch spiral spur gear on the crankshaft which meshes with a 3 inch spiral pinion on the countershaft; this makes the total reduction from the engine shaft to the driving wheels about 41-3 to 1.

The wheels are 26 and 36 inch diameter, suspension; steel rims and ball-bearing hubs. The gauge forward is 33 inches, rear 45 inches, and the carriage will turn in a 10-foot circle. The tires are pneumatic,  $2\frac{1}{2}$  inch diameter, by the Newton Rubber Company, and cost about \$50 for the set of four. The total weight of the Hertel wagon is 475 pounds and the price named is \$750.

The Oakman Company is said to be ready to supply these wagons at short notice. The Hertel wagon has no geared speed changes; the speed is governed by regulating the volume of the explosive charge, which is effected by turning the handle of the brake lever; by this means the engine revolutions can be varied from 160 to 800 per minute.

### EXTRAORDINARY ROAD SPEED

Action of Electric Wagons Traveling Over Forty Miles an Hour—High Horse Power.

Further details at hand regarding the match contest between the Jenatzy and

ometer, flying start, and 2:09 for two kilometers. At pistol fire his carriage shot forward at a terrific pace. The spectators at the winning post could see the black mass rapidly approaching in a perfectly straight line and running as steady as a locomotive. It flashed by the winning post, and so powerful were the brakes that it stopped almost immediately the tape was crossed. The times were as follows: For the kilometer, standing start, 1:08; for the kilometer, flying start, :54; total for the two kilometers, 2:02.

Three records were thus broken and it then remained to be seen whether the count could better his opponent's performance.

The count's carriage had not the same steadiness as Jenatzy's and appeared to be more difficult to guide. It went thundering along the road at a breakneck pace, and it looked every now and then as if it would jump right up into the air. About 250 yards from home there was a sudden slackening in the velocity, and when the tape was reached the speed was barely twenty-five miles an hour. A shower of green sparks under the carriage and a strong smell of something burning indicated that something had gone wrong with the motor. In spite of this accident, the time for the last kilometer was :51 1-5, which gives an average speed of more than seventy kilometers (about forty-four miles) per hour, and showed that at half distance the speed must have been extraordinary.

The official figures for the count's performance were as follows: For the kilometer, standing start, :51 2-5; for the kilometer, flying start, :51 1-5; for two kilometers, :1:47 3-5.

The count is an authority on steam and petroleum motors and is now trying his hand at electricity. His carriage has a 36-horse power motor, but in ordinary work the release of the accumulators is equal only to 6 horse-power per hour. In the race he used 32 horse-power, and it is therefore easy to understand how he got "a move" on his carriage.

The return speed contest between the Jenatzy and Count de Chasseloup-Loubat electric road vehicles is to be run within a week or two and is being awaited with keen interest in France.

#### Automobile Cabs for Chicago.

It is said that twenty automobile hansom cabs owned by the Croker-Leiter combination will soon be in operation in Chicago. These cabs will be similar in construction to those which will begin running in New York next month. It is understood that the rate of fare in both cities will be three cents a mile. The plans of the cab line in Chicago are to avoid the downtown district as much as possible and seek fares along the boulevards and highways of the parks. Tallyho coaches driven by electricity will also be operated in the parks, the circuit of the entire Chicago park system to be traversed in  $1\frac{3}{4}$  hours at a low rate of fare.

#### Boilerless Steam Motor Carriage.

A number of citizens of Cincinnati are interested in a new motor carriage to be propelled by steam which is being perfected in that city. The engine differs from any other steam engine, as it has no boiler, the steam being generated by the flash system. The motive power consists of a generator, 10x5 inches, and two rotary engines, 8 inches in diameter, which constitute the entire mechanism, while the fuel supply is contained in a water and oil tank under the seat. The inventor claims that it will run up or down hill with equal ease, and that any person can operate it.

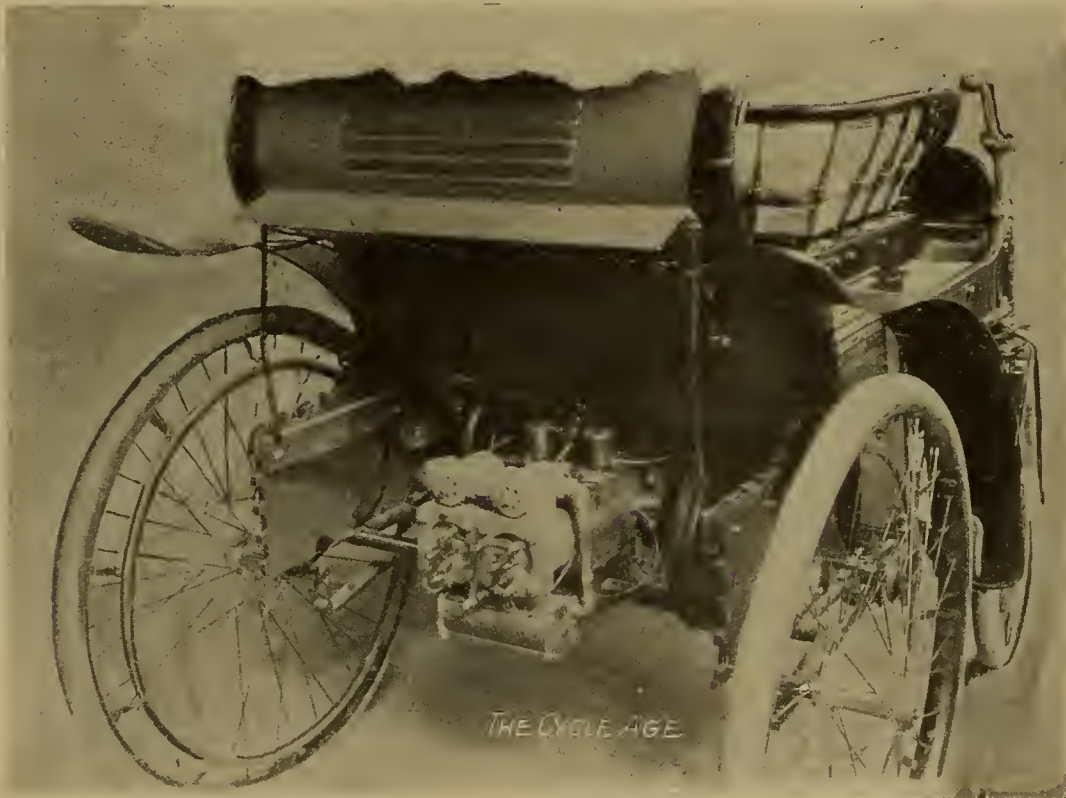


FIG. 3.—HERTEL CARRIAGE—TAIL BOARD RAISED.

cooling water little to do, as the explosion chambers are left to assume their natural temperature, the low compression obviating the liability of premature explosion.

The amount of water carried is only six gallons, and Hertel asserts that this water does not reach the boiling point, and hence, as it circulates in a closed system, does not give out steam nor require replenishment.

The ignition is electric, from a dynamo which is driven by the engine shaft, and delivers its current to a storage battery, whence the sparking wires are led. The weight of the dynamo is 22 pounds, and that of the storage battery is 14 pounds. This arrangement gives a sure spark, whether the dynamo is operating at the instant or not, and enables the driver to start the motor in action from the seat with perfect certainty.

#### Gear Arrangement.

The counter-shaft, which carries the driving wheel friction pinions, carries also a 24-pound flywheel, and is geared up to over 2 to 1, by means of a  $6\frac{1}{2}$

Count de Chasseloup-Loubat motor road wagons, as published in Cycle Age last week, furnish the information that both were electrically driven, that the match was for the gold medal of the French Automobile Club, of which both gentlemen are members, and that a great deal of interest in the event was manifested by the automobile enthusiasts, who journeyed out to Poissy, where the race was run, in large numbers.

The Jenatzy wagon has seen some hard road service and had previously won several contests for hill climbing. The count's carriage had been in use for some time also and last year took first prize in the kilometer race for autocars organized by the French Automobile Club.

Each vehicle was allowed only one trial, but times were taken as follows: for first kilometer, standing start; second kilometer, flying start; two kilometers, standing start.

Jenatzy lost the toss up and had to start first. To win he would have to lower the records, which were 1:12 for the kilometer, standing start, :57 for the kil-



GARFORD

HUNT

BROWN

## Guarantees

**W**E imagine that the average dealer gets awfully tired of having to bolster up little-known goods with a guarantee. He must labor to convince that they are safe to buy; that no risk is run because "money will be refunded if not satisfied," etc., etc.

How much better to handle goods that need no long-winded, brain-cudgelling argument to sell, above all, goods that don't have to be lied about; in other words Garford-made goods that sell themselves.

All we ask is that dealers will *tell the truth* about our saddles—if they can find anyone who does not already know about them.



The Garford Mfg. Co.  
Elyria, Ohio.

The Hunt Mfg. Co.  
Westboro, Mass.

The Brown Saddle Co.  
Elyria, Ohio.

R. B. McMullen & Co.  
SALES AGENTS, CHICAGO AND NEW YORK

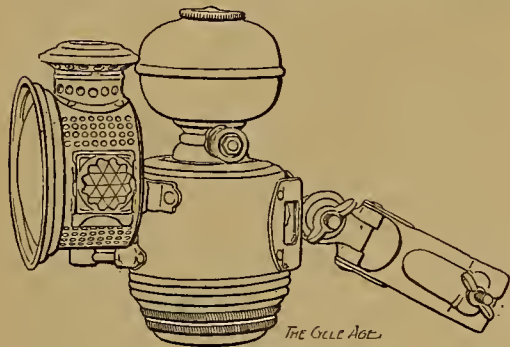
Hibbard, Spencer, Bartlett & Co.  
CHICAGO DISTRIBUTORS

# INFORMATION FOR BUYERS

## THE M. & W. "LANCASTER" GAS LAMP.

The Matthews & Willard Mfg. Co., of Waterbury, Conn., having salesrooms at 40 Murray street, New York City, is just sending to the trade an attractive bristol board hanger bearing a life size artotype of the new "Lancaster" acetylene bicycle lamp here illustrated. The reproduction on the hanger is so faithful a picture and yet so delicate that it must attract instant attention and prejudice the mind in favor of the goods.

By separating the water reservoir, combustion chamber, and carbide chamber so far from one another all the parts are kept

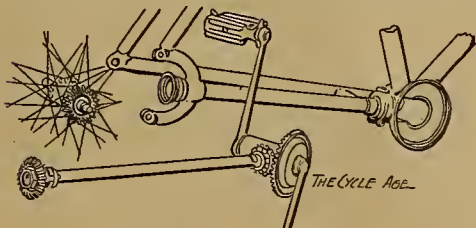


cool and all the gas generated is used in illumination, none being wasted in heat. The generator is scientifically constructed. By the use of a new patented water trap and gas seal unsteadiness of the flame is claimed to be rendered impossible, the lamp giving a steady light even when standing still, and the jarring of the bicycle in motion not being needed to make it work. The water valve affords complete control of the flame, graduating it instantly at the will of the rider from a very small to a large, broad flame. A quarter-foot fishtail burner is used, and it is readily removable for cleaning. The carbide is placed in a corrugated holder, which is so constructed that it facilitates the dissemination of water or gas, and is very easy to clean. It can be filled or emptied instantly.

With a full charge the lamp will burn more than five hours. As it is not necessary to use carbide specially prepared or put up in special packages, the lamp can be charged so as to burn a shorter time if required. One pound of carbide will give 20 hours' light.

## IMPROVEMENTS IN COLUMBIA CHAINLESS.

While in principle the bevel gear mechanism of the Columbia bicycle, manufactured by the Pope Mfg. Co. of Hartford, Conn., remains the same as formerly, the latest pattern has some important changes which tend toward more accurate running of the gears and pinions and toward the reduction of weight. The new design allows the use of smaller gear covers and of narrower rear forks and hub. Of greater importance, however, are the changes in the arrangement of the gears and pinions themselves. The forward mechanism which was formerly assembled directly into the crank bracket is now placed in an independent



sleeve which is inserted in the bracket and there clamped in position. The gear adjustments have been made entirely independent of the bearing adjustments, both at the front and rear. All of the gears and pinions bear in the line of thrust, the ball races of the several gear supporting bearings forming a part of the gears themselves. The right crank shaft bearing, which was formerly inside of the large driving gear, has been carried to the outside and placed at the periphery of the driving gear, thus giving a large diameter ball race such as has never before been used in cycle construction.

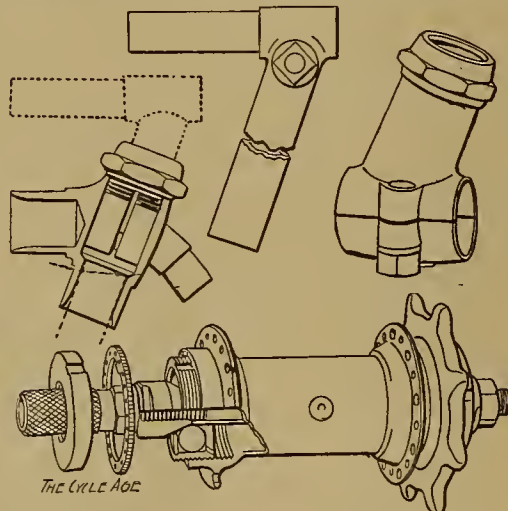
This last change greatly reduces the liability of the forward gear springing out of proper mesh with its pinion and at the same time reduces the weight of material necessary to properly support the parts. Provi-

sion has been made for the quick adjustment of all the gears independently of each other, thus greatly simplifying the operation of bringing the gears into mesh.

## PROGRESS OF WALKER & EHRMAN MFG. CO

The Walker & Ehrman Mfg. Co., Washington and Union streets, Chicago, has passed its fourth anniversary in the manufacture of bicycle parts and fittings and is justly proud of the fact that it has enjoyed a steady growth since its birth. The original W. & E. factory occupied but a small corner in a manufacturing building and employed but half a dozen men and boys. Now the floor space occupied is nearly 100,000 square feet and the pay roll includes nearly 200 men. The proprietors are young men and have conscientiously pushed their business and honestly endeavored to turn out nothing but first-class work, with the result that W. & E. parts today are widely recognized as possessing unusual merit and reliability.

The company's line of hubs is quite notable because it not only includes these parts for singles and tandems of ordinary construction, but embraces as well hubs for racing machines and for triplets, quads and other multiplets. The W. & E. Special hub is the latest of the firm's creation in this line and, as will be seen from the illustration, adjusts by means of the cups which screw into the barrel. The cones screw on to the axle, but abut against the ends of a light sleeve slipped on over the axle and are thus held from moving after having been once screwed tight into position. The locking arrangement for the cups is similar to that which has been used for some time on W. & E. crank hangers and is positive in its action, the security of the cups not depending upon the binding power of locking nuts. The racing hubs are light, carefully designed, and of standard three-point cup

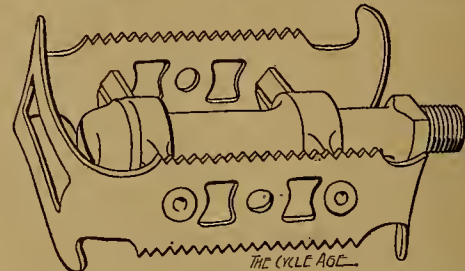


and cone design and free from contrivances which add weight without lending ease of running. The tandem hubs are furnished regularly in two chain lines and will be made to order with almost any chain line desired. They are made of the same material and in the same general manner as the single hubs and are guaranteed by the company to give the same satisfaction.

The leading feature of the W. & E. pedal is the form of the forged center frame, the cross bars of which have a neat and striking diamond shape—a new departure from the usual round or flat cross bar. The cap on the outer end of the barrel is knurled around the edge, as well as slotted for screw driver, so that if desired it can be screwed tightly into place with the fingers. The shape of the stamped frame plate is original and enough different from usual shapes to give the pedal a distinctive appearance. In the line of head and handle bar fittings the W. & E. company offers as original products its expander and its rear handle bar clamp for single steering tandems. Both of these fittings are here illustrated. The tandem clamp fastens directly to the rear top tube of the frame and has a short upward projection which receives the handle bar stem in the usual manner, though instead of being secured by bolt or set screw the bar is held by an expander, making the exterior appearance of the fitting clean cut and neat.

The company handles the Fauber one-piece hanger in addition to selling its own two-piece hanger, and thus meets both requirements among hanger purchasers. In the W. & E. hanger the left crank and axle are made in one piece and the right crank is secured to the end of the shaft by means of a taper seat and end draw screw, the head of which comes flush with the outer

face of the crank. The hanger is furnished in both regular and eccentric brackets. A full stock of standard handle bars and seat posts is carried by the firm, which also makes a seat post that may be readily changed from a front to a rear L by the loosening of one screw. This post is here-with illustrated. In frame sets and fittings a wide range is offered, including parts for building frames of all of the present popular styles. The fittings are offered both in machined drop forgings and in steel castings. All the fittings for multiple frames match the angles of Fauber hangers. Shelby tubing and front and rear forks and stays are carried in stock, as are also the Wire Goods Co.'s spokes and nipples. The head fittings for singles and tandems are



all turned from solid steel stock and are intended for use on high grade machines.

The company has recently engaged the services of J. E. Smith, who for several years past has acted as purchasing agent of the Monarch Cycle Mfg. Co., and who in his new position will doubtless prove a valuable assistant because of his wide acquaintance among manufacturers and dealers in parts and supplies.

## THE CROWN DETACHABLE CHAIN.

The breaking of a bicycle chain on a country road usually precedes a series of events more or less disagreeable according to circumstances, such as the distance from the nearest town or repair shop, whether or not the rider has a file and punch and extra links and rivets, and whether the walking is good or bad. All possibility of such unpleasantness is obviated by the use of a chain composed of detachable links, like the Crown Detachable chain here illustrated. With such a chain one has but to carry an extra link or two, with rivets, to be provided for any emergency that may arise through chain accidents, for a broken link may be replaced with a new one by the use of the fingers alone, anywhere upon the road. In the same way it minimizes the trouble of lengthening or shortening the chain when altering the gear of the machine, or of taking up slack due to stretching of the chain.

The principle of the Crown Detachable chain is not a new one and is plainly understood from the illustration, but the Thorsen Co., 56 Fifth avenue, Chicago, which is selling agent for this chain, made by the Crown Electrical Mfg. Co., of St. Charles, Ill., claims superior quality and finish for these chains. They are all made in B block pattern with flat tops, are 3-16 inch wide and made in four styles, as follows: No. 110, straw color hardened blocks bright side plates; 125, straw color hardened blocks, finely polished, blue side plates, fine revol-



ver finish; 130, white color hardened blocks, finely polished, blue side plates, fine revolver finish; 150, finely blued and polished blocks, polished and nickel plated side plates.

## UNITED SPECIALTY CO.'S TIRE INFLATOR.

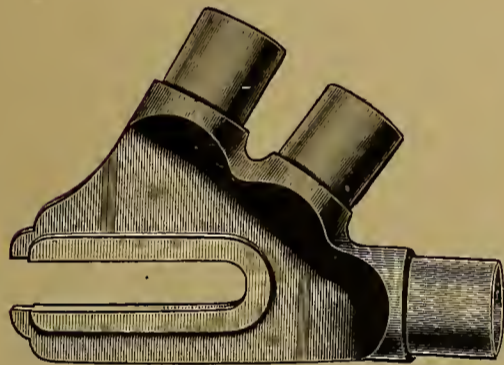
This cent-in-the-slot machine offers an entirely new solution of the tire inflation problem, at either high or low pressures, and can be made available for the 100 or 125 lb. pressures which are used in pneumatic motor vehicle tires and are difficult to obtain by ordinary tire inflating machines.

This inflator consists of a hexagon pillar rising from a cast iron base, and surmounted by a copper cap. The sides are made of enameled plates, blue, with white lettering, retained by copper corner strips. The base and middle band and the cap-support are

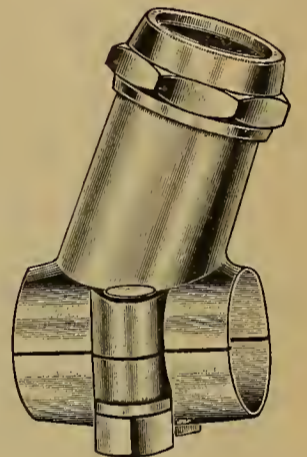
**Friend Builder of Bicycles!** You who prefer to build from first-class component parts, which Fit to the Designs furnished and are True to Angles specified in catalogue!

<p>YOU WANT THIS COMPLETE SELECTION:</p>	<p>HUBS HANGERS EXPANDERS FRAME FITTINGS SEAT POSTS HANDLE BARS</p>	<p>FOR</p>	<p>RACERS ROADSTERS TANDEMS TRIPLETS QUADS QUINTS</p>	<p>EVAH EW ETELPMOC SIHT :NOITCELES</p>
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If you want anything else, we make it or furnish it.



**B**BETTER deal with one firm which will supply you with ALL metal construction parts that you may want in course of a prosperous



year as builder of bicycles and multiplets!

ILLUSTRATED CATALOGUE SENT FREE

**Rule of Safety  
for Builders:**

In case of trouble, dealing with us, your trouble is ours. We must see that you have none. We are responsible manufacturers. Dealing with several firms, your trouble is your own and remains so. This applies especially to frame construction.

**WALKER & EHRMAN MFG. CO.**

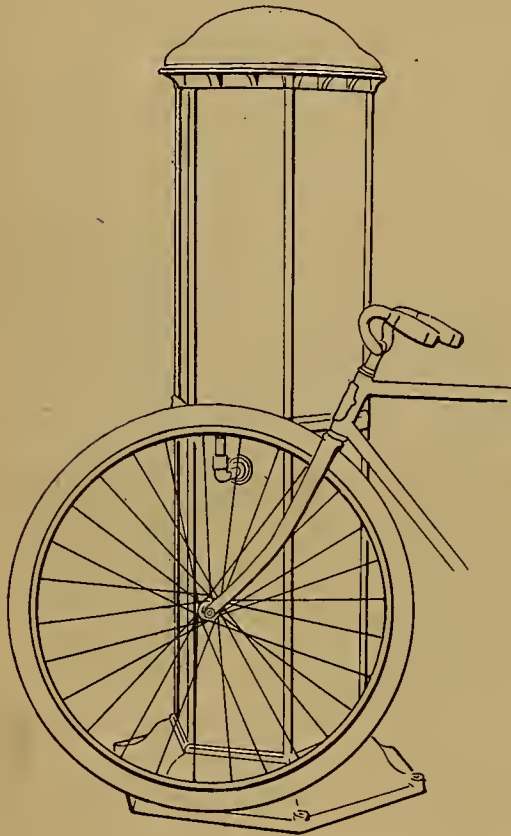
WASHINGTON AND UNION STS.

**CHICAGO**

bronzed, giving the structure an attractive appearance. From the front side of the machine a small tube projects; this tube is bent upward at right angles, and has a cup at the top end, in which the air valve tube of the tire is placed after removing the cap. There is no hose and screw connection to be made in bicycle tire inflating. All that is necessary is to hang the cycle on the pressure tube, as shown, and then drop a cent in the slot. The machine blows a tire up to 45 lbs. pressure in about 20 seconds, and this pressure cannot be exceeded. If less pressure is desired the wheel may be taken off at any time.

Inside the pillar there is a steel bottle of liquid carbonic acid gas, at a very high pressure, and a steel tank, about 8 in. in diameter is connected to the gas bottle through a reducing valve, this tank or receiver being always filled with carbonic acid gas at 45 lbs. pressure. It is the intention of the United Supply Company to place a great number of these inflating machines at points frequented by cyclists. No attendant is needed, as the pressure is always there, and any cyclist can hang his wheel on the delivery tube as shown and drop a cent in the slot, and the machine does all the rest.

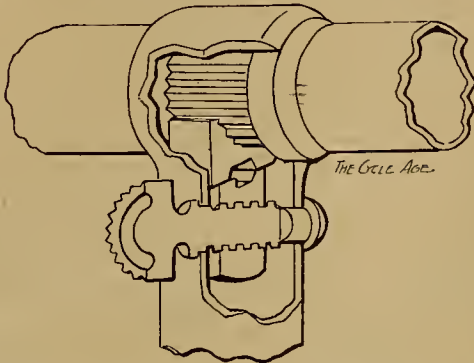
By adjusting the reducing valve, the pressure can be made 100 or 125 lbs., instead of the 45 lbs. demanded for cycle tires, and hence this charging machine becomes available for motorcycle tire inflation, without the slightest difficulty of any sort. For moto-



ten patterns in colors to match frames, and the bringing out of the new "Lenawee Flush" handle bar, which will be furnished regularly on four models of the line. The three Hudson patterns will be equipped with either the Claus or the Sanger adjustable bar.

#### DIRKSEN ADJUSTABLE HANDLE BAR.

This handle bar is adjustable without the aid of tools or wrench and may be changed from one position to another while the rider is on the machine. The locking device is



original as applied to bars, consisting of a transverse screw which actuates an inclined plane block that in turn raises or lowers the binding block proper. The last acts on the annularly grooved bar tube center. A half turn of the thumb screw to the left unlocks the bar and an equal turn to the right locks it in its new position. The bar is furnished in several of the popular shapes and will be supplied with stem of any desired size. It is manufactured by the Dirksen Handle Bar Co. of Hornellsville, N. Y.

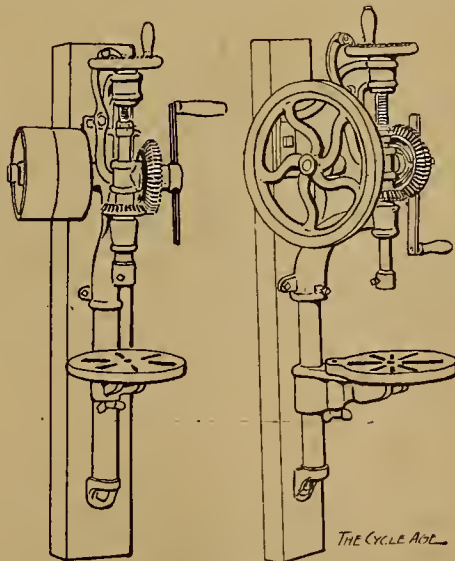
#### CONTRACTS FOR HALF A MILLION BARS.

Some idea of the immense volume of business done by the Chicago Handle Bar Co. can be obtained by noticing their large purchases of Shelby seamless tubing. Another car load containing 150,000 feet was shipped from Shelby Jan. 31 and consigned to the big Chicago concern. This makes the third shipment for the requirements of the current season. President Webster reports that the outlook for business is exceptionally good, contracts having been closed for upward of 500,000 bars.

Speaking of brazed bars, Mr. Webster says: "Their use will not be satisfactory. The trade is becoming most exacting and every detail in the way of equipment must be beyond criticism, particularly as to finish. This applies as well to cheap as to high grade products. While in no way prejudiced against brazed bars, or disinclined to furnish the trade with whatever may be specified; yet experience will demonstrate that brazed bars cannot be made to the standard which the trade will demand. Moreover, there is no material difference in the actual cost to the bar manufacturer in producing either, notwithstanding that the cost of brazed tubing is less than one-half that of seamless material."

#### DRILL FOR HAND OR BELT POWER.

Many cycle repairs shops now have light power such as that afforded by gasoline engines or electric motors, and consequently



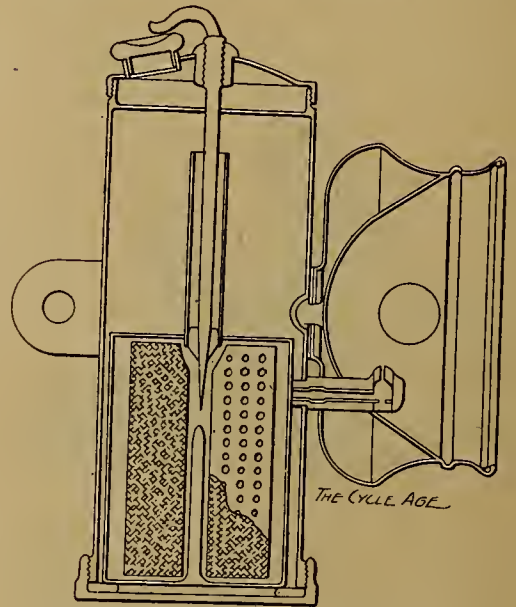
in buying drill presses the proprietors are apt to call for a drill which has pulleys for power driving but which is still small and light and not so expensive as the pretentious machine shop drill press. To meet such demands the Silver Mfg. Co. of Salem, O., rigs

up its Advance drill, No. 12, which is designed to be operated by hand power, with tight and loose pulleys, making it a complete and reliable power drill press. This drill and its mate without the power pulley attachment are shown in the accompanying drawings. The drills weigh but 125 pounds each and may be attached to a post or side wall. The spindle is one inch in diameter and has a run of 3 inches and is bored to take 1/2-inch round shank drills unless otherwise ordered. The press drills to the center of stock up to 15 inches in diameter, and any size hole up to 1 1/4 inch.

#### SIMPLEX AUTOMATIC GAS LAMP.

Simplicity, durability, regularity of operation, absolute safety and reliability are the strong features claimed for this new lamp, which is being brought out by the Hine-Watt Mfg. Co., 16 North Canal street, Chicago, makers also of the Octagon gas lamp shown at the Chicago cycle show. The construction and operation of the Simplex is made plain by the accompanying sectional drawing. The cylindrical body of the lamp is independent of the combustion chamber and reflector, which are riveted to the spring clamp that passes around the cylinder on both sides and fastens to the lamp bracket by means of a thumb screw at the back. The cylinder is prevented from dropping out by the engagement of the head of the rivet at the rear of the reflector with a depression formed in the cylinder and by the binding friction of the spring steel clamp.

The water reservoir occupying the upper half of the body of the lamp is provided with a diaphragm near the top to prevent the water splashing up against the top and leaking out. This diaphragm has a central perforation to permit the water poured



through the screw capped opening on top to find its way downward into its proper chamber. A needle valve of special construction allows the water to drop through the central diaphragm to the carbide beneath. The carbide chamber is provided with a cup having a new form of water distributor, made of perforated metal plates designed with a central perpendicular socket or tube to fit over a pin fixed upright in the center of the cup and covered with absorbent fabric. This plate extends diametrically across the entire cup and serves to draw the water by capillary attraction to the outermost edges of the cup. The bottom of the carbide chamber is closed in the usual manner by a screw cap or base having a rubber ring to make the joint air tight.

It will be noted that the end of the needle valve extends downward a short distance between the water distributing plates and is thereby secure from dust and dirt from the dry carbide, and when the carbide cup is in place the surrounding space is also shut off against dust, which therefore cannot enter the burner. The gas tube enters this space from the outside and is provided with a valve and a new patented tip especially suited to use in bicycle gas lamps. The gas tube connecting with this tip is bored with an orifice directly below and coincident with the opening in the tip so that air enters below and mixes with the gas before it leaves the lava tip, thus insuring perfect combustion and giving what is claimed to be the strongest and most regular flame obtainable with this type of burner.

The reflector is of the parabolic type, constructed on scientific principles and is removably held in position by means of a spring wire ring. The crystal is retained in the same manner.

In operation, the water valve is simply opened two turns of the handle at the top of the lamp and not again changed until it is desired to refill the lamp. The size of the

cycle tires, however, a hose and screw connection will undoubtedly be required.

The address of the United Special Company is 47 Great Jones street, New York, and as there is no question about the action or reliability of this new inflator, the machine seems likely to be of interest to many persons.

Carbonic acid gas is by-product of all breweries, and hence the only cost of liquid carbonic gas, which is in very common use for freshening malt liquors on draught, and can be obtained everywhere, is cost of compressing to liquefaction. The steel bottles are used over and over again, and empty ones can be exchanged for full ones almost anywhere in the civilized world.

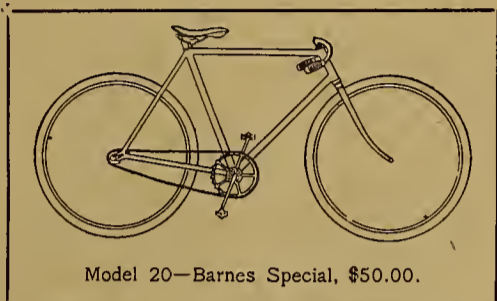
Should the pneumatic tired motorcycle come into general use, this carbonic acid gas inflator offers a very ready and inexpensive means for obtaining the heavy tire inflation pressures which will be in demand.

#### CHANGES IN THE HUDSON LINE.

The Bean-Chamberlain Mfg. Co. of Hudson, Mich., announces by circular that since going to press with the second edition of its advance catalogue it has made several changes which add to the appearance and value of the line. A new 30-inch wheel machine has been added to the line, it being of the same grade as the Lenawee machines and listing at \$45. Other points embraced in the changes are the furnishing of the company's special one-piece hanger on several additional models to those formerly catalogued, enameling the rims on all of the

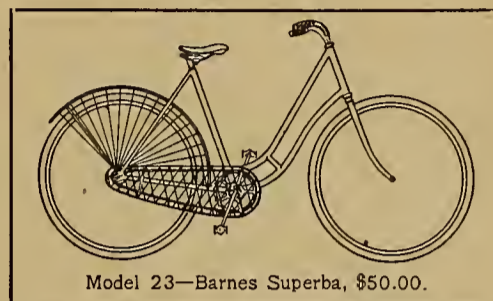
# A PAIR OF BICYCLES

THAT IT IS HARD TO BEAT



Model 20—Barnes Special, \$50.00.

These bicycles are light, graceful and easy running, and we doubt if a better wheel can be produced at the price. Our sales thus far on these models have



Model 23—Barnes Superba, \$50.00.

been away ahead of anything ever experienced by us before. We would therefore suggest that agents who are looking for a line to place them in the lead of their competitors should write us at once, provided we have not an agency in their city.

Our Handsome Art Catalogue with full particulars  
mailed upon application.

**The Barnes Cycle Co., - Syracuse, N. Y.**

*Thousands in use!*

*The Morrow Coaster & Brake!*

*It is not an Experiment.*

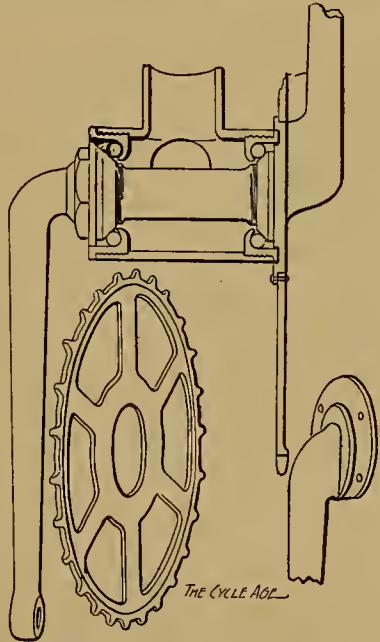
*In a 50 mile ride you pedal  
only 30! Centuries made Easy!*

*Double your sales and increase your profits  
by selling your wheels fitted with the Morrow  
write us for prices! Eclipse Bicycle Co. Elmira, N.Y.*

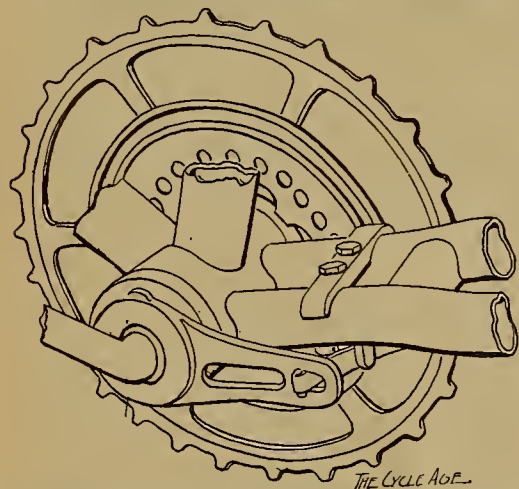
flame is regulated by the gas cock, and the length of time the lamp will burn depends on the size of the flame. Water will not flow except when this valve is open and gas is being consumed, the flow being automatically regulated by the pressure of the gas in the carbide chamber. Thus the gas can be turned off and regulated at any time. In charging this lamp, the carbide cup is filled to the top, there being no retaining or compressing springs, and it is claimed there is no difficulty in removing the exhausted charge.

#### THE BARNES COASTER AND BRAKE.

The Heinz & Munschauer Cycle Works of Buffalo, besides making the H. & M. one-



piece crank hanger, the construction of which is shown in the accompanying illustration and which is furnished with brackets for regular and three-crown frames and for various drops, is now manufacturing the Barnes coaster and brake. The exterior appearance of the brake is illustrated in the lower drawing. The device is so constructed that a slight back pressure releases a sprocket clutch and allows the machine to run independent of the cranks. Further back pedaling sets the brake, which acting on a braking surface attached to the front sprocket instead of on the tire, does not give the tire unnecessary wear. All parts of the brake are of metal neatly finished and clustered at the hanger in a way that does not mar the appearance of the bicycle. The company



is prepared to furnish the H. & M. hanger fitted with this brake, and will quote prices upon application.

#### THE RALPH TEMPLE LINE.

Ralph Temple, 204 Thirty-fifth street, Chicago, has just returned from a five-months' trip through European countries. In spite of the congested state of the cycle market in England and the northern continental countries, he states that he succeeded in doing a more satisfactory business than the average American traveler in foreign lands. The experience gained through his many European tours, first as a racing man on the ordinary and later in the furtherance of his export business as a bicycle maker, has been of the greatest assistance and is principally responsible for the success he has invariably met in his recent trips. Knowledge of the language and traits of character of the peoples with whom the foreign traveler desires to do business are a distinct advantage—a fact the German manufacturers are fully

cognizant of and which they make use of in pushing their export business.

The Temple line of bicycles is comprised of the following:

Temple Extra Special, having three-crown frame, nicked joints, Thor fittings but with Fauber hanger, built with both 28 and 30-inch wheels, but only in diamond frame for men.

Temple Scorchers, made in both diamond and drop frames; three-crown construction, one-piece hanger. The model for men is made in both 28 and 30-inch wheel sizes; that for women only with 28-inch wheels.

Superb, made only for men, and fitted with 28 and 30-inch wheels.

Superba, for women, fitted only with 28-inch wheels.

Faultless, made in both diamond and drop frames, but fitted only with 28-inch wheels.

No list prices are quoted on any of these, but they will be sold to agents at a net fixed wholesale price, stripped. Equipment will be furnished if desired at the factory cost with the expense of fitting added.

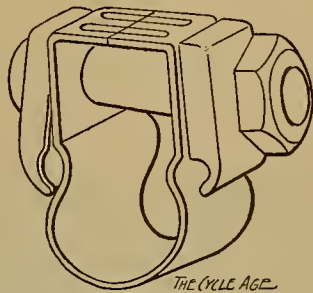
In addition to the above bicycles, a line of pedals of the Record pattern and an acetylene gas lamp called the Magic will be put in the market.

#### DISTRIBUTORS FOR AUTOMATIC CHAIN BRUSH.

The Cycle Syndicate, 320 Broadway, N. Y., is export agent and eastern and southern distributor for the Automatic chain brush made by the Automatic Chain Brush Co., of Chicago, and solicits correspondence with regard to it from these sections of the United States and from abroad. This chain cleaning device was exhibited at the Chicago and New York cycle shows, where it met with much success, and will be shown at the coming bicycle exhibitions in Philadelphia and Washington. The Cycle Syndicate is confident that it will prove a good seller.

#### NEWARK NO. 7 STAMPED CLAMP.

The all steel stamped saddle clamp here illustrated is made by the Newark Cycle Specialty Co. of Newark, N. J., from 14 gauge sheet steel at a saving in weight over the ordinary clamp of from two to five



ounces. No castings whatever are used and very emphatic claims are made for its superior lightness, strength and appearance. As plainly shown by the engraving, it consists of but three pieces and the bolt. It can of course be reversed to bring the nut below the springs where it will be easily accessible. It has been designed, according to the makers, especially for use on export machines, and it is pointed out that it will increase the export sale of the saddles on which it is used.

#### EXERCISERS AS A SIDELINE.

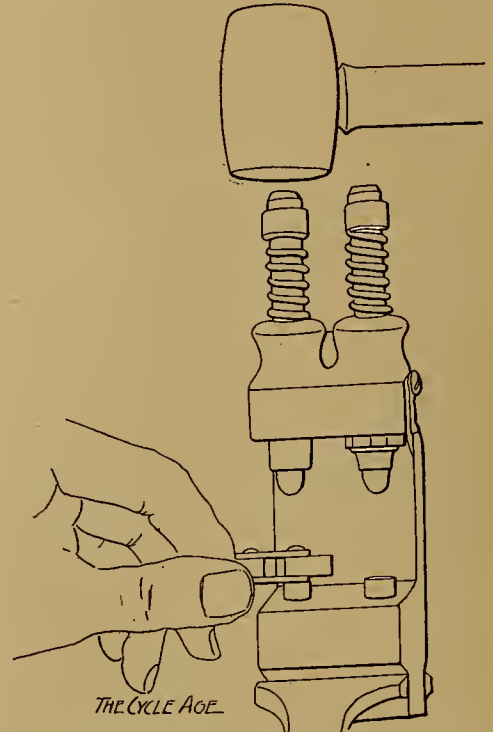
Bicycle dealers who are looking for side lines which will at once be profitable and will not make necessary large outlays of capital will be interested in the proposition of the Manhattan Web Co., Grand street and Market place, New York city. The company makes two styles of exercisers, the Manhattan and the Hendrickson, each of which is offered in several patterns at different prices. It is claimed by the company that this is the only house in the country which can make reliable first-class exercisers at the prices for which its goods sell, because it makes its own elastic cables.

In order to obtain a country-wide reputation and sale for its exercisers the company will send on consignment to one reliable dealer in each city a fair sized and complete stock of the exercisers, provided that the dealer will agree to mail each week to the firm an account of stock on hand and will remit for the exercisers sold. It is claimed that these make a first-class side line because if a young man is placed in the window to show the various movements possible direct trade in exercisers will not only be obtained but new customers for other goods will be drawn to the store. The goods so consigned will, of course, be subject to the call of the company, but will be left with the dealer as long as the very reasonable agreements are kept.

#### CHAIN RIVETER FOR REPAIRMEN.

When a broken chain is taken to the average repair man, his only method of heading the rivet is by the usual hammering. This

sometimes results in bending the body of the rivet and causing the link to bind. The McCabe Hanger Mfg. Co., 540 W. 22nd street, New York, has just placed on the market the Zamboni bicycle chain riveter, which is here illustrated. It is designed as a convenient, low-priced tool for repairmen, and overcomes the difficulties arising from the misdirected blows of a hammer. The rivet is first upset by the ram at the left, by a blow of a hammer. It is then passed to the other ram, the die of which is quartered and cup-shaped, with a lower die plainly cupped. This finishing ram has a ratchet cut wheel or gear, which, in connection with the side



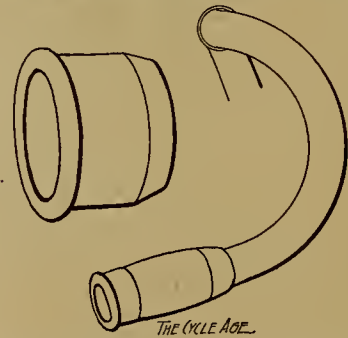
spring, turns the heading die one-ninth of a complete turn at each blow, so that the head is put on uniformly. The rams are lifted automatically by the springs after each blow. The riveter is formed so that it can be held in the jaws of a vise.

#### COPPERED AND NICKLED SPOKES.

Spokes which will not suffer in appearance as a result of inclement weather are now being made by the Excelsior Needle Co. of Torrington, Conn., the western branch of which establishment is conducted by Frank Odell at 204 Lake street, Chicago. After many experiments on the part of the firm's chemist, bicycle makers are now being supplied with nicked spokes which, subjected to the severest tests, have proven highly satisfactory. The spokes are nicked twice and buffed three times on a copper surface. Excelsior spokes bear the firm's trade mark—Diamond E.

#### STRAUS GRIP PROTECTOR.

The Straus Tire Co. of New York city is introducing a novelty which will be readily



appreciated by all who have marred or broken their handle bar grips by letting the bicycle fall to the ground or against a wall. The article is shown in the illustration. Its principal use, that of protecting the end of the grip, is supplemented by its utility in protecting the entire bicycle at times against fall. The protector being made of rubber will, when the bicycle is leaned against a wall or post, keep the machine from sliding backward and falling to the ground.

#### FEATURES OF NEW DEPARTURE GAS LAMP.

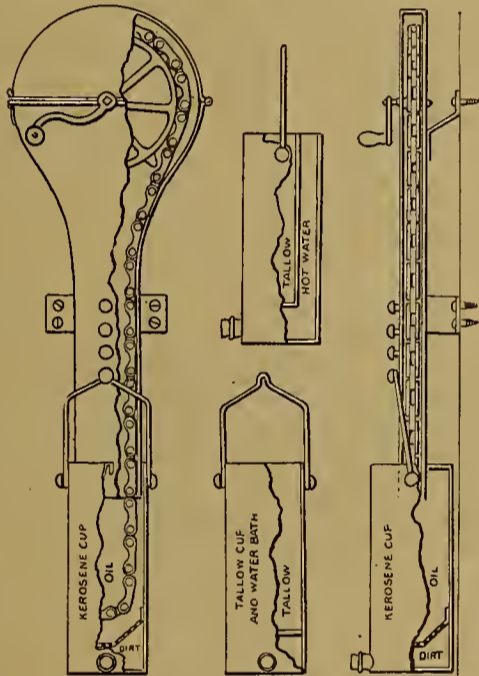
The separation of the generator and gas chamber from the combustion chamber, insuring a cool gas supply to the burner and safety from overheating, is the dominant feature of the New Departure gas lamp now being manufactured by Joseph Lucas & Son Co. of Bristol, Conn. In this lamp the metal cylinder containing the water reservoir and the carbide chamber attaches by

means of spring clips to the lower main tube of the bicycle frame, and the reflector and lens comprising the combustion chamber are supported adjustably in front of the head of the machine on a gas tube leading to the burner. The gas, generated in the lower chamber of the cylinder, has to pass through the water in the reservoir before entering the burner, thereby being washed free from impurities, thus securing the highest illuminating power with the least gas. Provision is made for simply, quickly and effectively freeing the gas chamber and burner from dirt or deposit by attaching an ordinary hand or foot pump to a small nipple underneath the reflector hood and forcing air through the passages.

Loose or broken carbide is used, no special form of charge being necessary, so that in operation this lamp is made convenient, reliable, safe and economical. The New Departure lamp is made of the best materials by skilled workmen. It is supplied to the trade by John H. Graham & Co., 113 Chambers street, New York City.

**IMPORTANCE OF "FILLING" A CHAIN.**

There is as much to be gained by "filling" a chain as by cleaning it. When a chain is thoroughly cleaned by the use of kerosene the grease is not only removed from the surface, but from the rivets and holes through the blocks. Graphite never reaches the rivets, and the chain is dry. The friction in the rivet holes of an ordinary dirty chain that has never gone through kerosene, is probably not as great before the



cleaning as afterwards. The chain, of course, was full of grit between the working parts, but this grit may not have reached the rivets, although it was cutting the sides of the links, etc. The washed chain, therefore, that is not filled with some good lubricant is often not as good a running chain as before it was washed. A chain, therefore, with dry rivets, is not only a hard chain to drive, but it is a chain which is rapidly wearing itself out. It is more important to lubricate the rivets than the outside of the blocks of the chain.

The problem is to arrest the wear and reduce it to a minimum. To do this the grit must be removed by washing and the chain then lubricated with a heavy body grease, that will remain in the joints a reasonable time and also form an armor or protection to the joints against the readmission of grit. A chain, dipped in hot tallow and passed through it until the chain is warm, will "fill." The tallow will also remain on the outside of the chain to a considerable extent when the chain is withdrawn from the grease. This hardens as it cools, leaving a coating all over the chain, as well as filling every joint.

The accompanying drawings show the patent chain cleaner, operated by a crank, made by the American Bicycle Chain Cleaner Co., 106 Beekman street, New York city, which concern has given much study to the question of chain wear. The apparatus is intended to be fastened to a wall or other support.

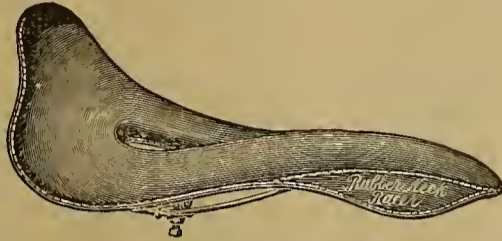
**MACHINES AT JOBBERS' PRICES.**

In the catalogue of the Chicago Tube Co., which concern manufactures and jobs bicycles, bicycle materials and supplies, dealers are invited to pay attention to the fact that the firm supplies goods at jobbers' prices, that is to say, a calculation has been made concerning the price at which the firm would sell jobbers from one to five thousand bicycles and the same quotation is made to agents. It is urged that in order to buy

good wheels at low prices this season it will be necessary for agents to purchase from first hands, jobbers' profits being a hindrance to sales. Frame sets and frames, complete and stripped bicycles, sundries and tools of all descriptions are described in the catalogue.

**RUBBER NECK RACING SADDLE.**

The Bunker Saddle Co., 65 Milwaukee avenue, Chicago, has just recently put in the market the trim little form racing model



of Rubber Neck saddle illustrated in the accompanying drawing. It comprises a metal stamped base, the honeycomb molded rubber cushion which is the distinguishing feature of all Rubber Neck saddles, and a leather top. The pommel is long and narrow, the seating surface of comfortable shape, and at the extreme rear the cantle is projected upwardly to form a high back. The length is 11 inches and the width 7 1/2. Owing to its peculiar form the saddle may be placed more nearly horizontal on the machine than the ordinary racing model, the rider having the extension of the cantle to push back against when not sprinting. This model is equipped with plain wire springs unless coil springs are ordered.

**MATLACK'S CLEVER PUBLICITY WORK.**

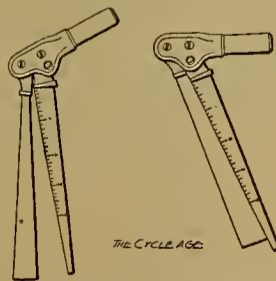
Before the close of the New York cycle show the name of Featherstone was pretty well known to the thousands that thronged Madison Square Garden. In the center of the show, fronting on three aisles, was placed the booth of A. Featherstone & Co. The platform was covered with Smyrna rugs, on which were displayed the seven models of the firm. Desks, chairs and tables lent additional elegance to the arrangement. Extending crosswise of the exhibit, and surmounting the space, was an elaborate electric sign of 350 miniature incandescent lamps, comprising the well known script, "Featherstone bicycles." During the week two pretty girls in cycle costume distributed 10,000 carnation pinks to the visitors.

For the purpose of creating additional interest, J. C. Matlack, who has charge of the eastern trade, offered four Featherstone bicycles, to be allotted on the closing night. Coupon tickets were given to all who wanted them. One part was retained and the other, with name and address, deposited in boxes at the booth. Over 20,000 of these tickets were distributed. On Saturday night all the tickets were placed in a revolving holder and thoroughly shaken up. A little miss in a pink frock was selected to do the drawing. For fully thirty minutes the entire attention of the vast multitude present was concentrated in the direction of the Featherstone booth.

Not content with that, Manager Matlack equipped the programme boys with caps and coats bearing the name of the bicycle and then capped the whole thing by placing small signs reading: "Get a Featherstone pink," in every place in the Garden.

**THE WATSON AUTOMATIC SEAT POST.**

The accompanying illustration shows the latest pattern of the Watson seat post, which since its comparatively recent introduction



has become widely known and popular. By the removal of two screws the post may be readily changed from a front to a rear L seat post or vice versa. The binding of the Watson post, since it acts equally for its entire length, does not tend to bulge the tubing in the seat mast. It is so easy to loosen the post from the frame that a rider may take the saddle and post from his machine when leaving it in public places and thus prevent cycle thieves from riding it off. The ready adjustment also makes it convenient for la-

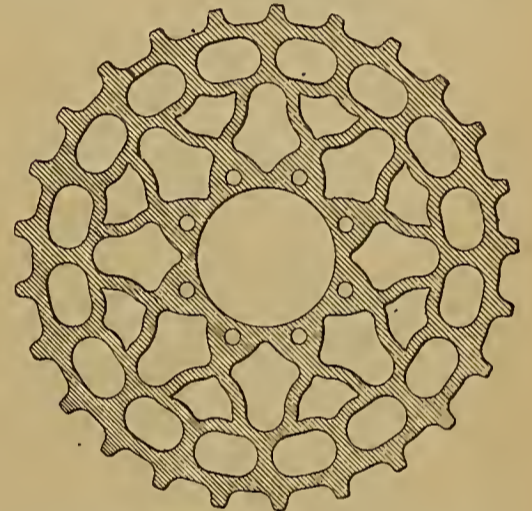
dies and others who, when on a long ride, desire to raise or lower the saddle for the purpose of resting the muscles by obtaining a new limb movement. The scale on the forward section permits the removal and replacement of the post without having to experiment in order to get the post in exactly the same position as before. Eight post diameters are furnished. The maker is the Watson Automatic Seat Post Co., 9 Warren street, New York city.

**A WELL MADE MACHINE.**

The cycle product of the J. L. Board Engraving Co., who are makers of high grade bicycles at 182-186 Clinton street, Chicago, has been on the market for the past three years in a small way, and has given such general satisfaction that the firm has now decided to manufacture on a large scale. A strictly first-class machine is being made by the firm. Unusual care is taken in the selection of materials, which are worked up by special mechanics. Already the firm has booked orders for 75 per cent. of this season's output, as calculated in advance, and may be obliged to increase its capacity. An advertisement descriptive of the characteristic features of the machine is to be found elsewhere in the Cycle Age.

**HADLEY SPROCKET DESIGN.**

G. W. Hadley of Chicopee Falls, Mass., has been granted a design patent on a front sprocket, and the patent is assigned to the Lamb Mfg. Co., which makes the Spalding bicycle. The cutting out of metal in the sprocket plate is shown in the accompanying illustration, from which it will be noticed that the distinctive feature is the leaving of a net work of metal whose parts are ap-



proximately equal in width and have all marginal lines joined together without angles.

**WANAMAKER DISPLAYS ORIENTS.**

In order to assist John Wanamaker, who has secured the agency for Orient bicycles, in making a proper display of these machines at the big store in Philadelphia, the Waltham Mfg. Co. loaned its New York exhibit. This exhibit comprised single machines, multicycles ranging from the tandem to the seven seater, and the Orient electric runabout. In addition to attractively decorating the store, Wanamaker advertised the function in most liberal fashion. The machines were displayed on the first floor of the establishment. It may be said in refutation of various comments on the methods of large stores in selling bicycles that Wanamaker is advertising his intention to maintain prices on the Orient.

**KEIM'S CYCLE FITTINGS.**

John R. Keim, successor to the Spaulding Machine Screw Company, has issued a catalogue descriptive of the cycle fittings which he is manufacturing in Buffalo, consisting of head clips, single piece heads, seat post brackets, frame tees, seat post clusters, handlebar tees, seat post tees, crank hanger brackets, handlebar clamps, brace tips, rear forks, crowns, head shells and fittings, hub and hanger shafts, flanged shells, frame and stay braces, crowns, cones, lamp brackets, reinforcements, coasters, sprocket wheels, wood rim washers, brake spoons, complete hubs, Kensington pedals, Spaulding and Genesee pedals, complete frames, handle bars and flat rolled steel. The catalogue is thoroughly descriptive of the goods which are manufactured, both in reading matter and illustrations.

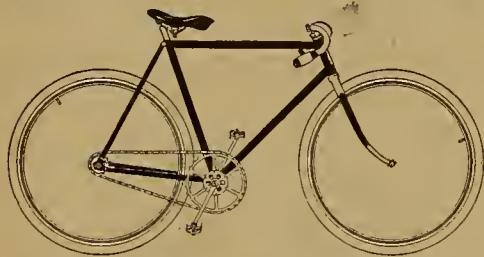
**A CHANGE IN DISCOUNTS.**

The Chicago Tube Co., 217 E. Washington street, Chicago, has just issued a new discount sheet in which some attractive price combinations have been made on the mate-

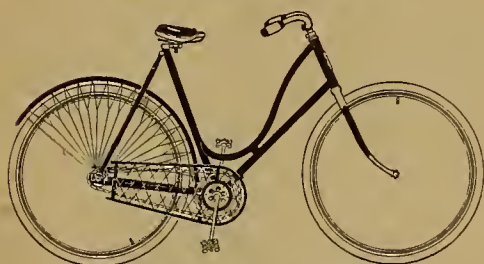
rial, parts and fittings handled by the company. The new price sheet, besides affecting sets of stock and fittings, applies as well to built-up frames, either enameled or unenameled, and to frame sets. The built-up frames made by the Chicago Tube Co. are all late popular patterns and are offered both for 28 and 30-inch wheels, with three-crown or regular construction and with eccentric hanger or rear chain adjustment.

**STERLING SINGLES AND TANDEMS.**

The recently issued twelve-page folder of the Sterling Cycle Works of Kenosha, Wis., is distinctive because of two large groups of illustrations, one showing the single machine models and the other the various notable



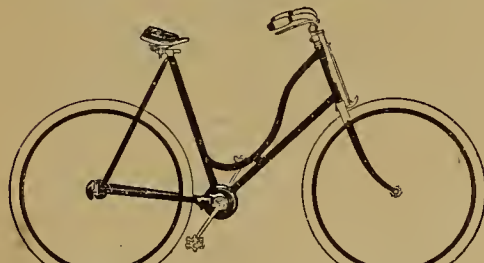
Men's Roadster. Price, \$50.



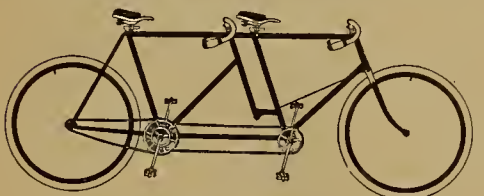
Ladies' Roadster. Price, \$50.



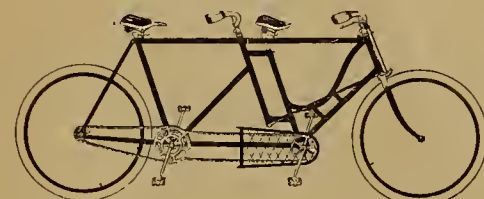
Men's Chainless. Price, \$75.



Ladies' Chainless. Price, \$75.



Double Diamond Tandem. Price, \$75.



Convertible Tandem. Price, \$85.

features in Sterling construction and equipment. The Sterling line comprises the six patterns here illustrated.

The singles, while possessing many new points, still embody the short rear frame which has long been a characteristic of Sterling design. The catalogue mentions the fact that the frames are now brazed by the immersion process and states that it is because of the surety of this process that the company is enabled to use flush joints without being doubtful of the brazing in them. English Mannesman tubing is used in all patterns. The Sterling special direct spoke hub and the Sterling arch crown are retained as valuable features. The rim used is the Lobdell one-piece, striped to match the frame.

The regular finish is as heretofore, Sterling olive, striped and ornamented. Plain black is offered as an option. Either Velox or Record pedals will be sent with machines as desired, and in the way of saddles the purchaser may have the Garford, Plew, Wheeler or Hollenbeck rawhide, and for a slight additional charge, the Christy. The tire options include the Hartford, Palmer, Kangaroo, Dunlop or G. & J. The single machines have a new pattern oval crank, while the regular square crank is used on the tandems. Rigid steel handle bars or an adjustable bar of new design are offered on any of the patterns.

**CHANGE OF PARTNERSHIP.**

The American Cycle Fittings Co. of New York city, which has given much attention to the export trade and established strong connections in the principal foreign markets through the residence in London of one of its partners for the past year, is making further bids for business by a change in its arrangements which will be of benefit to the many business firms it represents.

Jos. Friedenstain has disposed of his interest in the company to W. W. Stall, in order to devote his entire time to European business, having formed a company in London under the name of South British Trading Co., Ltd., with a capital of \$50,000, of which he takes the managing directorship. Mr. Stall will continue as manager of the American Cycle Fittings Co. at New York. This arrangement will give the American Cycle Fittings Co. new connections abroad which will bring it in closer touch with foreign buyers and enable it to increase its business by being directly connected with the largest houses in European markets.

**PERPETUAL PEDAL PATENTED.**

The Perpetual separable pedal manufactured by Edmunds & Metzel, 115 Monroe street, Chicago, is now fully protected by a patent granted to G. F. Marchant. The draw-out feature of the pedal barrel which

makes it possible to remove the spindle and balls from the frame without disturbing the adjustment is the particular point claimed in the patent.

**HOLLENBECK STOCKHOLDERS PLEASD.**

At a recent meeting of the stockholders of the Hollenbeck Saddle Co. of Syracuse, Robert Croasdale was re-elected president, and George H. Lloyd, treasurer and general manager. The stockholders received the encouraging report that the factory is being operated day and night turning out the 12-ounce Rawhide saddle for which this company has a large number of orders booked.

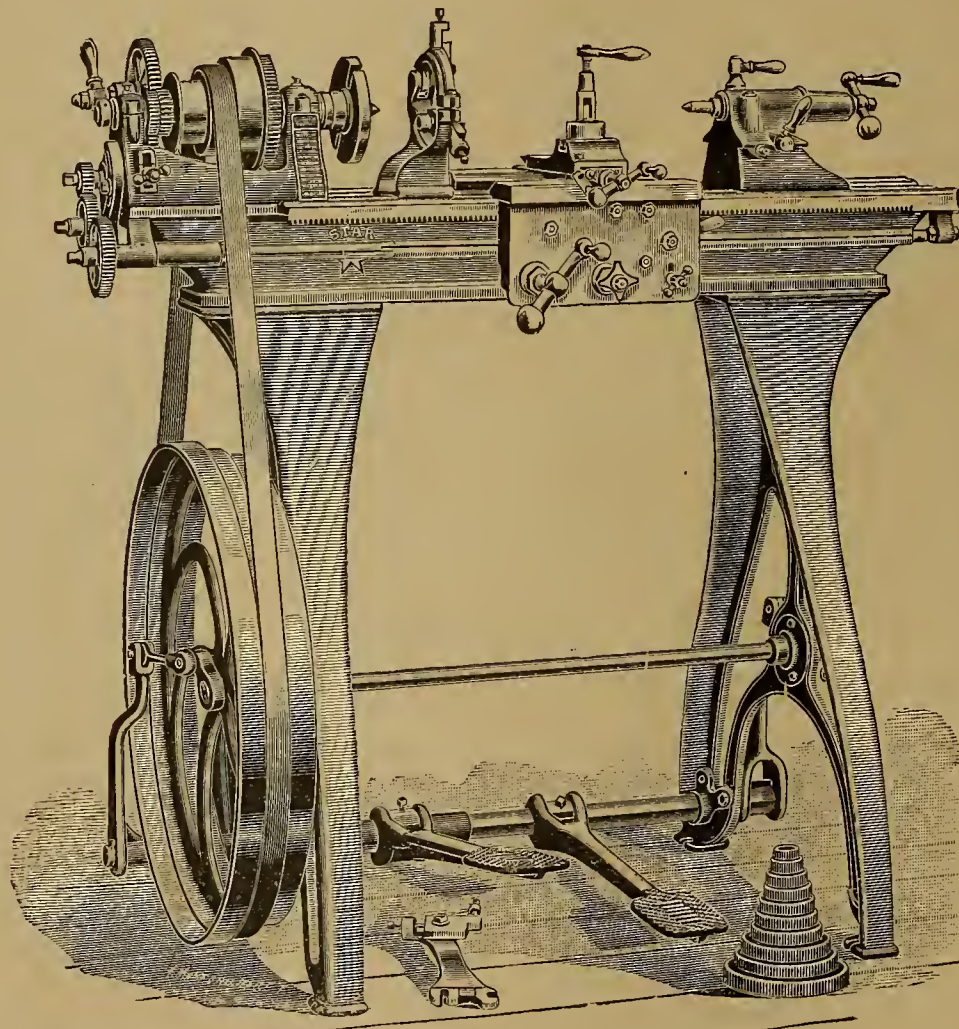
**TRANSFER OF CHIEF CYCLE CO. PROPERTY.**

The League Cycle Works of Milwaukee, successors to the League Cycle Mfg. Co., purchased the balance of the stock, tools, fixtures and machinery of the Chief Cycle Mfg. Co. of that city last Saturday, and besides putting up about 500 Chief bicycles, is in a position to furnish repair parts to the owners of the Chief machines.

**MONARCH AND DEFIANCE BICYCLES.**

The catalogue of the Monarch Cycle Mfg. Co. of Chicago has been issued and describes fully the construction and methods used in the manufacture of the various patterns of Monarch and Defiance bicycles. The introductory claim made by the company brings out the point that its growing capacity and its established trade position permits it to turn out machines at lower manufacturing cost and to market them with less selling expense than would be possible in a younger and smaller factory. Accordingly the company is able to reduce the list prices of Monarchs without lowering the quality of the machines.

On all but the Cooper Special racer two-piece hangers of special construction are used. In this hanger a section of the shaft



**THE STAR SCREW CUTTING LATHE.**

The accompanying illustration shows the latest form of Star screw cutting lathe for either foot or engine power, made by the S-neca Falls Mfg. Co., of S-neca Falls, N. Y. The head stock has a hollow spindle, phosphor bronze bearings and improved end thrust ball bearings which greatly reduce friction in drilling. The tail stock is fitted with an adjustable side movement device useful in turning tapers. A plain gib rest is regularly fitted, though a compound rest of late construction is furnished as an extra attachment. The automatic friction cross and longitudinal feeds are actuated by a phosphor bronze worm on the lead screw which is splined, and for all work except screw cutting it acts simply as a feed rod, and therefore the only wear on its threads is in screw cutting. The feed may be thrown in or out of contact by simply turning a band knob in the apron, and will feed in or out, right or left, cut screws right or left, or may be thrown out of gear entirely by moving a lever in the head stock, without changing the motion of the foot or driving power. The cross-feed will be found valuable in a large variety of work, as it secures perfect accuracy in turning or facing up work, and with the addition of simple fixtures, which can be made by any ordinary workman, light milling may be done. The lead screw is provided with an open and shut nut, which is thrown in or out of contact by means of a cam lever in the apron. It will cut all standard threads, from 3 to 64, inclusive, without compounding the gears, and nearly all threads by compounding them. The foot power attachment affords a walking motion and can be started or stopped instantly and may be operated with both feet when sitting or one foot when standing. Countershaft is furnished if desired. The lathe is fully described in the company's catalogue "B".



## Graceful Staunch Reliable



What you get for your money is as important as the amount you pay.

### National Bicycles

have an unblemished reputation. They have always given dealer and rider satisfaction. They have always been sold at a stable price. They have always carried the greatest number of practical yet simple improvements. They have a market of their own. No National dealer ever suffered cross competition. Every National dealer gets the benefit of his efforts in increased sales and a growing number of satisfied customers.

Price is relative. Profits are predicted by good business men on something besides first cost. It's the NET profit you want. Our catalog is readable.

**National Cycle Mfg. Co.**  
Bay City, Mich.

A NATIONAL RIDER NEVER CHANGES HIS MOUNT.

## Plain Talks on ANDRAE Cycles

VIII—Light Roadster for Men, \$50.

This is the most handsome bicycle built.

Its taking points have been turned into selling points.

There's more money in selling than there is in talking. We needn't argue that with agents.

The Andrae improved pattern frame, Andrae rigidity, quality, bearings sell the bicycle without talk.

The Andrae hub, with sprocket-like flange for direct spokes is another selling point.

This light roadster is to be shown to the "elite" of your city. There is no reason why a man should not buy an Andrae after he sees it.

There are 14 models in the Andrae line. Every one a seller on sight. Write for trade prices and our monthly paper, "The Andrae Agent."

**Julius Andrae & Sons Co.**  
MILWAUKEE, WIS.



## The Welcome to Waverley BICYCLES

This year is phenomenal. It is based on the good service Waverley Bicycles gave their riders all through 1898, and on the profitable business that resulted to Waverley agents. This year Waverleys are better than ever, with more talking points, and yet their price is but

≡≡≡ \$40

In addition we provide for our agents a lower-priced line, so that they can meet the demands of everybody.

Ivanhoe Specials, - - - \$35  
Ivanhoe Bicycles, - \$25 and \$26

Waverleys and Ivanhoes are the best values ever offered to the public, and will make the Waverley agency more desirable than ever. Write.

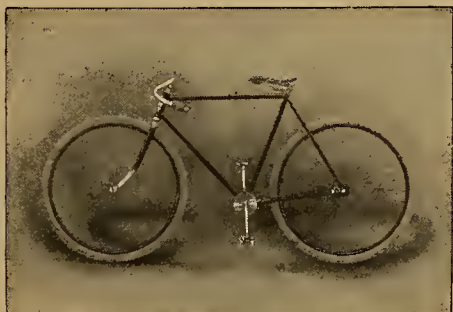
**INDIANA BICYCLE CO.**  
INDIANAPOLIS, IND.

We are almost ready to talk about our perfected Electric Motor Vehicles. Our announcements of the next few weeks will be interesting.

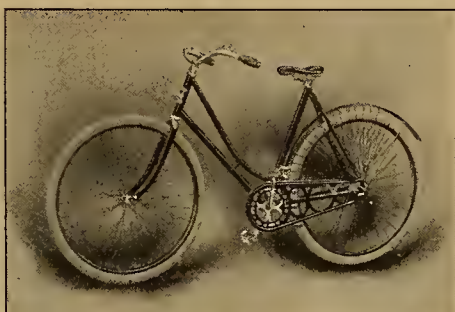
is forged together with each crank and these are locked together with a sleeve having threads of different pitch but both right-hand, so that when the sleeve, which also serves as a hub for the sprocket and spider,

Hartford and Morgan & Wright tires are the regular options in those fittings. The racer will be fitted with Palmer tires if desired.

To meet the popular demand for one-piece



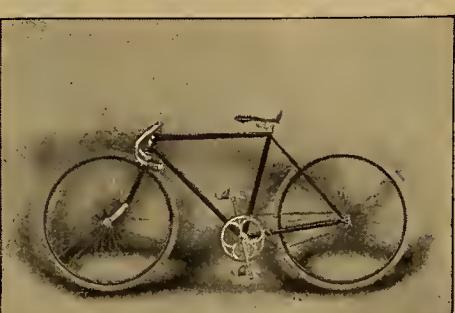
Monarch Chainless. Price, \$75.



Model 63, Defiance—Weight, 25 lbs. Price, \$35.



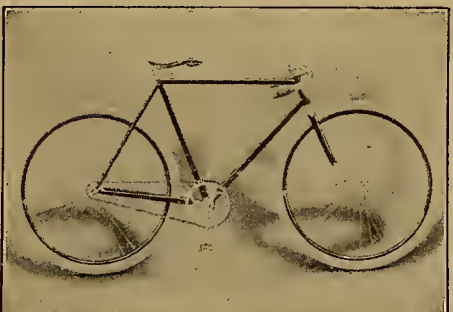
Model 70—D. D. Tandem. Weight, 45 lbs. Price, \$75.



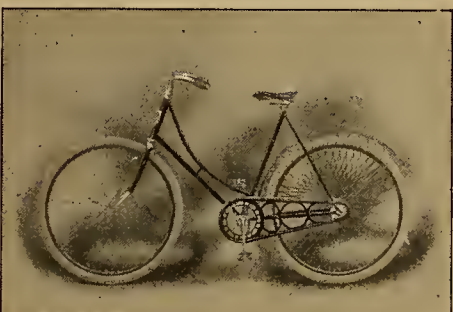
Cooper Special Racer. Weight, 21 lbs. Price, \$60.



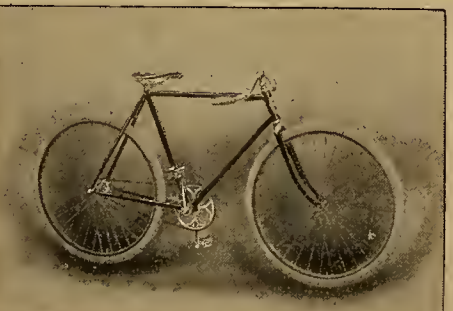
Model 69—Comb. tandem. Weight, 45 lbs. Price, \$75.



Model 68, Monarch—Weight, 25 lbs. Price, \$50.



Model 67, Monarch—Weight, 25 lbs. Price, \$50.

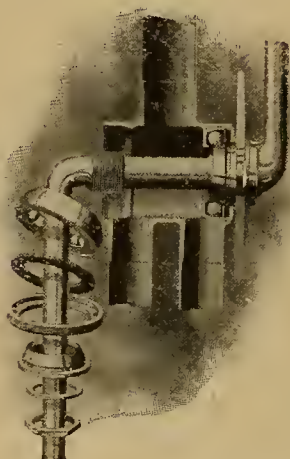


Model 64, Defiance—Weight, 25 lbs. Price, \$35.

is revolved on both shaft sections at the same time it draws them together.

A change toward neater appearance that has been made in Monarch patterns is in the form of the seat cluster lug, which is now clean cut and devoid of bulkiness. The standard finish is plain black, highly polished. Garford and Hunt saddles, and Dunlop,

hangers the Cooper Special is fitted with such a hanger of the company's own construction. There is no threading in the barrel ends, the cups fitting into tapered seats, as may be seen in the illustration



herewith, which shows the construction of the hanger. Besides the regular line shown here in full, the company also makes a pair of up-to-date machines to be sold at popular prices. They are styled the King and Queen.

**WILL SUPPLY BULLIS GEARS.**

The Bullis ball gear will be handled in the west and south by the Excelsior Supply Co. of Chicago. Considerable improvement has been made in this gear since it was first noticed in this paper. Drawings descriptive of the changes will soon be supplied readers.

**WANTS GOODS FOR EXPORT TRADE.**

The Violet Cycle Co. of Westfield, N. J., has just completed its new salesroom and now wants quotations on goods for export. Its store is located in the suburban district of New York, easy of access to buyers, who are personally conducted to the store by representatives of the firm.

**FROST GEAR CASE IN NEW HANDS.**

The American Mfg. Co. of Indianapolis has purchased the entire business and patents of the Frost Gear Case Co., and is now in position to supply the trade with the well known Frost gear covering.

**TRADE NOTES.**

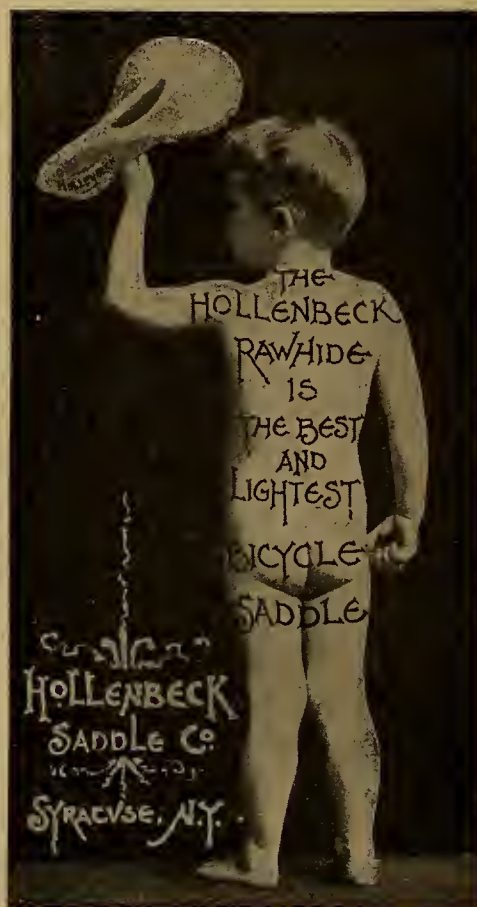
The Miami Cycle & Mfg. Co. of Middletown, O., has begun the manufacture of its well known Racycle two-piece crank hanger at Toronto, Can., under the management of W. E. Houghton.

C. K. Anderson, 164 La Salle street, Chicago, Ill., will in the future take care of the western sales of the Hollenbeck Rawhide saddle made by the Hollenbeck Saddle Co. of Syracuse, N. Y.

# Merit Wins Its Own Reward



Never in the history of Saddle manufacture has the record won by the famous **Hollenbeck Rawhide Saddle** been equaled, and never in the history of this popular saddle has the demand for it been so great.



Thirty high-class bicycle makers are fitting it to their best wheels, while over 75 wide-awake jobbers are distributing the **12-Ounce Rawhide Trade Winner** at factory prices. There must be a reason for this condition, and there are several. No saddle made combines the Lightness, Beauty, Comfort and Durability to such a great extent. Investigate

## The Hollenbeck Rawhide Saddle

**HOLLENBECK SADDLE CO.**  
SYRACUSE, N. Y.



# The Standard Bar of the World

Has 15-inch adjustment and 25 positions, with no change in pitch of grips, same as demonstrated at the shows in Chicago and New York



Over fifty of the leading manufacturers are supplying these Bars as their regular equipment. . . . .

Kindly say in your letter in which paper you saw this ad.

## The Kelly Handle Bar Company

Cleveland, Ohio, U. S. A.



# EXCELSIOR

Our line of Famous Cements is complete. Have you our Prices?



## EXCELSIOR SUPPLY COMPANY CHICAGO, ILL.

ESTABLISHED 1876. Everything for Bicycle Builders.

Send us your name and address for our new catalogue.



# THE PASTIME AND SPORT

## GATHERING IN PROVIDENCE

League Delegates Assembling to Elect Officers and Settle the Question of Racing Control.

League officials and state delegates have been gathering in Providence, R. I., during the first part of this week to take part in the annual assembly which convenes there today, February 8. President Potter and a number of other prominent New York state members arrived Tuesday, and delegates from other eastern divisions arrived that night, while later ones were expected Wednesday morning. Illinois delegates left Chicago Saturday night. The two Canadian delegates from the C. W. A. and belated members from western states were looked for Wednesday afternoon.

The first day will be devoted entirely to good roads matters and reports on road subjects, and there will be a dinner at night, given by the Rhode Island Improvement Association, at which many people prominent in cycling and good-road work will speak. It is believed that the complex racing situation may be cleared somewhat by Thursday night. The tilt between the faction favoring the divorcing of racing from the League and those who think the League should continue to retain control of the sport promises to bring out something interesting.

Election of officers will occur on Friday and will occupy but little time, there being little opposition to the various candidates.

## Pennsylvania Racing Circuit Formed.

Philadelphia, Feb. 6.—Local racing men are greatly interested in the announcement of the formation of a six-cornered circuit by prominent clubs in the following cities: Williamsport, Bloomsburg, Wilkesbarre, Reading, and Allentown, in Pennsylvania, and Binghamton, in New York. Three-year contracts have been signed with track owners in each town, and as at present arranged at least four circuit meets will be run off at each track. All these towns are within six hours' ride of Philadelphia, and many of the Quaker City flyers have announced their intention of taking in the circuit.

## Banker Wins the Prize of Tunis.

The principal event of the race meet run at Tunis, Algiers, January 22, on the winter circuit, was the great prize of Tunis race at 3,000 meters. It was won by George Banker in 4:45 by several lengths from Tommaselli, with Grogna third. The track was small and gave the American a slight advantage. For the first time since handicap races were inaugurated on the circuit Banker was badly defeated, running third in his heat, with Chavanne, 70 meters, first, and Coquelle, 40 meters, second. Grogna won the final heat from 15 meters in 1:22 1-5, defeating Coquelle, who ran second. Banker and Tommaselli won the tandem race as usual, with Coquelle and Grogna second.

## Pushing Intercity Path Scheme.

Washington, Feb. 6.—The Maryland Cycle Path Association has been formed, with the object of promoting the construction of a cycle path between Baltimore and Washington, and it is understood to have good backing in Baltimore. During the week Conway W. Sams, chief consul of the Maryland Division of the L. A. W.; Park Commissioner Casey, R.

A. Pfeffenhofer, and A. H. Harvey, representing the new association, were in Washington conferring with local League officials to secure the co-operation of the Washington wheelmen. It is proposed to capitalize the association at \$5,000, consisting of 5,000 \$1 shares. The executive committee of the association is vested with power to increase the capital stock. It is proposed to fix the initiation fee at \$1, which shall be in lieu of the first year's dues. After that there will be an annual fee of the same amount. Every member is to be provided with an emblem, which, when placed upon his bicycle, shall entitle him to the use of all paths built by the association during the calendar year for which his dues are paid.

## Road Training on the Coast.

San Francisco, Feb. 6.—The middle and long distance riders who are now here training for the coming races to be held on the coast by the American Cycle Racing Association are doing some fast work on a three and a half-mile stretch of boulevard which skirts the ocean out at the Golden Gate. Most of the pacing is done by Henry Fournier on his motor pacing machine, and miles much under two minutes have been cut out day after day. Waller hangs onto the rear wheel of the motorcycle with a tenacity that makes the other riders jealous. Fredericks, the Swiss rider, has been training hard lately, and Miller says that he is to be most feared of any of the long distance riders. Waller is also afraid of the Swiss. Miller has been demonstrating his ability to ride unpaced by doing some flying half-mile sprints, in one of which he covered the distance in 1:00 1-5. The Kennedy-Michael aggregation have established bachelor quarters and engaged a Chinaman as housekeeper.

## Southern Cyclists' Second Meet.

New Orleans, Feb. 6.—The Southern Cyclists' Association held its second Sunday race meet here January 29. The eastern professionals were in good humor, and though they knew that their winnings would not net them a week's board, each strove hard to win the various events. An informal meeting of the members of the association was held at the track and it was decided to hold another Sunday race meet February 12, the Sunday immediately preceding Mardi Gras. The summaries of the principal events follow:

Half-mile open—D. Kramer, first; Miller, second; G. Kramer, third. Time, 1:17.  
One-mile handicap—Repine, 15 yards, first; Verilhac, 30 yards, second; G. Kramer, 25 yards, third. Time, 2:34.

## No Memorial Day Race in Denver.

The last decoration day road race in Denver under the auspices of the Associated Cycling Clubs of that city has been run, the association having voted at a meeting held last week to abandon the race on that day in deference to the requests of the G. A. R. Hereafter the day will be left to the old soldiers and another selected for the annual road race.

Cities and towns in Massachusetts are empowered to lay out and maintain cycle paths, and in Ohio the county commissioners have been authorized to levy a license tax of \$1 a year on bicycles and with the proceeds to construct and keep in good shape such paths as may be deemed desirable. The legislature of New York is now considering a similar proposition.

## OPPOSING STONEMAN'S BILL

New York Cyclists Preparing to Defeat Proposed Law Allowing Towns to Regulate Cycling.

Representative Stoneman, from Cattaraugus county, N. Y., is meeting with vigorous opposition since he began in the state legislature to foster his proposed enactment for the amendment of the town law in relation to regulating the use of bicycles. Wheelmen responded heartily to the appeal of the New York state division of the L. A. W. in its recent circular calling on cyclists throughout the state to oppose the bill in every way possible, and if the power of the wheelmen of New York amounts to much politically, the bill is apt to meet an early and violent death. At least so the wheelmen hope.

Instead of proposing a law that would be universal in its scope, Mr. Stoneman deems it desirable to enact a law which would lead to confusion and constant difficulty because of conflicting ordinances in different towns by providing that the town board of any town may adopt ordinances regulating the speed of bicycles on any highway in the township outside of a city or village; requiring or prohibiting the use of bells or lamps on those highways; prohibiting riding on side or foot paths, and may prescribe fines for violation of the above not exceeding \$5 for each offense. One-half of each fine, according to the proposed law, is to be given to the person giving evidence of the violation.

The bill, if it passes the legislature and becomes a law, will directly injure every wheelman in the state who rides out of his own township, and for tourists it will cause untold annoyance. One township might have a speed limit of five miles, the next a limit of eight miles, and a third of ten miles, and the tourist, unless he were familiar with the various ordinances and knew exactly where one township ended and the next began, would doubtless in the course of a good day's riding unconsciously and innocently violate several ordinances and make himself liable to several fines. In one town there might be an ordinance requiring the carrying of bells and in the next an ordinance prohibiting them.

It is hard to conceive what good to anyone the originator of the bill believes can come out of it.

## Unpopular Measure Defeated.

When the bill to prevent the trundling of bicycles along the sidewalks of Philadelphia, which was introduced into common councils by Frank M. Riter, director of public safety at an annual pittance of \$10,000, came up for discussion last Thursday, the city solons poked all manner of fun at the bill, one of them even going so far as to offer a jocular amendment forbidding the riding of bicycles within the city limits. Afterward, when the time came to vote on the measure, not a single ballot in its favor could be mustered. The A. C. C., backed by the wheelmen of the city generally, was responsible for its downfall, and Director Riter is breathing dire vengeance.

## Boston Gets the Meet.

It has been officially announced by Secretary Abbot Bassett of the L. A. W. that the result of the mail vote of the delegates on the question of the location of the '99 meet gives Boston the choice.



## WHEELER SADDLES

HAVE ALWAYS BEEN MADE WITH THAT  
CURVE IN THE BACK.

OUR LINE FOR '99 COMPRISES BUT FOUR DISTINCT MODELS:

- "EXTRA" Woman's . . . . Broad, Soft and Easy. ❀❀
- "EXTRA" Men's . . . . Hygienic and Durable. ❀❀
- "SPECIAL" Roadster . . . . An ornament to any wheel.
- "CORK-TOP" Racer . . . . Light and Graceful. ❀❀❀

These saddles are made and finished in the careful and stylish manner that has always characterized Wheeler Saddles.

Send for samples of the most popular saddle on the market.

### THE WHEELER SADDLE CO.

1427-1457 Woodward Ave., DETROIT, MICH.

Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT.  
New York Distributing Agents: HARTLEY & GRAHAM.

## THERE MAY BE OTHERS

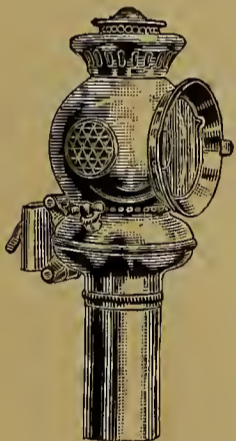
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.. 1899 ..

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THE SIMPLEST GAS LAMP ON THE MARKET.

Place your order early to insure prompt delivery.



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REPAIRMEN ❀  
RIDERS ❀❀❀

... OUR ...

## '99 CATALOGUE

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Biggest line of Cycles and Sundries to be found in the Gulf States. Are you on our mailing list?

Abbott Cycle Company, Ltd. WHOLESALE DEALERS  
NEW ORLEANS, LOUISIANA.

# 70,000 People Marvelled

AT THE MAGNIFICENT  
DISPLAY OF ❀❀❀❀

# Orient Products

AT THE NEW YORK CYCLE SHOW

## Our Friends Say

The Orient Sager Chainless  
"The peer of all."

The Orient Chain Models  
"Excelled in value by none."

The Orient Automobile  
"None in its class."

It's not strange that the Orient factory has doubled its output each year since 1894, when the facts are known. ❀❀❀



❀❀ PROGRESSIVE DEALER ❀❀

identify yourself with a

PROGRESSIVE MANUFACTURER



## Waltham Mfg. Co.

315 Crescent Park

WALTHAM, MASS.

"THEY ALL RIDE THE FAMOUS ORIENT."

Altogether there were 249 votes cast. Of these, Boston received 159 and Buffalo 90.

**NEWS IN BRIEF.**

Denver cyclists are planning to petition the Colorado legislature to set aside each year a day to be known as "Wheelmen's day," and to declare it a legal holiday.

Press reports state that Jimmy Michael and his traveling fellows were recently instrumental in removing two dying trainmen from the debris of a wreck near San Antonio, Cal.

The eastern racing men who sought fortune in New Orleans are sadly trying to gather together \$15 firsts and \$3 thirds to purchase transportation to some other part of the country.

The racing men who are planning a trip to the Argentine Republic will, if successful, follow "Plugg Bill" Martin to South Africa, where bicycle racing is in a most flourishing condition.

The amateur racing men of France, being dissatisfied with the existing rules governing their branch of the sport, are on the verge of organizing and formulating new rules. They will not attempt to form a new league, but will ask the Cyclists' Syndicate of Northern France to take charge of their interests.

The eight-lap track which Jack Prince has been building in Houston, Tex., has been completed and racing was begun on it Sunday, February 5, local riders competing. The races are scheduled to last until late in April, and it is probable that some of the men now racing in New Orleans will go to Houston in search of better prizes.

"Hub clubs" are already in existence and in process of formation among the wheelmen of Philadelphia who intend visiting Boston at the time of the League meet. A specified amount is paid into a common fund each week, and by August next the moneys so paid will have amounted to a sum sufficient to pay the expenses of the entire club for the trip.

Philadelphia wheelmen are preparing to dabble in politics a little at the coming local election. Thomas Hare, president of the Associated Cycling Clubs, has been nominated for common council in the Thirty-second ward on an independent ticket, and every bicycle rider in the ward is being urged to

break party ties regardless of previous affiliations and vote for him. His chances are considered good.

Charles G. Kilpatrick, the one-legged trick rider and globe trotter, has recently returned from a trip to Cuba, where, according to his own statement, he rode down the famous slope at San Juan.

The development of bicycle racing among college men has led to the suggestion that that form of sport be conducted separately from other college sports, and doubtless after the regular annual meeting of the Intercollegiate association, to be held the latter part of this month, a distinct organization will be formed. The Intercollegiate Bicycle Association, if it materializes, may work in conjunction with the L. A. W., and if so, will prove a strong ally.

**MISCELLANEOUS.**

Advertisements under this head 5 cents per word first insertion, 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received.

**WANTED**

WANTED—A man having full knowledge of the manufacture of double-tube bicycle tires and inner-tubes. Address G. H. R., Postoffice Box 1553, New York, N. Y.

WANTED—Position with bicycle factory; foreman or contract; 15 years' experience; understand every part of wheel, also horseless carriages. BEINFELD, 209 W. 115th St., New York.

MANUFACTURERS—Gentleman, trained engineer with central London office, many years' experience in the cycle trade, large connection amongst manufacturers, factors, shippers and agents, is open to take up and thoroughly work through travellers and himself a good sole agency for cycles, components or stampings, etc.; best firms only entertained. R. M. P., care Cycle Age.

WANTED—Bicycle dealers and repairmen to send us 25c in stamps or otherwise and we will send them a receipt for making the best and cheapest puncture proof fluid in the country; easily made. Very effective; prolongs life of rubber. FT. WAYNE NOVELTY Co., Ft. Wayne, Ind.

**FOR SALE**

FOR EXCHANGE—High class hubs and two-piece hangers for machinery. Address C. H. B., care Cycle Age.

FOR SALE—A lot of 238 high class wood handle bars in perfect condition. The best offer takes them. Address E. C. S., care Cycle Age.

FOR SALE—Half or whole interest for patent in cane covered grips. Address A. R. WIENS, 225 Cedar St., Milwaukee.

GET THE GENUINE.....

**DIAMOND E** Nickeled Spokes...

and you will find this trade mark



on every spoke. It is conceded to be the most important feature of the season.

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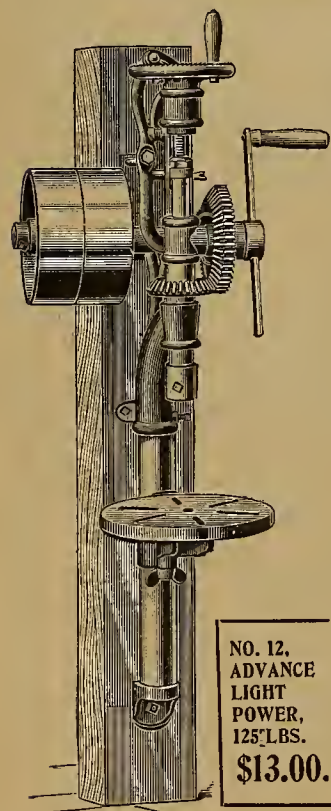
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Torrington, Conn.

THE HART & COOLEY MFG. CO., So. Chicago, Ill.

**HOT and COLD ROLLED STEEL**

Geo. Nash & Co., General Sales Agents, 35 South Canal Street, CHICAGO.



**Advance Drills...**

FOR BICYCLE REPAIRERS.

Well made, Light draft, Continuous automatic self feed.

14 Sizes and Styles...

**\$6.00**  
to  
**\$85.00**

EVERY DRILL GUARANTEED.

NO. 12, ADVANCE LIGHT POWER, 125 LBS. \$13.00.

THE SILVER MFG. CO., Salem, Ohio, 325 Broadway.

**Liquid Brazing Crucibles**

All sizes and shapes as required to fit any make of furnace, made by the original makers of brazing crucibles and the largest and oldest manufacturers of plumbago or graphite crucibles in the world.

**JOSEPH DIXON CRUCIBLE CO.,**

Jersey City, - - - New Jersey.

A NEW LIGHT ON AN OLD SUBJECT  
It saves from 33 to 50% propelling force.

Notice to... BICYCLE MANUFACTURERS.  
The riders of 1899 will insist upon their wheels being equipped with "The Star Ball Retainer."  
Send us samples of Cups and Cones and write for prices.

THE STAR BALL RETAINER CO. LD. LANCASTER, PA. U.S.A.

"I USE THE STAR BALL RETAINER!"  
"I DON'T!"

ALL ROADS ARE EASY WHEN THE STAR BALL RETAINER IS USED

# THE CYCLE AGE

VOL. XXII—No. 16.

CHICAGO, FEBRUARY 16, 1899.

NEW SERIES No. 65.

## CANADIANS WILL NOT COMBINE

### Rumor That Big Concerns Were About to Pool and Save Home Market from Invasion.

A week ago it was whispered in some of the large manufacturing centers that a plan was afoot to bring about the consolidation of half a dozen large cycle making concerns in Canada, save in the neighborhood of \$200,000 annually in the marketing of their joint product, arrest or completely choke off the competition which American makers give Canadian manufacturers in the Dominion, and, in short, bring about a state of affairs among Canadian makers which will lead to the return of more prosperous conditions than have been reigning for the past twelve months.

#### The Story Emanated from Chicago.

Upon presenting this information, as it was disclosed through a former Canadian now resident in Chicago, to the leading cycle manufacturing concerns in the Dominion, it was ascertained that it had no foundation. No such project has ever been broached to Canadian makers, and, while they have naturally desired to stem the flood of machines exported from this country to theirs, yet they do not see any hope of accomplishing such a result by pooling. That part of the rumor which credits the Canadian makers with a desire to reduce expenses in the marketing of their products is one which has been under discussion in every quarter of the United States and Canada since the cycle industry began.

#### Details of the Alleged Consolidation.

As the story goes, it was the intention to form a monster consolidation among the Canadian cycle makers, the preferred stock or debentures to be issued according to the valuation of the various plants which desired to form part of the combination. Common stock was to be issued for good will. It was hinted that such a consolidation could be brought about within a period of four months.

#### Canadian Makers Enter Denials.

The Planet Cycle Works, of Toronto, was much surprised upon being informed by the Cycle Age that gossip of the nature above set forth was current. The firm emphatically declared that there was not the least chance of the scheme ever being given vital form.

The McBurne & Beattie Company, of Toronto, replied stating that there was no foundation for the rumor, that no such scheme was ever broached to the Canadian Manufacturers' Association, of which the firm is a member, that the scheme was impracticable and visionary.

The Canadian Typograph Co. and other firms responded in similar vein.

#### Opening of Pittsburg Show.

The cycle show now being held in the old city hall at Pittsburg by the local

cycle board of trade opened last Saturday evening and was well attended and alive with local interest. More than thirty makes of bicycles were exhibited by the respective local dealers handling them, and in addition was an exhibition of horseless carriages and motor tricycles which attracted a large part of the spectators' interest. A feature of the show that is proving a drawing card among the cycling fraternity is the contest for a \$100 prize for the most popular bicycle club in western Pennsylvania. The cycle board of trade is not attempting to make money out of the show, being satisfied to come out of the affair even with expenses.

## M. & M. W. CO. BURNED OUT

### Million Dollar Fire Causes Total Loss to Supply Company—Other Cycle Stock Ruined.

The Manufacturers & Merchants' Warehouse company of Chicago has been completely burned out at a loss of between \$100,000 to \$150,000 by a terrific fire that totally destroyed the seven-story brick warehouse at 10 to 24 West Water street Tuesday night.

Among the fifty or more other firms which sustained losses amounting to from \$2,000 to \$100,000 were Kelley, Maus & Co., bicycles and supplies, \$80,000; H. E. Graves, bicycles, \$10,000, and J. B. Barnett & Co., bicycle supplies, \$5,000. The M. & M. W. Co. carried \$65,000 insurance. Kelley, Maus & Co., \$100,000, and H. E. Graves, \$10,000.

The building was known as the Traders' warehouse and was built seven years ago. It was of improved mill construction and was claimed to be the finest warehouse in the west, but within a few hours after the starting of the fire at 9:15 in the morning the walls had fallen and it was a smoldering heap of ruins.

Frozen fire plugs hindered the firemen so that it was eight minutes before the first stream of water was playing on the fire, and before it was gotten under control thirty-five engines and two fire tugs were at work.

The fire started in a pile of hemp lying in contact with a steam pipe.

## SADDLE PRICES NOT TO RISE

### Outline of Policy to Be Pursued By the American Saddle Company—Working Capital Subscribed.

On February 8 in Cleveland, Ohio, the stockholders of the American Saddle Company, with a capital stock of \$1,800,000, elected directors, and the latter elected the following officers:

A. L. Garford, president and general manager.

S. S. Kurtz, vice-president.

Heman Ely, secretary and treasurer pro tem.

The following board of directors was elected: A. L. Garford, J. A. Hunt, S. S. Kurtz, D. F. Prince, L. H. Foster, M. B. Johnson and B. F. Yates.

Mr. Garford is at the head of the Garford company; Mr. Hunt is the active force in the Hunt company; Mr. Kurtz is the ruling spirit in the Gilliam company; Mr. Prince directs the fortunes of the P. & F. company; Mr. Foster controls the affairs of the Wheeler company; Mr. Johnson is a lawyer representing the Brown company, and Mr. Yates is the representative of the Canadian factory of the Wheeler company located at Toronto.

#### The Men Who Will Exercise Control.

The American Saddle Company will be controlled by an executive committee consisting of Messrs. Garford, Foster, Kurtz and Prince.

Of the capital stock \$800,000 is preferred and the remainder common. The Garford, Hunt, Gilliam, P. & F., Wheeler and Brown companies will continue to manufacture the patterns with which the name of each establishment has been peculiarly identified, but under the direction of general managers who will be subject to the executive committee of the new organization. The American Saddle Company takes control of all the plants from January 1 of the present year, each establishment having agreed to turn over its business to the new company free of incumbrance.

#### New Working Capital Subscribed.

In the valuations put upon the various plants all quick assets were thrown in, and only the actual value of each plant paid for with stock. Then a new working capital of \$200,000 was subscribed in a single day. No prospectus was issued, a fact which by itself sufficiently indicates the confidence of investors in the new company.

It is not improbable that all goods shipped from the various factories will be invoiced direct from the mills instead of from the general offices of the new company, which are located in the American Trust building fronting the square in Cleveland. This, however, is a matter which has not yet been fully decided.

For the remainder of the selling season no noteworthy changes will be made either in the methods of selling or man-

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ner of manufacture. What may happen next year, however, is a matter of such considerable interest that it is well to let the head of the American Saddle Company talk to the point.

"It is not the purpose of the American Saddle Company to increase the price of saddles," says Mr. Garford. "Such never has been the purpose. It is a well known fact that the saddle business had got to that point where many models were sold for less money than they cost to manufacture. This consolidation of saddle making interests will endeavor to reduce the cost of manufacture, and by the elimination of the expense of conducting and separately managing many concerns it is hoped, with present prices, there will be a fair profit in future operations. It is in the saving of cost of marketing our products, as well as in their manufacture, that we hope to make our profit, and not by the raising of prices.

#### Will Lessen Saddle Patterns.

"It is our purpose to reduce the number of saddle patterns. At the present time each concern in the American Saddle Company is putting out from ten to twenty different styles. This has had a tendency to confuse bicycle makers, and through the competition among the bicycle makers the public has got the impression that there is no end to the saddle options which they may demand. As a result saddle manufacturers have been compelled to make more patterns than were actually necessary, and in turn have loaded the bicycle makers with patterns which, if not wisely bought, have proved very burdensome. We hope to eliminate a large number of models that heretofore have had but limited sale and leave only standard types. That such a plan is not impossible of accomplishment is demonstrated by what has taken place in tire manufacture and in other branches of the industry which are not cumbered with unnecessary patterns. We will therefore select from among the concerns now in the American Saddle Company the models which are most popular with riders and endeavor to find demand exclusively for those patterns."

#### All the Year Round Manufacture.

Every effort of the American Saddle Company will be bent toward that indispensable condition for really economic production, namely, all the year round manufacture. The undoubted advantages which the concern will have in the matter of purchasing stock will enable it to buy cheaply and to make metal parts, such as clips, screws, bases, plates, etc., much cheaper than those articles are now being produced.

The commercial value of a high purchasing capacity is best understood when it is stated that annually there is the sum of \$750,000 to be spent by the concerns now consolidated. If it is found that certain work common to all of the concerns in the big company can be manufactured cheaper in one establishment than in another, the one which can produce most cheaply will be instructed to take care of the work. The value of this method of distributing work will be apparent even to those who may not coincide with all the views entertained by the American Saddle Company, for it is well known that the cost of labor in the production of the cheaper forms of saddles is much less in certain parts of the country, where conditions are favorable for manufacturing, than in others, where wages are high and consequently cheap production is out of the question.

#### No Radical Change Till July.

It is not the intention to make any very striking changes in the prevailing methods of merchandising saddles before July or August. By the arrival of that time, however, the true work of the American Saddle company will be start-

ed, and as fast as goods are turned out of the various factories they will be warehoused and hence will be ready for instant delivery in large quantities at any time manufacturers, jobbers, agents or riders may want them. The fact that the executive body of the American Saddle Company considers that half a dozen standard types of saddles are sufficient to be reckoned as standard, and the further fact that it is the intention to confine manufacture almost exclusively to such standard patterns, will operate to prevent the product from getting out of date unless some unlooked for change in the taste of the general public should take place.

#### Will Energetically Seek Foreign Trade.

It is highly probable that the big company will establish depots in many of the principal cities in foreign countries. Already each of the establishments in the new company has built up an extensive foreign trade and several of the mills will send almost 200,000 saddles abroad this year. Just how the product intended for foreign countries will be marketed is as yet undetermined, although it is not unlikely that Markt & Company, who have signalized their usefulness to several of the concerns in the American Saddle company, will act as general foreign distributing agents for the combined interests.

#### Plans for the Future.

Something more than the mere continuation of the present methods of manufacture is intended by the new company, for negotiations are already afoot for the purchase of the latest and best machinery for construction of all kinds.

The company lays special stress upon the fact that it owns most of the valuable patents on saddle construction, and announces its intention to take aggressive steps for the protection of its property.

#### OPENING DAYS FAVORED

Dealers of Detroit and Columbus Will Make Simultaneous Individual Displays.

The Detroit cycle board of trade has decided to have a general spring opening of the bicycle stores of that city on March 1, 2, 3 and 4. Stores will be open day and night and will be attractively decorated and illuminated. There are fourteen members in the board.

Arrangements for a bicycle show in Springfield, Mass., were completed by John Adams, manager for the local agency of the Cleveland firm, last week, and the exhibition was to open this week Tuesday. Twenty booths were provided and neatly trimmed. Most of the spaces were rented by local firms.

Special efforts to interest women in cycling are to be made at the spring cycle show, to be held March 24 to April 1, in Grand Central Palace, New York City, under the management of Allen S. Williams. The display will include exhibits of drop frame and women's diamond frame bicycles, accessories for the convenience and comfort of women riders, and ladies' costumes, shoes, etc. Prizes are to be presented for the most ingenious and meritorious cycle or sundry device invented by a woman and for the largest number of century bars and racing medals won by female riders.

The Associated Cycle Dealers of Baltimore met recently and decided not to hold a show in the spring under its own auspices, nor to take part in any show no matter by whom conducted. The reason given for this action was that their busy season is expected to begin about March 1 and it would be unwise to take their time from their stores. It was the consensus of opinion among those present that more bicycles will be sold this

year than last and that during the spring and early summer months at least there will be all the business the dealers can transact.

The Columbus, O., cycle board of trade met last week and decided to have a grand opening of their stores on March 1, 2, 3 and 4, each firm to have an individual display.

The New Haven, Conn., Y. M. C. A. will hold an exhibition of bicycles the last three days of this week for the benefit of the twenty cycle dealers in that city.

New Bedford, Mass., is to have a local show opening next Saturday evening and continuing until February 25, under the management of Theodore Bayliss.

Retail dealers of Grand Rapids assert that nothing is further from their thoughts than the holding of a bicycle exhibition this spring, as proposed by W. Montague Perrett, as they expect to be so busy next month that they cannot take their goods, clerks and their own time from their stores to attend a show. Even during the winter they have made sales enough to make it worth while to be in constant attendance at their respective stores. It is said that the show held three years ago proved a detriment to the business of all who participated.

A movement is on foot in Erie, Pa., to interest the bicycle dealers in a local bicycle show and carnival to be held at the opening of the riding season in March.

#### CHANGES AMONG DEALERS

New Jobbing Firm Formed in Newark—Westfield, Mass., Dealer Declares Bankruptcy.

John Cockburn, who carried on a strictly jobbing business last year at 504 Broad street, Newark, N. J., has entered into partnership with Lindley Underhill, Jr., late manager of the Liberty Cycle Co. of 567 Broad street, same place, for the past five years. The new firm will job bicycles, fittings, supplies and sundries on an extensive scale, buying and selling for cash only, at the latter address.

W. D. Wilmot, formerly selling and repairing bicycles in the Casino building in Fall River, Mass., has removed to 101 North Main street, in the same city.

Alanson A. Sanborn, a Westfield, Mass., bicycle dealer who has been in business with Fred E. Gridley under the style of A. A. Sanborn & Co., has filed a petition in bankruptcy in Boston. Total liabilities are placed at \$810, against assets of \$285.

H. M. Snyder & Co., cycle dealers in Detroit, have been burned out at a loss of \$2,000 by a fire that occurred February 4.

Marion Black has retired from the bicycle business of Meyer & Black at Fort Wayne, Ind., and the concern will in the future be known as the Meyer Cycle Co.

#### Boston Dealers Organize.

The organization of the Boston Cycle Dealers' Protective Association was completed last week, and J. F. Scott elected for president and Albert King for secretary, each to serve one year. Steps were taken to establish a bureau of credits and collections, which will begin operations at once and take care of this year's business. An executive committee, consisting of D. S. Pratt, W. S. Atwell and J. A. Cushing, was chosen to serve three months. All dealers in cycle sundries and parts have been invited to join the association.

The Kirk Mfg. Co. of Toledo has installed an acetylene gas generator in its home retail store and will hereafter lighten the premises by this means only.



**BEGINS TARDY RETRENCHMENT****BASES HOPE ON AUCTION SALES****Australia's Largest Agency Struggling to Recover from Extravagance - The Tire Trade.**

Sydney, Jan. 16.—The largest cycle agency in Australia, having branches in every colony, now finds itself compelled to resort to auction sales and to retrench expenses in various ways in order to keep alive after two years of extravagance. This is the Austral Cycle Agency, which made a huge effort to monopolize the entire trade throughout Australia, but failed signally in the attempt. The large losses sustained during the past two years are a matter of common gossip among the cycle dealers of the island continent, who have frequently been heard to say in the past twelvemonth, "I'll give them another three months to keep alive," yet the firm is still extant.

**Large Salaries and Racing Expenses.**

However, the agency has begun a policy of retrenchment, beginning with the advertising, and has disbanded its pacing teams, and it is believed that the racing men under contract will soon be given notice to quit. At the present time all the best racing men of Australia are employed by the firm and their wages and percentage of winnings must amount to very nearly \$500 per week.

Other examples of the heavy expenditures that have led up to the present lamentable state of affairs are the drawing of a salary of \$7,500 by the director of the firm and of the payment of salaries of \$2,500 to each of the managers of the head depots in the several colonies.

**Auctioning Off English Machines.**

Great endeavors have been made by this agency to push ungainly and inferior bicycles of English manufacture on which a number of racing men have sustained serious accidents on track and road. These machines sell in England for \$65, while the Austral Cycle Agency sells them here for \$140 and lists them in western Australia at \$150. Just before Christmas an auction sale of 100 new and second-hand machines of several makes was held in Adelaide, at which it is claimed an average price of \$55 was realized. If this is so, it was the best auction sale that has occurred in Australia. On Christmas eve another auction was held in Melbourne, at which eighty-five machines were put up and the majority were disposed of. They were all made in England. The highest price realized was \$80 for a road racing machine, while some of the bicycles went as low as \$32. Two women's bicycles brought \$69 each.

Today another auction is being held here in Sydney to dispose of 100 bicycles of the same make as those sold in Adelaide and Melbourne. It is hardly possible that this sale will be as successful as the previous sales, for the cycle business is none too brisk in Sydney and this auction will make it still worse.

**Instalment Sales Make Second Hand Stock.**

The Gould Bicycle company and the Sydney Cycle company are suffering the usual consequences of too liberal instalment sales and now find themselves burdened with enormous stocks of second-hand machines recovered from riders who, having purchased them on a first cash payment of \$10 and monthly payments of \$5, rode them three months and refused to make further payments. The well known firm of Scott & Morton wrecked itself on this same innocent looking coast of easy payments a few years ago.

Judging from the enormous profits realized from the sale of double tube tires

in this country at \$15.75 per pair, there should be an excellent opportunity for some American firm to reap a harvest by introducing double tube tires to sell for about \$12 a pair. They would have to be good tires, however, properly handled, and capable of standing rough usage as the Australian roads, which are very rough, combined with the excessive heat, soon ruins and finds the weak spots in an inferior tire. Eighty per cent. of the Australian riders use the double tube tires.

F. Grimley, dealing extensively in bicycles in Sydney, is stocked almost to the roof with American machines of 1897 and 1898 production. One of these makes which he is pushing is being sold at the ridiculously low price of \$40. When he clears his stock he may quit selling bicycles and confine his attention to the sale of sundries, of which he sells a large quantity.

**Adopting Wider Handle Bars.**

There is a growing tendency in both Sydney and Melbourne to abandon the very narrow dropped handle bars in favor of others a little wider.

A firm of Canadian manufacturers claims to have sold 1,800 bicycles in Victoria last season. If this is correct it sold as many machines as any other firm in that colony.

All the Beeston Humber bicycles of 1898 production which were imported into Australia were fitted with a double chain stay, which was said at the time to be a permanent feature. This year, however, all the new machines of this make being landed here have only the usual single stay. Riders found the double stay satisfactory when chain wheels of large diameter were used, as greater power was given to resist the high strains of big gears, but when low gears were fitted the least slackening of the chain caused a continued tapping on the upper stay which gave great annoyance to the riders. This feature has therefore been discarded, so far at least as the Australian trade is concerned.

**SUES THE BONDSMAN****A Columbus Rider is Unable to Satisfy Judgment Against Bicycle Protective Company.**

Suit has been brought by Lyman D. Wood of Columbus, O., against the Columbus bondsman of the Toledo Bicycle Protective Association of Toledo against which judgment was rendered some time ago in favor of the plaintiff for \$52 and costs for failure to make good the loss of a bicycle stolen from him.

The company failed to settle the judgment and did not appeal the case, leaving it to the successful plaintiff to recover the amount as best he could. There were no available assets of any kind, and in case there were no local bondsman the only recourse of the judgment holder would be to sue on the basis of stock liability, which would be very costly and which few would undertake.

Execution was ordered February 1 and placed in the hands of the sheriff at Toledo, who found that there was nothing available at the offices of the association that would justify seizure.

The company is composed of two lawyers and a manager. Efforts to learn who the other stockholders are, if there are any, have been unsuccessful.

A new process for the manufacture of calcium carbide which will so cheapen its cost that it can be sold at retail for 3 cents per pound has been invented by I. S. Prenner. The process has been successfully demonstrated at the Armour Institute, Chicago, and a plant is to be erected at Maquoketa, Iowa.

**COLUMBUS AGENTS SATISFIED****NO CALL FOR THIRTY INCHERS****Heavy Sales of High Priced Machines—Good Work Done By Local Board of Trade.**

Columbus, O., Feb. 13.—The promised demand for machines with 30 inch wheels has not materialized. Towards the close of last year every dealer was led to expect, from all the noise which appeared in the papers concerning these models, that the higher priced goods with 28 inch wheels would be completely superseded. Such, however, is not the case. A constantly increasing demand is noticed for chainless models, this increase being reckoned by what was discoverable last year. It is, however, yet too early to make accurate predictions touching the sale of chainless models.

**Good Business Anticipated.**

From March 1 to 4 the members of the board will formally open the retail season, each dealer in his own store. Indications point to a very good business for the coming season. Many more machines have already been sold thus early in the season than is usual in local trade, and, strange to relate, the early customers are not seeking cheap bicycles, but want the better grades.

**Effective Organization Work.**

The local cycle board of trade, which now includes all the leading dealers in the city, has been very successful in the past year. Two branch houses do not affiliate with the board, but are, however, in hearty sympathy with its general aims. So much money was lost in 1897 by giving away lamps, bells and other sundries in order to encourage purchasers of bicycles that the board last year stringently bound its members to abolish this practice and was very successful in the effort, in the case of one firm having been instrumental in saving almost \$800 as a result of abstinence from the practice. This agreement will continue this season.

**What is Left Undone.**

A schedule of prices on sundries and repairs will be adopted. Last year many sundries were sold at cost, even less. No effort will be made to regulate the prices of new machines, or the trading prices for second-hand machines, of the terms on which machines may be sold. It has been found in practice that the members of the board do not view these subjects in the same light.

**Receiver for Invictus Fittings Co.**

The Invictus Cycle Fittings company of Chicago went into the hands of the Chicago Title & Trust company as receiver last Wednesday, upon application filed by the Port Chester Bolt & Nut company of New York, the Crosby & Mayer company of Buffalo, N. Y.; the Hawthorne Manufacturing company of Maine, Morris & Bailey of Pittsburg, and Frederick Voss of Chicago, who claim to hold an indebtedness against the Invictus company aggregating \$2,600.

**Ewald Mfg. Co. Incorporated.**

The Ewald Manufacturing company of Chicago has been incorporated with capital stock of \$15,000 to manufacture bicycles and fittings. The incorporators are G. H. Somers, William E. Ewald and J. Charles Barker. The company has for some time been making hangers and other parts.

A bill has been introduced in the Wisconsin legislature which, if passed, will take bicycles out of the class of vehicles, and by so doing cut off their right of way on the road.



**The Record-Breaker in Past Years**

**The Leader Again for 1899**

You estimate value by comparison, always. We invite you to carefully examine our Crescent models and compare them with any other high grade wheels on the market.

**ADULTS' CHAIN MODELS, \$35**

Catalogue No. 2, Free on Application.

**CHICAGO—WESTERN WHEEL WORKS, Makers—NEW YORK**

NEW TESTIMONIALS EACH WEEK.

# MILWAUKEE TIRES

**PUNCTURE PROOF**

Pneumatic

Resilient



Single Tube

Easy Riding

COPYRIGHT 1898, BY MILWAUKEE PATENT PUNCTURE PROOF TIRE CO.

**PRESENTING TESTIMONIALS.**

CRANE & BARKHAUSEN, Architects & Superintendents, 91 Wisconsin Street.

MILWAUKEE, WIS., Dec. 1, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen:—I have ridden one of your tires for about 2,500 miles and am well pleased with it. Have had no punctures nor any other trouble with it and my business takes me into all sorts of places, alleys, etc., full of glass, nails, etc., but I never pay any attention to any of them and have had no trouble as yet.  
Yours truly, (Signed) CHAS. D. CRANE.

NORTH MILWAUKEE, WIS., Dec. 1, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen:—Your favor of recent date at hand, and in reply will say that I am only too pleased to give my opinion of the tire which has carried me over 900 miles without a single puncture. I think puncturing your tire is all out of question. Furthermore, I think that they are very much easier riding than any other tire. I would not be without them at any price.  
Yours truly, (Signed) H. BATCH.

Representatives Wanted. Write for Prices and Other Information.

**MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.**

# THE CYCLE AGE

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

Published every Thursday at 324 Dearborn Street, Chicago.  
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Subscription price in the United States, Canada and Mexico, \$2.00 per year; in foreign countries \$6.00 per year.

ALL remittances should be made to THE CYCLE AGE COMPANY.

## BICYCLES WITH AN ALIAS

Bicycle manufacturers have always found it a thankless undertaking to attempt limiting their customers among jobbing houses to any given territory in regard to the reselling of the manufacturers' products. A jobber in St. Paul, Minn., and another in St. Louis, who buy the same manufacturer's bicycles under two different names, but of identical construction, are most likely to clash in the state of Iowa, for example; or in any other territory whither the traveling representatives of both firms penetrate.

This clashing regulates itself so far as the jobbers are concerned, but otherwise for the manufacturer and for the dealer. The latter who has perhaps given a big order for the Blaque bicycle from St. Paul is approached by the drummer from St. Louis who offers him the Phoenix at a lower price, and investigation discloses the absolute identity of the two models, barring the nameplate. It is evident to him that competitors in his own and neighboring towns will be in position to underbuy and to undersell him, and he consequently straightway countermands his first order if he can. Further than this, he most probably resolves to order bicycles henceforth only from those manufacturers who sell to retail dealers exclusively.

Much of the trouble arising from such cases is manifestly due to the two-fold nameplate. If the manufacturer would refuse his sanction to the alias—freely translated; another name in another place—jobbers would almost necessarily manage to steer clear of each other and retail dealers would not necessarily look upon the manufacturer as a culprit caught, even if they are always inclined to consider any manufacturer who does not market his goods under a system that protects the retailer, as a good man gone wrong.

Says a dealer who writes to the Cycle Age on this subject:

We have cancelled the order from the former firm and asked them what kind of protection we shall have. We are a very small "fry" to be kicking, but how would it seem to be placed in the retail trade's position?

Is there any other kindred industry in which a financially sound manufacturer who sells to the wholesale trade does not insist upon having his manufacture recognized under one name for one article wherever it goes? And if he consents to an alias, will not his financial standing soon be doubted and his trade dwindle?

## DEALERS ON THE LOOKOUT

It may be said in favor of the cycle shows which have been held this year and of those which will be held, that they all serve the purpose of reminding the retail branch of the cycle trade of the possibilities which may be in front of it in regard to the retail marketing of motor vehicles.

It was learned from several among the western cycle dealers who visited the New York show that they would not have undertaken the journey if it had not been for their desire to investigate motor vehicles and see with their own eyes to what extent mechanical wagons may be considered practical and salable in a community where knowledge of their construction, virtues and shortcomings is necessarily limited to hearsay evidence.

The results arrived at are now seen cropping out in the columns of country newspapers in the form of interviews with the returned investigators in which it is particularly pleasant to note the tone of conservative intelligence displayed by them.

They are not by any means blind to the limitations of the various types and, if anything, overestimate the troubles that may arise from breakage and repairs of gas engine vehicles. It is clear to them that hill-climbing qualities, such as are indis-

pensable for all-around travel in country districts, should not be looked for in vehicles in which the driving power is very heavy in comparison with the "pay load." But after all the main conclusions may be summed up in the words of one of these cycle dealers who is quoted as saying:

The dealers who make the trip at the same time as myself are eagerly watching every move in horseless carriage development, as we expect it to prove the next expansion of our business.

The Cycle Age has for nearly a year shared this opinion—with all the reservations which the financial condition of the motor vehicle industry and the cycle trade call for—and has given a great deal of space to preparing the trade for approaching the new line with full knowledge of all the problems with which motor vehicle builders must contend.

Now the time is drawing near when the opportunity for applying any knowledge he may possess to practical business may at almost any time be offered the enterprising cycle dealer, and it is hardly necessary to advise him to round off the impressions which he has already received through the pages of this paper, by following the example of those to whose journeying reference is made above.

## SUMMER MONTH AGENTS

The ideal condition for the retail cycle trade would be that which secured to each dealer his proportionate share of business and a guarantee that his vocation would not be rendered unsafe by the unexpected appearance of marauders during the active selling months. The futility of wishing for such a happy condition, however, is nicely illustrated in the following communication from a Pittsburg agent, who laments that he ever fancied the severity of last year's competition would act as a check upon the enthusiasm of aspiring newcomers:

When the retail season of 1898 was drawing to a close there were many dealers here who abandoned their stores and said that they were out of business for good. The few who remained thought they would be in clover this season owing to the retirement of competitors, but as it looks now there will be a lot of new firms engaged in the scramble for trade, at least for four or five months. Well-established dealers deplore the entrance of these new firms into a field from which others were reluctantly compelled to retire, for they foresee a repetition of the conditions which forced their predecessors to vacate.

It is from the people who go into business for four or five months the trade suffers most. Not only are they themselves hurt, but those who are in business all the year around as well. If this sort of thing is to continue manufacturers will get the worst of it, for they cannot depend for support upon men who hop into the business for a few months and then hop out of it again for seven or eight months. If recognition of this evil is not forthcoming by makers in general it is quite likely that the hardware and harness dealers, who are just now being sedulously cultivated by traveling men, will leave the latter to the more agreeable work of scratching the acquaintance of people who, to say the least, are unsound because they are not firmly anchored.

Overcrowding of agents is one of the natural results of overcrowding of makers, each one of whom is but too anxious to secure representation in a town where others are already well entrenched. Salesmen from factories aim to get the best representation possible for their houses, and when their goods are barred from the floors of such stores as command the bulk of local patronage, they turn to people who are willing to enter the lists of retail competition, and immediately there is a weakening all around.

If credits are carefully examined at the factory, no great harm can immediately result from an increase in the number of agents, provided the increase is not out of proportion to the population and common prudence is exercised in selling. After all is said and done, the much-discussed and much-deplored increase in the number of agents will eventually find its own remedy—perhaps in a policy which in self-defense makes it compulsory upon firmly established agents to handle many models instead of a few.

\* \* \* \*

Probably it would not injure the cycle trade if all its manufacturers of note should become prominently identified with a movement looking to something beyond profit-mongering in the narrowest sense of the word, and among the propositions which have been advanced the following, in the words of A. G. Spalding, seems well worthy of attention. He is quoted saying:

I believe that the time has arrived when the bicycle manufacturers of this country, and in fact I may say the makers of all vehicles, should meet in an annual convention to consider ways and means looking to the advancement of road making throughout the United States.

## BRAZING BY IMMERSION

### Frame Cleaning Methods Are Wrapped in Much Mystery When Anti-Flux is Not Used

Whether frame joints should be made to suit the brazing process or the brazing method should be adapted to the frame joint is a question which was answered in favor of the first proposition a couple of years ago when two or three manufacturers found themselves compelled to abandon certain forms of flush joints because it proved impracticable to braze them with any assurance that the work was done when it appeared to be done.

#### Air Vents for Closed Joints.

The same question is now repeated with reference to dip brazing as a sort of objection to the method, on the ground that certain forms of joints are so constituted that air pockets will form in them and prevent the penetration of the molten spelter unless special air vents are drilled at suitable places in the tubing, or that the superfluous spelter cannot flow back into the crucible, or that screwthreads cannot readily be protected against a spelter deposit.

As a general rule the same joints which present these difficulties with dip brazing must be handled with such extraordinary skill if flame brazing is employed that the prospect of getting them brazed at all properly is much smaller than regard for the safety of cyclists would require. And therefore, if dip brazing otherwise continues to be found desirable from the points of economy and workmanship, it seems much more probable that the joints which are unsuitable for the process will be abandoned than that a process will be abandoned which is preferable for all other and better, joints.

#### Cleaning Frames or Preventing Deposit.

Manufacturers who have pinned their faith to any of the styles of tube connections which are troublesome and have trained a crew of workmen to braze these connections by the old method until finally obtaining acceptable results, are naturally loath to acknowledge any virtues in a process which, if adopted by them, would render a change of any of their favorite styles of joints advisable, but while they are hesitating at the starting point, which really presents no difficulties, their competitors are working away at that which is the only really serious problem in connection with dip-brazing, viz., the economical removal of the brass film from the exterior of the tubing or the prevention of deposit on any part of the frame where spelter is not required.

For these more advanced manufacturers it is already beyond question that dipping makes by far the most reliable union and that spelter, molten and kept at a uniform and suitable temperature, may be absolutely depended upon to enter into the smallest as well as the largest air spaces between metal parts held under the level of the molten mass, if only an upward escape for air is provided while the spelter enters from below.

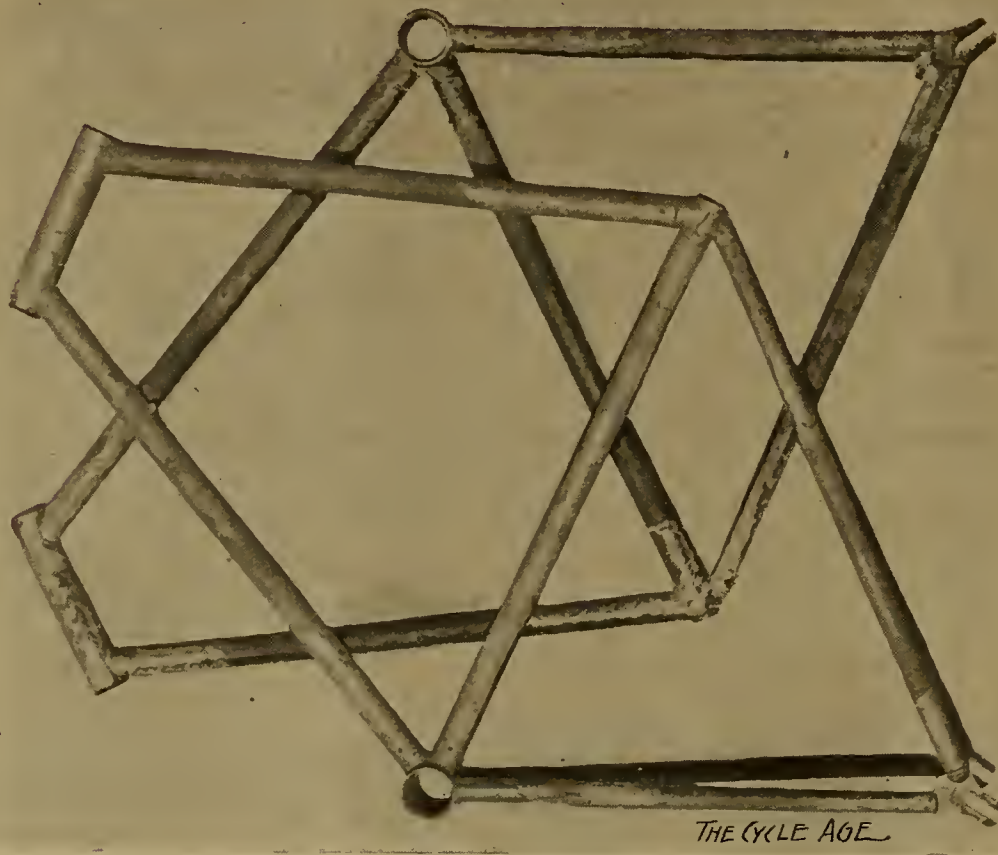
So firmly proved is this assumption that some manufacturers entirely dispense with flux and care nothing for capillary attraction, the two factors which are so indispensable for flame brazing and yet so hard to control.

Not flux nor flow nor deposit of the spelter troubles the dip brazer of experience, but anti-flux, limitation of flow and removal of deposit.

The accompanying illustration shows something of what may be accomplished

by purely automatic means in the way of cleaning a frame which has been dipped, so as to prepare it for enameling or nickeling or both. The frame to the fore in the picture has been subjected to an alkaline bath by which most of the rugosities of spelter deposit have been removed.

So says the manufacturer who dipped it; but manufacturers must be pardoned if they don't tell all they know on this subject. If they have reached results which are satisfactory to themselves, they are not anxious to give others the benefit; and if they are still in the dark they don't desire particularly to advertise that such is the condition of their minds. Mystery is their policy; filing their last resort; and meanwhile they are



The joints of the outer frame in the picture were cleaned in a bath; the joints in the under frame are coated with spelter.

experimenting with every imaginable expedient for rendering filing unnecessary, and find it no hardship to keep a stiff upper lip, inasmuch as the process of filing the comparatively smooth deposits which result from dip brazing at the proper temperature of spelter, is after all less costly than the removal of clots and lumps that usually remain around the edges of joints after the flame brazer has done his work.

The other frame in the illustration represents the condition before anything has been done to smoothen the surface after its spelter bath. No anti-flux has been used to prevent deposit.

#### Anti-Flux Not in Favor.

The use of anti-flux in dip-brazing will some day, when facts shall have been learned, require a separate chapter in description of the art. At present reports are very contradictory and of a controversial character as to the merits of various graphite preparations. It seems that a majority of manufacturers prefer to

dispense with anti-flux of any kind, except where it is necessary in order to protect screwthreads—as in many styles of bottom brackets whose makers still consider it permissible to screw the cups directly into the frame without an intervening shell for the bearing posts.

Whether anti-flux is used or not there is always some use for the emery belt, the steel brush, the sandblast, the filer, the buffing wheel, or other forms of mechanical abrasion, if it is intended to do enameling of high grade on the frame, but it may be hazarded as a guess that this work is often reduced to a minimum when a superfine finish is not required.

Pickling the frames in an acid bath is talked of considerably as the most effective and cheapest method for making the filer's work easy and it is contended that any danger which may be courted by this process in the way of injuring the steel tubing is more than balanced by the reduced chance of injuring it by filing. It is said that in a factory where filers formerly touched elbows at the bench they are now about ten feet apart by virtue of certain vats in which the frames remain about 45 minutes and from which they emerge with the spelter coating entirely removed with the exception of a

small lump here and there where the brass was thickest. The method should certainly have the advantage of uniformity in results.

Electrolytic baths have also been considered, the idea being to reverse the method used for electro plating, and cause the spelter film to leave the tubing and distribute itself in the bath. It is not known whether it is practicable, but it appears that it would be slow and expensive.

For high grade work in connection with dip-brazing a suitable, quick drying anti-flux, which will not scale off in the bath and which may be easily removed after the bath, still seems to be the main thing as yet unattained, and yet worth attaining.

The German branch of Markt & Co. has been sued by an Austrian concern for selling Hartford tires which bear a trademark similar to that registered by the complainant.



TRADE MARK



80

MANUFACTURERS ARE FURNISHING

# Dunlop Detachable Tires

On their wheels AT NO EXTRA COST, either wholesale or retail.

Agents should see that the manufacturers whom they represent are among this number. Write us about it.

1899 WILL BE A DUNLOP YEAR

## The American Dunlop Tire Company

134 Lake Street, Chicago.

Belleville, (North Newark) N. J.

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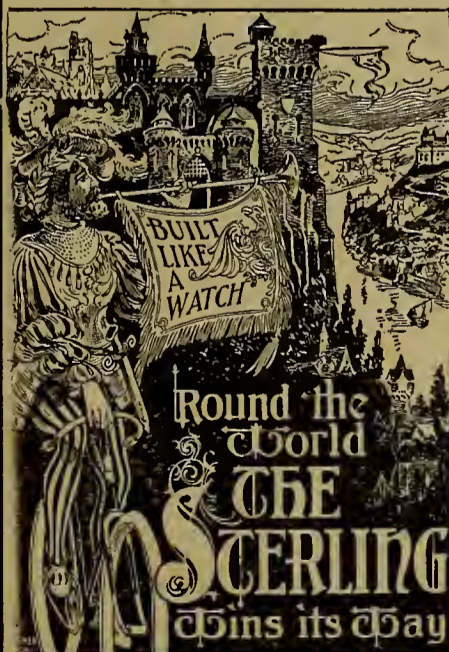


TRADE MARK



# THE STERLING

## "BUILT LIKE A WATCH"



THE HIGHEST TYPE OF QUALITY AND CONSTRUCTION.

The successful Agent is the one who identifies his own reputation with that of the Bicycle he represents.

Securing the Highest Market Price for an inferior wheel makes a sale but not a friend.

THE BEST LOCAL ADVERTISEMENT IS A SATISFIED RIDER

No wheel is TOO GOOD for the purchaser who pays for THE BEST. Our Proposition and Catalog are ready for Energetic Agents.....

STERLING CYCLE WORKS KENOSHA, WIS. SEND FOR CATALOGUE

# STERLING CYCLE WORKS. KENOSHA, WIS.

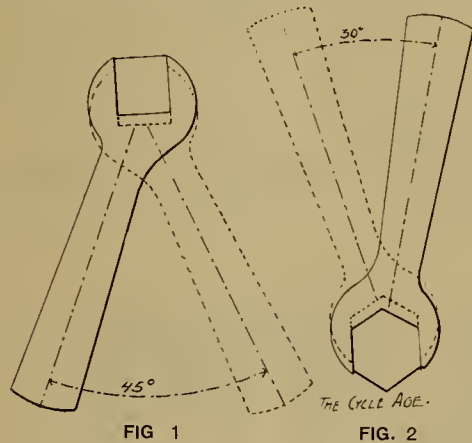
## SPANNERS FOR BICYCLES

### Best Designs for Screwing and Unscrewing Nuts in Cramped Quarters—Round Nuts

To turn a square nut with an ordinary monkey wrench it is necessary to turn fully 90 degrees at each grip in order to get a new hold, unless the operator can get at the nut on all sides, and in close quarters where the handle of the wrench cannot be turned around more than 90 degrees the monkey wrench is therefore useless. With a hexagon nut six new grips can be obtained without changing the position of the operator, and the usefulness of the tool is therefore increased somewhat by using hexagon nuts instead of square ones. The bulkiness of the jaws, however, frequently reduces the angle over which the wrench can be turned to less than 60 degrees, and the tool is again useless. The practical value of a wrench or spanner for bicycle work depends therefore largely upon the number of new grips it will allow for effecting a revolution of the nut from one position of the hand. Square nuts should never be used except where access to the nut is perfectly free and unobstructed by the contiguity of other parts.

#### To Avoid Barked Knuckles.

A monkey wrench can only be used with satisfaction when turned with the jaws foremost, so that the strain on the



loose jaw comes toward the stock. Every mechanic knows this, but riders often disregard it and get marred nuts in consequence. This limitation of the adjustable wrench means something more, however. It means that a monkey wrench cannot be turned over and applied with a new grip at a new angle as can a properly designed spanner with fixed jaws, and by this limitation the monkey wrench becomes useless in all cases when contiguous parts prevent the jaws from being turned all of 60 degrees and also when it is inconvenient to turn the stock 60 degrees at one grip.

Spanners designed as shown in Figs. 1 and 2, with the lines of the working jaws at an angle with the main direction of the handle, have the great advantage over those shown in Figs. 3 and 4, that they may be reversed in the hand after a nut has been turned an angle which is 45 degrees for the square nut and 30 degrees for the hexagon nut, and may then be applied to the same flats of the nut and be again turned 45 and 30 degrees, respectively, so that the nut is turned 90 or 60 degrees while the handle is moved over only half of these angles. With spanners of this description nuts can therefore be conveniently turned on or off, though the space allowed for hand motion is very limited.

In the American bicycle industry the advantages of spanners have been very

generally recognized, so that nearly every manufacturer of bicycles has spanners made specially for the machines of his make, but as a rule it is overlooked that these spanners might be made more useful and that the machines themselves might be built in a more trim style if the

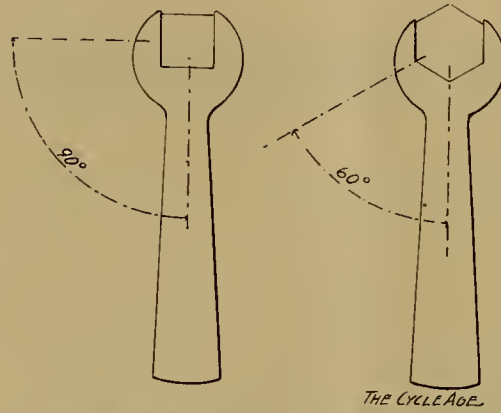


FIG. 3

FIG. 4

reversible design shown in Figs. 1 and 2 were adopted.

The disinclination of many riders to carrying a toolbag has probably much to do with the preference shown for spanners, as the latter are lighter of weight and more compact than adjustable wrenches and may be carried more conveniently in a pocket, but when the manufacturer relies on the spanner furnished with his bicycles to the extent of placing nuts in such manner that they are inaccessible with the ordinary bicycle wrench, he probably commits a mistake, unless he also supplies a leather cover for the spanner and provides for its ready attachment to one of the frame tubes, for every cyclist who habitually leaves his toolbag at home is liable to find, when a spanner is required, that it also has been left at home in his shed or in the pocket of other clothes than those he is wearing. He will then borrow a bicycle wrench and will in all likelihood finish by marring the nuts which were intended to be operated by the spanner only, and spoil them for all futurity, spanner or no spanner.

#### A Place for One Tool.

The same class of riders who object to the regulation toolbag, because it is large

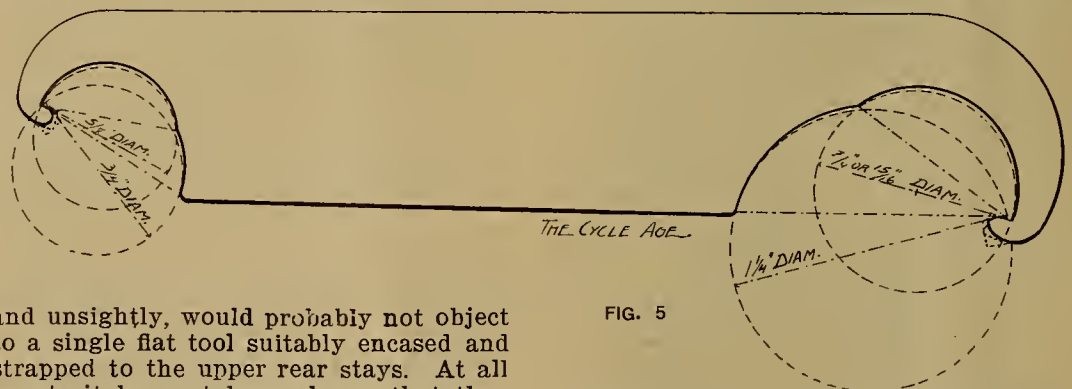


FIG. 5

and unsightly, would probably not object to a single flat tool suitably encased and strapped to the upper rear stays. At all events it has not been shown that they do object, for the practice of providing a permanent place for a spanner, and for it alone, has never become general. Even for those who carry a toolbag it would be a convenience to have all the spanners separately disposed of, as it is the tool which is most frequently in requirement if the manufacturer has taken care to make it fit all adjustable nuts, cones, expanders, etc., on the machine, or, vice

versa, has made the latter so as to be fitted by a spanner of simple design.

Without doing violence to any of the proportions and dimensions of nuts on a bicycle, it is quite within the range of possibilities to fit them all with a single spanner of the simplest design, if all the nuts are made round instead of hexagonal or square and provided with notches or holes in the circumference. And, if the holes are placed close together, the further advantage would be gained by using round nuts exclusively that they could be turned with a very small angle of rotation for the spanner handle on the principle on which an alligator wrench is used. In other words the manipulation of the spanner would be made very convenient to the cyclist, for the same reason that makes the spanner of the design shown in Figs. 1 and 2 more convenient than the common kind, and makes a hexagon nut more convenient to turn than a square nut when there is small room for hand movement.

The objection to round nuts is chiefly that they do not present as finished an appearance when new as nickeled hexagon nuts. In regard to this opinions are divided and on the other hand they will look better when old than a marred hexagon nut. Another objection is the impracticability of operating them with a monkey wrench, if the spanner should be mislaid, lost or left at home. The latter objection is much reduced if a special receptacle is provided for the spanner as before referred to.

#### A Trial Design.

A design of a spanner for round nuts which would presumably fit as many diameters of nuts as there is need for on any one bicycle, is shown in Fig. 5. The small end would fit axle nuts and hub cones and the large end crank hanger cone and cone lock nut and seat post and handle-bar expander nuts. If cotter pins were used, and made no longer than necessary, the cotter pin nuts might be kerfed on top and turned by means of two small lugs on the small end of spanner. If cup adjustment were used the design of the spanner should, of course, be modified to suit the style adopted, but in all cases it would seem possible to devise an instrument which alone would serve all the ordinary requirements of the cyclist for getting at the mechanism of his mount, tires excluded, and which could be conveniently disposed of on the bicycle in a manner to which the most fastidious riders would not object.

#### French Puncture Closing Compound.

Another recipe for making puncture closing liquid comes from Lyons, France, in the form of the specifications of a pat-

ent granted by the United States patent office to Antoinette Lovocat. The composition is as follows: Gutta percha, 1 part; copaiba or other balsam, 4 parts; holly or other bird-lime, 4 parts; Swiss or Bordeaux turpentine, 2 parts; saturated solution of celluloid, 4 parts; chloroform or any other solvent, a quantity sufficient to dissolve the gutta percha and other substances above mentioned.

**THE ONLY EFFECTIVE PROTEST  
SHIPPING BY FAST FREIGHT**

**Cycle Dealers Making Use of Their Only  
Weapon to Induce Lower  
Express Rates.**

When corporations that are already paying 80 per cent annual dividends on their investments and doing business ten times as great in volume as the amount of their actual capital, go to the mean extremity of forcing their overburdened patrons to pay the war tax that was obviously intended to be levied on the business of the corporations, and stubbornly maintain that attitude in the courts, it is evident that the only protest of their patrons against exorbitant charges that will be effective is the transference of their business to competing companies.

This is the conclusion reached by many of the bicycle dealers and repairmen with regard to the express companies, which are virtually organized into a trust to maintain extortionate charges, and the small trade is changing very rapidly to the fast freight service, which, while slower, offers a very material reduction in transportation charges. The sentiments contained in the following letters are characteristic of the feeling of cycle dealers throughout the country:

**Coast Dealers Would Benefit by Freight.**

I heartily endorse the plan of using fast freight rather than express as a mode of shipping, the difference in time being greatly preferred to the extortionate charge of express companies. Especially will it benefit dealers on this coast who are so far removed from the manufacturers.

Oregon, A. P. MORSE

**Has Used Freight for a Year.**

Express charges take at least 25 per cent. of the profit on bicycles and sundries. I have been using freight for about twelve months as margins are too low for me to pay present express charges.

South Carolina, C. D. COOPER.

**Will Use Only Freight Hereafter.**

The proposal to use fast freight instead of express meets with our approval. We used express entirely last year, but will use nothing but freight this season unless express rates change.

Iowa, ALLINE BROTHERS.

**Useless to Ask for Explanations.**

We are "skinned" unmercifully here by the express companies, and I have been so much disgusted with their rapacity that I have frequently determined never to send another article by express. The rates are never twice the same on bicycles from the same place, and it is of no use to ask explanations. When a package comes by express you might as well pay the charges at once and be done with it, as to attempt to get even handed justice done you. I mean to write to the representative of this district in Congress and urge upon him the desirability of a parcels post. I think you are doing a good work and am sure your magazine is doing much that will help to right matters for the people against these companies.

Virginia, J. R. EOFF.

**Cheap Delivery of Freight Shipments.**

My idea would be to do away with the express companies entirely. Improved freight facilities and the permission of the postal department to increase the size and weight of packages to ten or fifteen pounds would work a great benefit to the public and be a source of increased revenue to the government. The parcels post would be a great benefit to the rural districts not now reached by the express companies, for the cheapening of the rates of transportation would create a demand for goods which many people now get along without.

The railroads are common carriers. The government gives them the right of way; gives them permission to go through a man's farm regardless of whether he wants them to or not. Then, when they have the "cinch," they charge all the traffic will bear. I say, give the railroads fair pay for their services, but shut off their profits on watered stock.

Messrs. Carpenter & Male, on page 348 of the Cycle Age, say they cannot use fast freight because the freight is not delivered,

I have a contract with a drayman to receive and deliver my freight; then, when the drayman presents my freight receipts with his charges added, I pay him. Yesterday he delivered three crated bicycles, today he presented the receipted freight bill with only 10 cents added for his services. My freight is almost immediately delivered, after the arrival of the train it is on. If Carpenter & Male will have some such understanding with a drayman or teamster it will help them to patronize fast freight with the rest of us.

South Dakota, L. E. STAIR.

**Varying Rates of Freight Companies.**

The express companies are not the only extortionate chargers, as the railroad companies charge double first class freight on bicycles, which is in my opinion extremely exorbitant, as the time is four times as long by freight as by express. To give an illustration of freight rates on bicycles, I wish to mention that on December 9 I received two bicycles from Toledo, O., at a weight of 90 pounds, and a freight rate of double first class, which cost me \$3.05, in addition to which cartage cost 25 cents, making the charges on the two machines \$3.30. On January 3 I received two bicycles from Westfield, Mass., nearly twice as far as Toledo, total weight 90 pounds, freight \$1.65, cartage 25 cents, making \$1.80 for two bicycles. Why is this and how is it I can receive such low rates from the far east when from the west it is so much more? Here is an important subject for the manufacturers to work on, and I hope they will take hold of the matter at once, and see why bicycles cannot be shipped as simple first class freight.

Texas, MARCH CULMORE.

**In Full Accord With Movement.**

We are heartily in favor of a concerted action to bring down the extortionate charges to a reasonable basis. Whenever we can do so we have our goods shipped by fast freight, avoiding express shipments as much as possible.

Indiana, MUELLER & WATSON.

**EAGER FOR SHOW SPACE**

**American Builders Would Monopolize Bicycle and  
Motor Vehicle Building at Paris Exposition.**

The bicycle and motor vehicle department of the Paris exposition next year promises to be of great importance and, according to the assistant commissioner, the American section will be especially noteworthy. No week passes in which applications are not received from manufacturers for space. All the big bicycle and motor vehicle makers, including makers of motors and bicycle parts, have made requests for space and if each were given all he asks for there would not be an inch of space left for the other nations.

It was at first intended to have only one section devoted to bicycles, motor vehicles, horse drawn vehicles and harnesses, etc., for which 7,000 square meters were to be set aside, half of which were to be used for the first two sections, but it was soon found that the cycle and motor vehicle section would be too small and many protests were made, with the result that it was decided to erect a special building to be called the bicycle and automobile building. This annex is to be erected at Vincennes, adjacent to the exposition, but also close to the municipal track of Paris, where the international bicycle races and athletic contests are to be held.

Preparations for displays in this section are already being eagerly made in all parts of Europe. A suggestion is gratuitously thrown out to American manufacturers that they should be careful to send only their best products, as small exhibits of good wares are preferable to large displays of inferior goods.

The entire plant of S. A. Smith & Co., manufacturers of bicycles, carriages and toys in Brattleboro, Vt., was destroyed by fire February 1. The Smith factory was insured for \$16,000, and was totally destroyed.

**EXPORTS FOR TWELVE MONTHS**

**SMALL GAIN OVER LAST YEAR**

**Shrinkage In Australian Trade—Increased  
Demand from Japan, Argentina,  
Germany and France.**

Governmental returns on the exports of cycles, parts and materials for the twelve months ending with December (1896, 1897 and 1898 in comparison) are here given:

	1896.	1897.	1898.
United Kingdom ..	\$1,306,403	\$2,128,491	\$1,699,127
France ..	135,202	283,910	517,183
Germany ..	303,096	1,378,558	1,636,207
Other Europe ..	484,731	1,110,599	1,362,199
British N. America	575,577	744,889	608,190
Central America ..	75,063	21,295	7,091
Mexico ..	51,887	69,391	57,947
San Domingo ..	1,873	3,939	631
Cuba ..	4,833	8,836	5,286
Porto Rico ..	8,179	4,285	2,631
Other West Indies.	66,016	126,528	72,461
Argentina ..	22,196	52,244	131,624
Brazil ..	22,934	54,082	99,232
Colombia ..	20,904	22,091	7,986
Other S. America ..	42,915	61,303	54,104
China ..	11,278	26,300	27,863
Brit. East Indies ..	10,155	31,583	155,265
Hongkong ..	(a)	7,118	9,355
Japan ..	41,386	80,874	128,752
Australia ..	530,339	445,529	247,146
Other Asia ..	34,784	65,399	79,166
Africa ..	64,266	174,730	181,009
Other countries ....	.....	762	1,739
Total ..	\$3,796,022	\$6,902,736	\$7,092,197

**Exports for the Month of December.**

The official returns for the month of December (1897 and 1898 in comparison) are as follows:

	1897.	1898.
United Kingdom ..	\$ 87,300	\$ 67,913
France ..	24,686	37,947
Germany ..	178,643	161,930
Other Europe ..	47,773	177,594
British North America	23,406	27,709
Central America ..	727	404
Mexico ..	5,450	3,129
San Domingo ..	24	33
Cuba ..	574	790
Porto Rico ..	317	70
Other West Indies ..	8,771	6,941
Argentina ..	6,046	18,598
Brazil ..	9,071	5,494
Colombia ..	2,131	614
Other South America ..	4,687	6,916
China ..	874	1,542
British East Indies ..	3,878	12,831
Hongkong ..	289	66
Japan ..	8,450	3,127
Australia ..	21,091	26,439
Other Asia ..	2,340	10,051
Africa ..	21,146	16,238
Other countries ..	.....	40
Total ..	\$457,674	\$586,416

**The Week's Exports.**

Exports of bicycles and bicycle materials from the port of New York for the week ending February 7 are recorded as follows:

	Bicycles.	Mtls.
France ..	\$24,450	\$ 3,921
Germany ..	8,095	11,924
Russia ..	9,235	10,336
Canada ..	.....	16,097
England ..	4,527	3,616
Holland ..	6,977	2,058
Sweden ..	2,508	701
Denmark ..	820	2,058
British West Indies ..	1,170	847
Argentine Republic ..	1,612	169
Scotland ..	.....	1,466
British East Indies ..	530	500
Belgium ..	257	740
British Africa ..	438	421
British Guiana ..	353	567
Mexico ..	737	180
Dutch Guiana ..	304	39
Uruguay ..	320	.....
Brazil ..	297	.....
Austria ..	.....	268
New Zealand ..	.....	81
Central America ..	.....	73
Porto Rico ..	70	.....
Other South America ..	73	13
Ireland ..	13	.....
Totals ..	\$62,791	\$56,075

**Steel Bands Instead of Chains.**

The English cycle trade is just at present deep in the throes of a discussion concerning the merits of a steel band as a means of power transmission in bicycles.

## COMMERCE IN FOREIGN MARKETS

**OUR BICYCLES IN RUSSIA**

A report upon cycles from and were quite satisfactory, except as to price. Soon the better class of American machines made their appearance, and later the cheaper German goods came in. Large numbers of the German bicycles are being sold, mostly on the installment plan. American machines are much liked, but as only the high-priced ones have been introduced so far, the cheaper goods of German manufacture find more purchasers. In St. Petersburg American bicycles are the most popular, those from Germany standing second, and those from England third in favor. The most popular machines in Moscow are English.

The ruling prices at retail for machines made in Russia vary from \$80 to \$95; for English machines, \$90 to \$110; German, \$70 to \$90, and American, \$50 to \$100. Most of the imports of cycles are from Germany and Great Britain. The greater part of the business is done in March and April.

The roads in Russia are rough, and the report states that extra strong pneumatic tires should be placed on all grades of machines. They should also be equipped with mudguards and brakes to suit the Russian trade. It is absolutely necessary that catalogues, price lists, etc., be printed in Russian if it is desired that they should be read. The metric system should also be employed.

The number of representatives of American firms and corporations that visit Russia is increasing annually. Among those more prominent who were represented during the past year were Pratt, Whitney & Co., Indiana Bicycle Co., H. A. Lozier & Co., Stover Mfg. Co., and other bicycle companies, who carried home large contracts and expressed satisfaction with the results of their visits.

**AUSTRIAN CYCLE TRADE CONDITIONS**

Bicycles are largely used in Austria, but their use is not so general as in England or America. The condition of the roads varies according to the seasons, and when the weather is favorable they are very good. There are some domestic manufacturers of bicycles. Machines are also imported from Germany, England, France and the United States. The receiving port is Trieste. Port charges are about one cent per 100 pounds and clearance papers cost about 8 cents. The number of bicycles cleared does not increase the charge. There are bonded warehouses in Trieste. Goods sent there should be securely packed in closed cases and bright parts should be well greased to prevent rust. Bicycles should be packed three in a crate, wheels detached. The American bicycles sold in Trieste are as follows: Cleveland, Eldridge, Rambler and Monarch.

**ORIGIN OF GERMAN GOODS**

The progress in many of the leading branches of manufactures which has taken place in the German empire during the last decade is wonderful. Germany is making enormous strides, notably in those manufactures in which superior knowledge, technical skill, and the agency of the expert in chemistry or other sciences can be brought to bear. This is true to a remarkable degree in the elec-

trical trades and in the cognate branches of electrical engineering.

The foreign-trade policy of the general government had hardly commenced to develop twenty-five years ago, if it can be said that it existed at all. When the attempt was made at something of an exhibit at Philadelphia in 1876, the director of the Berlin-Charlottenburg technical high school, upon his return, reported German manufactures, in comparison with those of other countries, cheap and poor in quality, which gave rise to the expression "cheap and shabby" and brought down upon his honest head fierce criticism by the German press. But the German manufacturers who had visited Philadelphia felt the truth of his judgment, and his words proved the sharpest spur for renewed efforts to the better.

**TARIFFS ON CYCLES AND PARTS**

Tariff charges on American bicycles and parts are shown in the appended table. In such countries as the duty on parts is not specifically given it is to be understood that the tax on bicycles applies to parts, etc.

Antigua . . . . .	10 per cent plus 33 1-3 per cent of duty.
Argentina . . . . .	25 per cent ad val.
Austria . . . . .	\$12.50 per cycle.
Austria . . . . .	\$6.09 to \$6.90 per 220 lbs parts.
Bahama Islands . . . . .	\$1.25 per cycle.
Barbadoes . . . . .	10 per cent ad val.
Bavaria . . . . .	3 cents per lb.
Belgium . . . . .	12 per cent ad val. cycles.
Belgium . . . . .	15 per cent ad val. lamps.
Bermuda . . . . .	\$2.41 per cycle.
British Guiana . . . . .	10 per cent ad val.
British Honduras . . . . .	10 per cent ad val.
Bohemia . . . . .	\$12 per cycle.
Bolivia . . . . .	35 per cent ad val.
Brazil . . . . .	\$7 per cycle.
Bulgaria . . . . .	8 1/2 per cent ad val.
Caicos, W. I. . . . .	Free.
Canada . . . . .	30 per cent ad val. cycles.
Canada . . . . .	25 per cent ad val. tires.
Canada . . . . .	30 per cent ad val. bells and lamps.
Cape Colony . . . . .	9 per cent ad val.
Ceylon . . . . .	6 1/2 per cent ad val.
China . . . . .	Free.
Colombo . . . . .	3 cents per lb.
Congo Free State . . . . .	6 per cent ad val.
Costa Rica . . . . .	20 per cent ad val.
Cuba . . . . .	\$4 per cycle.
Cyprus . . . . .	8 per cent ad val.
Denmark . . . . .	10 per cent ad val.
Dominican Republic . . . . .	\$10.05 per cycle (men).
Dominican Republic . . . . .	\$5 per cycle (children).
Dutch Guiana . . . . .	Free.
Ecuador . . . . .	5 cents per lb.
Egypt . . . . .	8 1/2 per cent ad val.
Fiji Islands . . . . .	5 per cent ad val.
France . . . . .	22c per lb.
Gambia, W. Africa . . . . .	7 1/2 per cent ad val.
Germany . . . . .	\$5.71 per 220 lbs.
Gold Coast, W. Africa . . . . .	Free.
Greece . . . . .	\$1.93 per cycle.
Grenada . . . . .	7 1/2 per cent plus 10 per cent of duty.
Guatemala . . . . .	15 cents per lb.
Hawaii . . . . .	10 per cent ad val.
Holland . . . . .	5 per cent ad val. cycles.
Holland . . . . .	5 per cent ad val. parts.
Honduras . . . . .	6 cents per lb.
India . . . . .	5 per cent ad val.
Italy . . . . .	\$8.12 per cycle.
Jamaica . . . . .	12 per cent ad val.
Lagos, W. Africa . . . . .	5 per cent ad val.
Liberia . . . . .	12 1/2 per cent ad val.
Japan . . . . .	25 per cent ad val.
Korea . . . . .	7 1/2 per cent ad val.
Luxemburg . . . . .	3 cents per lb.
Mauritius . . . . .	10 per cent ad val.
Mexico . . . . .	2 cents per lb.
Montserrat . . . . .	10 per cent plus 15 per cent of duty.
Morocco . . . . .	10 per cent ad val.
Natal . . . . .	5 per cent ad val.
Newfoundland . . . . .	30 per cent ad val.
New South Wales . . . . .	Free.
New Zealand . . . . .	20 per cent ad val.
Nicaragua . . . . .	\$1.90 to \$2.15 per cycle.
Northern Territory . . . . .	15 per cent ad val.

Norway . . . . .	\$8.10 per cycle; juveniles, 67 cents each.
Norway . . . . .	34 cents per lb. fin. parts.
Nova Scotia . . . . .	30 per cent ad val.
Persia . . . . .	5 per cent ad val.
Peru . . . . .	45 per cent ad val.
Philippine Islands . . . . .	\$4.50 per cycle.
Portugal . . . . .	27 per cent ad val.
Queensland . . . . .	15 per cent ad val.; parts free.
Roumania . . . . .	\$1.55 per cycle.
Russia . . . . .	\$9.24 per cycle.
Russia . . . . .	16 2-3 cents per lb. detached parts.
Salvador . . . . .	25 cents per lb.
Saxony . . . . .	71 cents to \$1.19 per cycle.
Servia . . . . .	\$5.79 per cycle.
Siam . . . . .	3 per cent ad val.
Sierre Leone . . . . .	10 per cent ad val.
South Australia . . . . .	25 per cent ad val.
St. Christopher . . . . .	10 per cent plus 10 per cent of duty.
St. Lucia . . . . .	15 per cent plus 15 per cent of duty.
St. Vincent . . . . .	10 per cent plus 10 per cent of duty.
Spain . . . . .	6 1/2 per cent per lb.
Sweden . . . . .	\$6.70 per cycle.
Sweden . . . . .	25 cents per lb. parts.
Switzerland . . . . .	7 cents per lb.
Tahiti . . . . .	32 per cent ad val.
Tasmania . . . . .	20 per cent ad val.
Tobago . . . . .	5 per cent ad val.
Trinidad . . . . .	5 per cent ad val.
Transvaal . . . . .	27 per cent ad val.
Turk's Island . . . . .	Free.
Tunis . . . . .	8 per cent ad val.
Turkey . . . . .	8 per cent ad val.
United Kingdom . . . . .	Free.
Uruguay . . . . .	40 per cent ad val.
Venezuela . . . . .	7 cents per 100 lbs.
Victoria . . . . .	10 per cent ad val.; parts free.
Virgin Islands . . . . .	10 per cent ad val.
West Australia . . . . .	15 per cent ad val.

**SENDING CATALOGUES TO GERMANY**

In all cases postage on letters, circulars, etc., should be fully paid. When not fully paid the recipient is charged double rates on the amount due, and this often results in his refusal to accept. Letters should be plainly addressed, for very few of the German postoffice officials can read English, and addresses ought therefore to be as plainly written as possible, so as not to increase the difficulty.

The German will purchase his home product, unless our people can offer him unusual advantages in the way of price or quality. Just now, he is a little sore because a large American trade, built up under the Wilson tariff, has been sadly reduced by the Dingley tariff and the war, and he is not disposed to buy where he can not sell; but the feeling can be overcome. The hostility felt toward Americans during the war, as expressed in the newspapers, is being replaced by a more friendly feeling.

**SPACE AT PHILADELPHIA'S EXPOSITION**

The directors of the Philadelphia Exposition Co. recently held their annual meeting and decided to open the exposition on or about September 15 next and close it on or about November 10, the exact date being left to the discretion of the executive committee. Another important action was the fixing of the price to exhibitors for space in the exposition buildings at an average of \$1 per square foot. It was stated that good progress is being made in procuring subscriptions toward the \$50,000 which is to be added to the \$250,000 obtained from the city of Philadelphia and the state of Pennsylvania. When this sum is raised an appropriation of \$300,000, conditionally made by Congress, will become available.

The Berlin parcel post is largely distributed by tricycle.



# BICYCLE MANUFACTURERS ACKNOWLEDGE

that it costs in labor and waste

# 40%

where a substitute is used for  
SEAMLESS TUBING.

That is one reason for the  
large demand for

# Shelby Seamless Tubing



WRITE FOR 1899 CATALOGUE OF  
TUBING AND SPECIALTIES ❁ ❁ ❁



## SHELBY STEEL TUBE CO.

General Sales Offices: CLEVELAND, OHIO, U. S. A.

— BRANCH OFFICES —

No. 144 Chambers Street,  
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No. 135 Lake Street,  
CHICAGO, ILL.

No. 29 Constitution Hill,  
BIRMINGHAM, ENG.

## DEALERS FEEL TRADE PULSE

### Lowered Prices of Standard Bicycles Will Increase Sales, Especially in the Country

One effect of the reduction of list prices on the standard bicycles made by reputable firms, as noted two weeks ago, will be the increased sale of the better class of machines in proportion to the cheaper and less reliable goods, according to the consensus of opinion of the agents throughout the country. Another result quite as important is the effect the reduction will have on country sales. Heretofore the farming element has practiced economy and largely bought second hand and low priced machines rather than pay \$75 to \$100 for the best makes. This year, however, the difference between the prices of standard reputable makes and bicycles without nameplates is so small that the country folk, now in better financial condition than for a number of years, will prefer to pay the difference and feel that they are riding as good bicycles as are made. This is the belief of many dealers located in the west and northwest who are in the best position to anticipate the country trade of the coming season.

The following letters show the feeling among the retail trade in various states:

#### Prospects Decidedly Encouraging.

I think more bicycles will be sold this season than in '98, because there seems to be more money in the country at present than there was at this time last year; also collections are coming in better and more mortgages have been cleared. The lowered list prices will increase the demand because we can get people to buy at \$35 that would not at \$50 or \$75. Dealers are buying more freely, according to the statements of the traveling salesmen.

Ohio.

H. F. WHITE.

#### Industrial Conditions Will Help Sales.

We believe that people in this town will buy more bicycles than last year because work is more plentiful and people have more money. The price is now getting to where it ought to be, and will no doubt help the sale of bicycles. So far as we know, dealers are not buying any larger quantity to start out with.

Ohio.

FRANK H. SNYDER.

#### Lower Prices Will Influence Buyers.

My trade in '98 was good, and from all appearance I do not think it will be any better this year, although I expect to make as many sales. The lowered list prices will help the trade by bringing bicycles within the reach of all and enabling them to purchase. I do not believe that for the first purchase dealers are buying any more than usual.

Indiana.

A. R. GROVE.

#### Public Understands Bicycle Values.

In my judgment the number of machines sold will be greater during 1899 than last year, or, in fact, any former year. All grades of machines are cheaper, and while I do not claim that the general prosperity is unloading money in the laps of all the people, I still think the greater purchasing power of money in this line of trade will make it easier for all the people to buy. The lower prices on the first-class goods is having its effect in the sale of reputable machines, and I find that I have already sold more machines up to date than I ever sold before so early in the season, and all of them, or nearly all of them, of the better grades. The people are now well educated in the values of the different makes of bicycles sold in this city. I cannot see that my competitors are buying more freely than in former years, but I certainly am doing so, as I wish to get well stocked up early, so as to be "in out of the wet."

Michigan.

E. C. ADAMS.

#### Trials of Dealers in Small Towns.

I think the sales will not exceed those of last year; very likely they will be about the same. I know of some instances in which old, experienced agents have gone out of the business, where they were situated so they could do so, on the ground that there are not sufficient returns for the bother and express on broken parts and other expenses,

which sometimes have to be borne by the agent, because of the low prices, which compel the agents in towns of less than 10,000 to carry bicycles as a side line only. To hold customers for other trade they are obliged to stand repairs and expense which they ought not to. This has a very demoralizing effect on the whole trade and the large manufacturers who are making efforts to squeeze the small ones out are not going to get off entirely free from the effects of their own efforts. Dealers seem to be buying about the same as last season. People here seem to look with suspicion on the cheap machines.

Michigan.

C. B. BUCKBEE &amp; Co.

#### Cheap Bicycle Trade Will Suffer.

I am now out of the bicycle business myself, but I still feel a friendly interest in the old line. Dealers here are buying less stock than a year ago, and I hear little talk about the new lines. My impression is that retail trade will be less than in other years. The new prices on old standbys will cut seriously into the new cheap bicycle trade.

Michigan.

F. L. COLBY.

#### Anticipates Fewer Sales.

I think the sales of bicycles will be less this season than last, though it is hard to tell. There does not seem to be as much bicycle talk as heretofore. The lowered list prices should have a good effect, judging by the way people have bought here in the past, having purchased mostly cheap machines. Dealers are buying about the same as usual.

Michigan.

C. H. PARSONS.

#### Expects Trade to Remain Constant.

I think the sales will be about the same as in '98, but on account of the lowered list prices there may be a few more machines sold. The poorer classes can afford bicycles now, when they could not before. Dealers will buy about the same this season as usual.

Illinois.

C. B. BUTLER.

#### Is Early to Estimate Sales.

It is hard to determine so early in the season, but I have no reason to think that sales will be less than in '98. As the price is lower, I think they may be greater. The season is young, and I do not know of any purchases as yet. I have some sales in view, but have not bought any goods yet.

Illinois.

S. H. CREET.

#### Think Purchasers Are Well Supplied.

Perhaps sales will not be as large this year as last. The lowered price list will have practically no effect in this locality, and dealers are not buying any more freely than usual. There have been very large sales of bicycles here for several years and it would seem as though almost everybody must have been supplied. There has been small sale here for high priced machines; people are satisfied with the \$35 to \$40 goods.

Kansas.

R. H. ROYS CYCLE Co.

#### Lower List Will Sell Better Quality.

Sales will be as good, if not better this year than last year. The lowered list prices will create a larger demand for high grade goods. Dealers are buying more freely than last year.

Texas.

GEO W. BEARDSLEY.

#### Dealers Buying Conservatively.

Sales at this point for the coming season, in our judgment, will not exceed those of last year, the effect of lower prices being to just about bring the total to balance the previous year's sales. The dealers in this neighborhood are very conservative regarding '99 purchases. There is little competition here and we are taking things very easy.

Texas.

ENNIS CYCLE Co.

#### Preparing for Better Business.

The sale of bicycles will be greater this year than in '98, as effect of lowered list prices will be that more people believe now that they can buy. We have been buying more freely this season, but don't know about the other dealers.

DIAMOND SUPPLY Co.

#### Post Dating and Long Credits.

The dealer is frequently injured by post-dating and long credit. A salesman

representing a long-time jobbing house succeeds, by the inducements of post-dating and four months' time, in selling the retailer about twice as much as he ought to buy. Too frequently the retailer does not recognize this fact until he has received the invoice. Then he becomes alarmed. He is seized with the fear that he will not be able to dispose of enough goods to be able to pay the bill by the time it falls due. In his anxiety of mind he takes risks. He sells to customers on time, even making credit sales that he would not have thought of making had he bought his goods as he needed on short time or for cash. The usual result is that when the post-dated bill falls due, the merchant has neither the money to pay it, nor yet the goods on hand. Accordingly, he is either compelled to ask for an extension or to borrow the money with which to pay the bill. The long-time, post-dating wholesale houses are an actual injury to the trade, and the real enemy of the average retail merchant, while on the other hand the cash houses are his true friends. The retailer that buys for cash and sells for cash seldom fails.

#### Dealers Oppose Cycle Tax.

Washington, Feb. 11.—Local bicycle dealers are vigorously opposed to any legislation looking to the imposition of a tax on bicycles, and have prepared a letter setting forth their views on the subject. In the course of their letter the dealers say: "In our opinion, a tax on bicycles is an unfair and unjust discrimination against the owners of such vehicles. We consider any public or private conveyance much more amenable to such a tax, as horses and wagons certainly inflict greater injury on streets and roadways than the bicycles. A tax of \$1 each would be entirely out of proportion to the value of the bicycles now in use, considering the lower list prices and changed conditions of the trade. As dealers, we have further ground for objection to such a bill, considering the fact that we require the bicycles for trial purposes, employees' use, and rental stock; this being the case, a tax imposed on bicycles would force us to contribute more than our share toward the revenues of this District. We are required to pay on personal property, so that if this bill should become a law we would be paying double tax on the same articles."

The dealers have appointed a committee to wait upon the District commissioners and represent their views on the contemplated legislation. Many prominent cycle manufacturers have given their support to the movement to defeat the proposed legislation. In accordance with the usual practice of the commissioners, a hearing will no doubt be granted to the dealers.

#### Cleaning Store Windows.

A correspondent advises the Iron Age in regard to a method of cleaning windows which experience has taught him is far ahead of the window brush and rubber idea. The plan is to put into a cheese cloth sack about ½ pound of whiting. A clean cloth wet enough to hold in the hand without dripping water and a clean old muslin cloth are the other requirements. The whiting bag is drawn over the window, followed by the damp cloth, when the window is polished with the clean cloth. The description of the three applications may leave the impression, he remarks, that it will take a long time to clean the windows, but his experience has been that the ordinary boy who requires from one to two hours for cleaning a pair of windows with a brush and rubber can do the same job by the above method in from twenty minutes to half an hour.

## SUBJECTS OF GENERAL INTEREST

THEORY OF  
PYRAMID  
CONSTRUCTION

The construction of the Egyptian pyramids could have been performed by means of inclined planes of earth. Let us suppose that each of the stone blocks used had a rectangular base, being half as thick as wide, and that they were moved from the quarry on rollers. Other stone blocks could then have been transported along the surface of the ground in the same manner and so could the other stones in the same tier. An embankment at a 20 or 30 per cent. grade could then have been constructed by carrying earth from pits beyond the continuation of the boundary lines of the base of the pyramid. Over the surface of this plane, extended toward the quarry, the second tier of stones could then have been put in place; a new embankment could then have been constructed, and new blocks and those behind them being put in place; and so on, by the aid of the additions to the embankments, the remaining stones could have been put in position.

The highest embankment necessary when the workmen reached the top course, assuming that a 20 per cent. grade was adopted, would have been 750 yards long, containing about 7,500,000 cubic yards, if the sides of the earth embankment would stand at an angle of 30 degrees, which is not at all improbable.

Assuming that one laborer could have placed two and one-half yards (about twenty barrow loads) of earth on an average each day on this embankment, 10,000 men could have built it in twelve months of twenty-five working days. It is stated that 100,000 men were employed for twenty years in the whole work, so that, according to this calculation, the construction of this embankment would have occupied only a small portion of the total time consumed.

The false work to support the walls of the interior chambers of the pyramids could also have been made of earth rather than of timber.

SCHOOLHOUSE  
ON  
WHEELS

A most unusual kind of schoolhouse is owned and operated by the Westinghouse air brake company. It is made up of three cars and has traveled more than fifty-five thousand miles. It is fitted with every appliance for instructing the pupils in the use of the Westinghouse brake system, and has its principal and its competent teachers.

When the Westinghouse brake was invented and applied to steam railroads it was found to be the best thing of its kind ever invented, provided it was properly handled. It is automatic in its action, but the best results could not be obtained without a competent man at the throttle, who understood perfectly just what results would be obtained with a certain amount of pressure. It was this fact that led to the establishment of the schoolhouse. It was the idea of getting the best results out of the brake, and therefore insuring greater safety to the passengers and a saving of property to the railroads and shippers, that was the inspiration of this remarkable school.

The instruction car is equipped with the full number of air brakes, number of feet of piping, couplings, auxiliary reservoirs, etc., to equip a freight train of thirty cars; and also to equip a passenger train of fifteen cars fitted with the whistle signaling device. The instruction car

weighs 135,000 pounds, and is one of the heaviest cars that ever traveled the rails of a railroad. More than 112,000 railroad men have received instruction and have been examined as to their competency.

MARVELOUS  
BROAD  
JUMPER

Athletes have been startled by the wonderful broad jumping performances of W. J. M. Newburn. This athlete now holds the record of the world, twenty-four feet six and three-quarters inches. Had it not been for the fact that this great athlete cleared over twenty-four feet in public six times last summer, on different grounds and under different conditions, it is doubtful if on this side of the Atlantic athletes would admit the genuineness of his best performance. There are only about eight jumpers who have ever cleared twenty-three feet or over.

Newburn stands 6 feet 6 inches in height and weighs 208 pounds. He starts with his run about 150 feet back from the take-off, and approaches rather slowly a certain mark, about ninety feet away from the take-off. On arriving at this mark he has given enough momentum to his body to have quickened his speed, which he does after getting the foot with which he jumps at this mark. His strides after leaving this mark increase in length as his speed increases, and the last three or four measure over ten feet in length, for by this time he is going at his utmost speed. The stride just in front of the take-off is not over seven feet long, for he must gather himself then for the jump, and if he put his jumping foot too far in front of him he would more or less retard his momentum. When Newburn leaves the ground he gets a great "rise" and literally sails through the air. Just before landing it would seem that his feet were going to touch, when he tucks them under him, and their being handled so gives the uninitiated an impression that he is taking a second spring. Then when his head and shoulders are so close to the ground that he can postpone the inevitable no longer he shoves his feet in front of him, and the momentum of his whole body carries him forward and prevents falling back.

Like nearly all of the best running broad jumpers, Newburn is a fast sprinter, and has been credited with running 106 yards in ten seconds. His stride when running his fastest in this race is from 10 feet 3 inches to 10 feet 5 inches, and he is the longest striding athlete ever heard of since athletic sport has been chronicled. He is a professor in Claremont college, Dublin, and practices his athletics solely for health.

ENGLAND'S  
IMPERIAL PENNY  
POST

What is described as John Bull's Christmas present to the world, or more particularly to the British Empire, is the inauguration of the imperial penny postage, which occurred on Christmas day in accordance with a treasury warrant published in the Official Gazette, establishing a rate of 1d (2 cents) per half ounce or fraction of half ounce on letters posted in the United Kingdom for transmission to specified British colonies and possessions.

Cape Colony is not included, although Natal is, nor have the Australasian colonies been brought into line as yet; but it is generally believed that a continuation of the 5-cent rate with the colonies which

are now exceptions to the general rule will be but temporary.

Mr. Henniker-Heaton, the champion of postage reform in England, points out that every boat belonging to the steamship lines communicating with the British colonies will be "floating British postoffices," and will carry an abundant supply of penny stamps for sale. Moreover, he states that every squadron and every naval vessel in any part of the world will be a "portion of the British postal territory," and everybody serving thus under the British flag will have his letters forwarded by the shortest and swiftest route to its destination for 1 penny.

The day the new rate went into effect the mail that left Canada for England was the largest that ever left the dominion.

RUSSIA  
IS MAKING  
PROGRESS

Russian industry is making rapid progress. Within the last few years cotton mills have sprung up in all parts of the empire. Where at one time Russians were content with English goods, the German gradually crept in with the cheaper article, better adapted to tastes and requirements. Presently their ambition rose above this, and they asked why they should not themselves become producers. Factories were started, English machinery imported, and English foremen and engineers placed in control. Then the English engineer was supplanted by the German, the machinery perhaps got out of order, and the introduction of German machinery, accompanied by American, naturally followed. By this time Russia had started schools for the training of a special class as engineers. They are supplanting American, German, and English in their own country and are beginning to turn out machinery of their own design.

LESSON  
IN PUBLIC  
ECONOMY

The burning of refuse by the Shoreditch parish, of London, to supply electricity for lighting streets, dwellings, and public buildings has aroused considerable discussion in the electrical press. Before the new plant was in operation the parish had to pay about \$30,000 a year for carting the refuse to barges on the Thames and towing it to a dumping place in the sea, and about \$20,000 annually was spent for gas for lighting the streets and parish buildings. Sixty thousand dollars was expended for an electrical plant. The funds were obtained by taxing the people. The plant ran all the time during week days and twelve hours on Sunday, furnishing electric power for small manufacturers during the day and for illuminating purposes at night. The street sweepings have furnished all the fuel necessary, only \$432 being expended for coal. The total expenditures for the first year were \$19,070 for wages, supplies, insurance, repairs, etc. The interest, sinking fund, rents, depreciation, etc., were \$10,205, making a total of \$29,275. The gross receipts for the sale of light and power, including a credit equal to the average charge for street lighting by gas, was \$45,205, thus leaving a net profit of \$15,930. This will be used in enlarging the plant. Of course, by street sweepings must be understood cinders, manufacturing wastes, etc.

An old roller skating rink in Newton, Kan., is about to be reopened as a cycle skating academy.

# The American Saddle Co.

OPERATING THE FORMER  
FACTORIES OF

**GARFORD MFG. CO.**

OF ELYRIA, OHIO

**HUNT MFG. CO.**

OF WESTBORO, MASS.

**WHEELER SADDLE CO.**

OF DETROIT, MICH.

**WHEELER SADDLE CO.**

OF TORONTO, ONT.

**GILLIAM MFG. CO.**

OF CANTON, OHIO

**P. & F. MFG. CO.**

OF READING, PA.



**Offices: 608-613 American Trust Building**

**• • • Cleveland, Ohio • • •**

# To the Trade

**T**HE American Saddle Co. begs to announce that its organization has been completed, and that its general offices are located in the American Trust Building, Cleveland, Ohio.

The American Saddle Co. has acquired the properties and business of the following named companies:

THE GARFORD MFG. CO., Elyria, Ohio  
THE WHEELER SADDLE CO., Detroit, Mich.  
THE WHEELER SADDLE CO., Toronto, Ont.  
THE GILLIAM MFG. CO., Canton, Ohio.  
THE HUNT MFG. CO., Westboro, Mass.  
THE P. & F. MFG. CO., Reading, Pa.  
and a controlling stock interest in the  
BROWN SADDLE CO., Elyria, Ohio.

The primary purpose of the new organization is to arrest the calamitous conditions which have governed the saddle industry for the past two seasons, and which have deprived the makers of fair returns on their capital invested.

This it will strive to accomplish, not by the advancement in price of its product to the trade, but by the reduction of expenses and the cost of manufacture through concentrated management of its business and the employment in its several mills of the best special machinery and mechanical appliances known in the art of saddle building.

It will constantly endeavor to better the grade of its product, and by increased facilities extend better service than has heretofore been possible.

All communications should be addressed to the company at Cleveland, Ohio.

## The American Saddle Company

By A. L. GARFORD, President.

## WAR FOR CHEAPER CARBIDE

### Plans Afoot for Co-operative Action By Makers of Generators—New Processes Proposed

In nearly all minor towns where acetylene lamps and gas generators for house or store lighting are sold, the trade in these new commodities has by natural selection fallen into the hands of bicycle dealers and hardware men, but more or less difficulty is experienced in introducing the goods, partly on account of their novelty, but also partly on account of the restrictions to which the trade is subjected.

Manufacturers of acetylene gas generator machines are split up into two camps, comprising on one side those who expect the smoothest sailing by submitting to the existing order of things and, in opposition, those who dearly love a little warfare for free competition and unrestricted trade. The restrictions complained of have reference to fire insurance regulations which hamper construction of generators and to the production of calcium carbide by a single producer.

#### Will Resist Underwriters' Regulations.

The Western Union of Fire Underwriters, the National Board of Underwriters and various state boards of underwriters form the regulating factor whose rulings make or mar the business of the generator manufacturers, or, more correctly, would do so if individual insurance companies did not see fit to deviate from these rulings at their own option. The underwriters have set up the rule that a generator maker must obtain their approval of his pattern of gas machine before the latter may be placed on premises covered by a policy issued by any of the insurance companies which operate under the board regulations, and they have allowed themselves a liberal fee—\$100—for passing judgment on each gas machine. If this is not paid the machine is tabooed, and its maker finds more or less difficulties in selling it. It is now charged in several quarters that the payment of the fee is of much greater consequence for securing the underwriters' stamp of approval than any consideration of the mechanical construction of the gas machine; and in the objectors' opinion construction should alone determine whether there is created any additional fire risk by its installation in a building. In other words, it is contended that the stamp of approval has been put on machines of inferior construction and that the underwriters have thereby stultified themselves to such an extent that generator makers whose ideas of construction are of a different order, may do better justice to themselves and the public by balking against the rules than by submitting to them. The threatened warfare consists partly in an attempt at organizing as many generator manufacturers as possible in resistance of the rules, so as to either bring about a revision of the same or induce individual insurance companies to disregard them. It is stated that a number of insurance companies are already quietly doing so.

#### To Fight Carbide Combine.

The other side of the rebellion is one of greater general interest and one which promises livelier developments. It is directed against the Union Carbide Company, which at present controls the production of calcium carbide in United States and turns out all the carbide consumed in bicycle lamps, as well as for house, store and town lighting, at its two large plants at Niagara Falls, on both

sides of the boundary, and at Sault Ste. Marie, Mich. The production of this company is conducted under the Wilson patents, which describe the first process for making calcium carbide on a commercial scale by passing a mixture of pulverized coke and burned limestone through an electric furnace. The lowest quotations which have been made for the product is said to have been \$3.75 per 100 lbs. in ton lots, and the usual price has been \$80 per ton.

#### Degeneration Under Monopoly.

At these figures the lowest price which makers of generators could quote for their customers has been five cents per pound and, assuming that each pound will make five cubic feet of gas, this makes acetylene gas cost the consumer ten dollars per thousand feet as against one dollar per thousand feet of coal gas. The illuminating power of acetylene gas being about eleven times that of coal gas, the two means of illumination are therefore at present of equal cost to the consumer. This is bad for the generator makers, who would like to show a great saving by using acetylene, but it is made much worse if the calcium carbide furnished fails to reach that standard of purity at which it produces five cubic feet of gas to the pound of carbide. European makers of carbide produce the highest grade, but the American monopoly, it is alleged, has allowed the quality to degenerate until frequently no more than two and one-half feet of gas can be produced from the material placed on the market.

It is against this alleged condition of affairs that certain makers of acetylene generators have risen in protest.

#### Scheme for Manifold Benefits.

George Harden of Toledo, who is known to the bicycle trade as the patentee of the Harden bevel-gear bicycle with driving gears on both sides of the crank shaft, and who is the manufacturer of an acetylene generator which is marketed independently of the approval of boards of underwriters, has taken up the cudgel in defense of generator makers and is at present engaged in the work of organizing them for the manufacture of calcium carbide on the co-operative plan. He holds the view that it is useless to attempt selling generators so long as no material saving by substituting acetylene for coal gas can be offered the public, and that, on the other hand, calcium carbide can be produced so cheaply as to make the generator business one of the greatest promise and prosperity. He finds no difficulty in interesting other generator makers in his plans, and contends that it is easily within the range of possibilities to make calcium carbide at a producer's price of much below \$10 per ton.

#### Production at \$5 to \$7 Per Ton.

It is stated that a Chicago inventor has offered to sell calcium carbide to generator manufacturers, if a sufficient number are combined to guarantee the purchase of his output, at \$25 per ton instead of \$80 as charged at present, and he makes no concealment of his own expectation of limiting the cost of production to \$5 per ton. The material which he proposes to furnish differs slightly from the carbide now in the market, but is said to give more gas per pound.

A Toledo chemist and electrical engineer has another process by which the

first cost of the calcium carbide is reduced to \$7. These estimates, however, do not include interest on the value of plant, nor administration expenses.

With these inducements in hand the aggressive Toledo manufacturer expects before long to have most of the representatives of the generator industry arrayed in line of battle against the Union Carbide Company, and to enable them all to convince the public of the superiority of acetylene gas over coal gas on the point of economy as well as the quality of illumination.

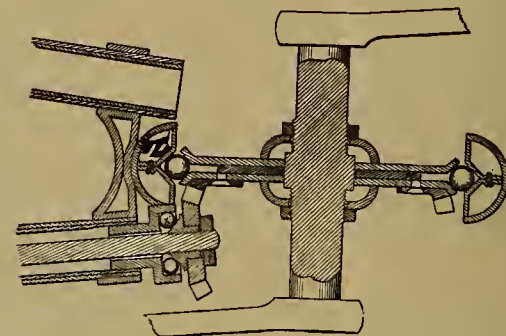
It is the supposition that any one of several practical processes for fusing coke and lime may be employed by the projected amalgamation without interference with the Wilson patents.

#### NEW BEVEL GEAR DEVICE

Crank Shaft and Main Driving Gear Supported By a Single Row of Balls.

Some time ago a Chicago inventor brought out a chain driven machine in which the usual two rows of balls in the respective ends of the crank hanger were replaced by a single row of balls rolling in four point races placed centrally in the frame and much larger in diameter than the common races of the standard type. Now C. W. Hamilton of Omaha, Neb., has obtained a patent on a bevel gear driving mechanism which employs the same hanger bearing scheme.

The driving gear is secured to the center of the crank shaft and comprises two adjacent plates to the right of which the toothed rim is fastened. The two plates



have each ball races around their peripheries that match corresponding races in the larger narrow hanger bracket, the parts thus together forming a regular four point bearing. That the bearing may be adjusted the plates are not placed tightly against each other, but are separated by a mat of leather or similar material. Cup shaped nuts screwing on the axle at each side of the pair of plates are used for pressing the latter together when it is desired to tighten the bearing. The leather mat through expansion will cause the plates to separate when by the unscrewing of the nuts to loosen the bearing the pressure on the mat is lessened. Lock nuts are provided to retain the cup adjusting nuts in position after the proper bearing adjustment has been made. The construction brings the balls on which the driving gear is supported quite outside of the gear itself and at the same time permits the use of a very narrow incasing box for the gear and pinion.

#### Frame Cushioned on Rubber Balls.

H. E. Henwood of Chicago is the inventor and recent patentee of a cushion frame device in which the flexing action of the springs is supposed to be limited to a vertical movement. The inventor's object is to relieve the machine from strains and injuries caused by cushion parts flexing in several different directions under heavy jolts. His proposition for accomplishing this object is to limit the action of one spring by the retaining influence of another placed in a different plane. The frame is supported on hollow

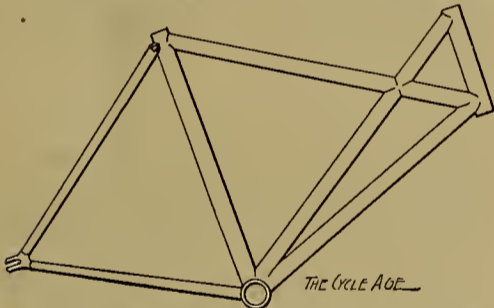
rubber ball cushions, one of which is placed at each end of both the front and rear axles. The balls are secured between upper and lower attaching plates which fasten respectively to the frame and to the wheel axle ends, thus forming the union between the frame and wheels. Around each ball and in a position parallel to the wheels of the bicycle is a circular spring strip, and at right angles to it but still in a vertical plane is a similar strip. Each ball is thus inclosed in two spring strips which act oppositely on each other and keep the ball cushion from flexing with other than an up and down movement. The spring strip at right angles to the wheel also keeps the rubber cushion from flattening to the extent that its inner side would touch the spokes of the wheel. A pair of brace rods running from the crank hanger to the rear axle ends takes some of the strain off the supports of the rear wheel cushions.

**ENGLISH FOIBLE FOR STRUTS**

**Designers Indulge Desire for Novelty in Frames Without Much Benefit to Anybody.**

The use of diagonal tubes for the strengthening and stiffening of frames has been for some time in great favor among English designers. A noticeable proportion of the tandems now being built in Great Britain have frames in which cross struts are employed in some manner or other, and there are several single machines in which the diagonal tube is the distinctive part of the frame. English riders do not shudder, as we are inclined to do, at tubes crossing each other at all sorts of angles. If he thinks that a tube running between two certain points will strengthen the frame, in goes the tube regardless of appearance.

A recent example of tube crossing, and one which gives a frame that is not



bad looking, is that shown in the accompanying illustration, and which is used on one pattern of the Raleigh bicycle. Instead of the usual single top rail, there are two, one running from the upper end of the steering head to the crank hanger and the other from the seat cluster lug to the lower end of the steering head tube. A connecting lug is used at the crossing point of the two upper rails. While the construction doubtless enables the frame to better resist fore and aft stresses, the bracing has several features which might be improved upon without departing very far from the main idea of the design. The crossing of the two upper tubes demands the breaking of one or both tubes and the interposition of a connecting lug. Accordingly the vibrations of the metal in traveling along either of the tubes can extend in a unit of motion as far from each end only as the crossing point. Here all the vibrations of both tubes will centralize. The frame, then, possesses stiffness which is gained by added material and short reaches of tubes rather than strength obtained through proper strutting.

England still holds the supremacy in China, as well as in Siam. In 1897, 20,000 English ships entered the nineteen treaty ports of China, against 2,140 from Germany and 174 from France.

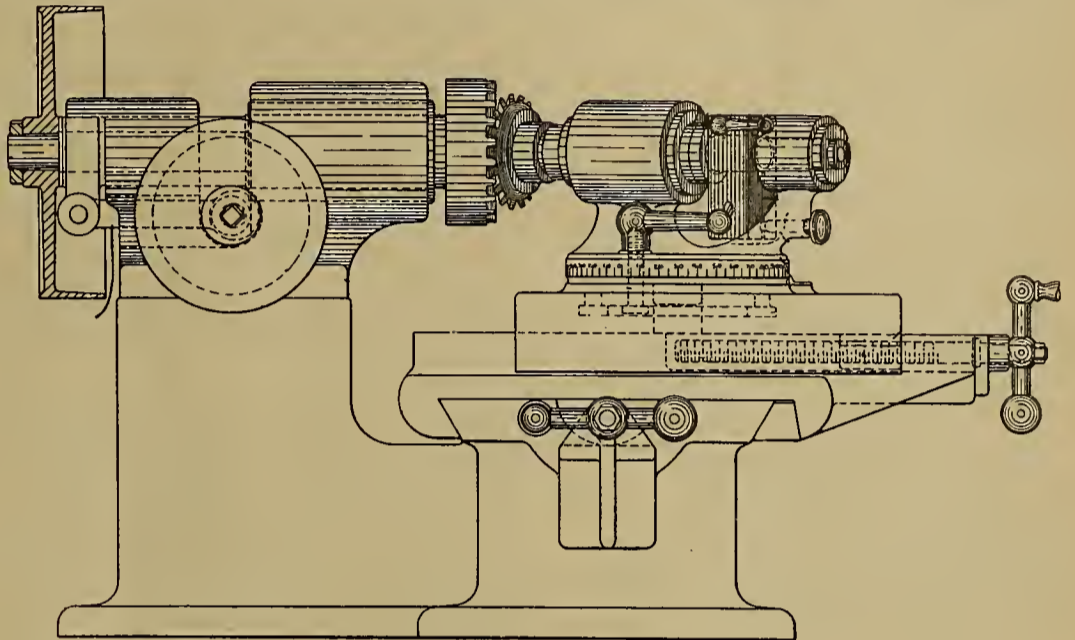
**GEAR GENERATING MACHINES**

**RAPID OPERATION THE OBJECT**

**Beale's Patented Crown Gear Generator Actuated to Secure Maximum Amount of Abrading Friction.**

A few weeks ago patents were allowed on bevel gear generating devices in which the blanked out gear was finished to accurate form through abrasion caused by the rotation together of the gear blank and a crown gear generator the pitch surfaces of whose teeth were mutilated or serrated to form cutting edges. To the inventor of these devices, Oscar J. Beale of Providence, R. I., there were last week

the main spindle on which the crown generator is mounted has at its rear end, just within the pulley by which it is driven, a sleeve that is secured against rotation with the spindle, but which cannot slide in an axial direction upon it. Depending from the lower side of this sleeve are a pair of lugs which receive the free rear end of a link the forward extremity of which is attached to an eccentric upon the end of a cross shaft driven independently by its own belt and pulley. The revolution of the cross shaft and its eccentric gives the revolving main spindle a limited to and fro motion along its axial line. In this way the desired additional friction between the generating crown gear and the gear blank is obtained. Another feature of the machine is a friction brake attached to the spindle



allowed patents on machines adapted for putting the generating gears into operation. All of the patents are assigned to the Brown & Sharpe Mfg. Co.

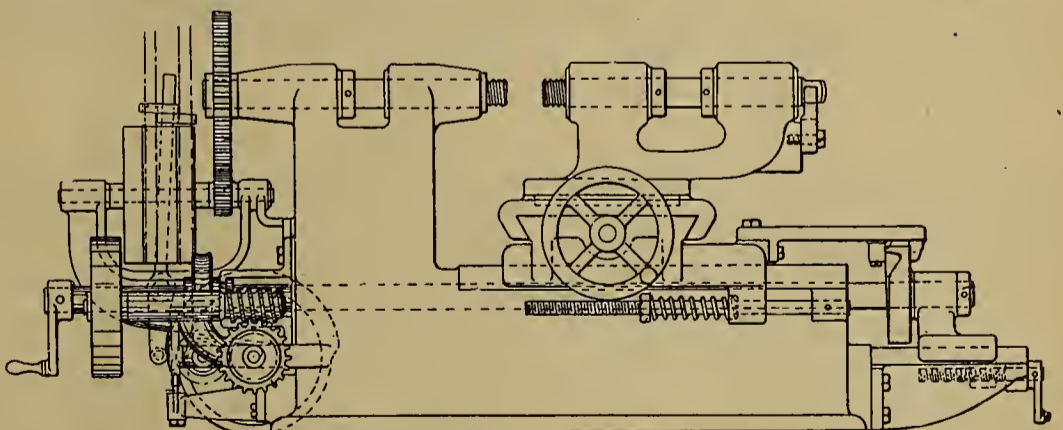
**Two Motions Between Teeth Needed.**

As the action of the generator depends upon the friction between the tooth surfaces of the generator and gear blank, and as this friction decreases as the angle between the axes of the gear blank and generator increases, it has been found that when the angle mentioned is extremely large there is not sufficient friction to effect rapid abrading of the gear blank tooth surfaces. This difficulty

of the blank to be generated. The brake is for the purpose of regulating the pressure between the teeth of the generator and of the blank. It comprises a pair of blocks surrounding the gear blank spindle and which by tightening through the medium of screws may be made to retard the motion of the spindle more or less, and thus cause greater or less pressure on the teeth.

**Operation of the Machine.**

In putting the machine into operation the gear blank is secured to its spindle, the head of the gear blank carrier adjusted about its pivot to bring the spin-



could be overcome by changing the form of the generator by making it in the shape of a small pinion, but as such forms of generators are more difficult to make than the crown gear generator, Mr. Beale has deemed it best to retain the crown gear generator and to produce the necessary friction by using the generator in a machine which will move either the generator or the blank, or both, in such manner that the tooth surfaces have a sliding motion in addition to that obtained by the simple rolling of the two together. In the machine patented by Mr. Beale

dle to the proper angle with the generator spindle and the cross feed and longitudinal slide carriages adjusted to bring the generator and the blank into proper mesh. The power is then turned on and the main spindle rotated and reciprocated. The upper illustration herewith shows this machine complete.

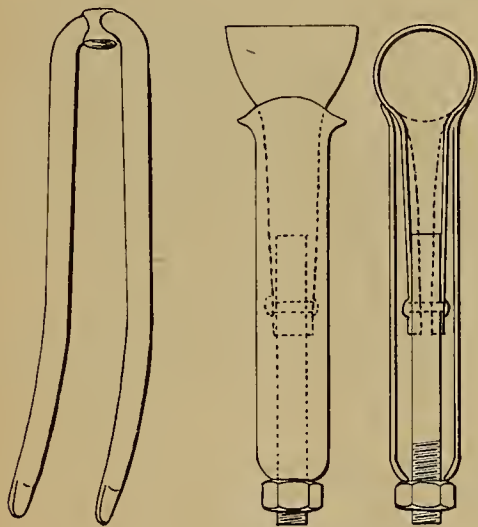
**Intermittent Motion Desirable.**

Another idea of this inventor in relation to the successful operating of his generating device is that the abrading action of the generator is more rapid and

the best results are obtained if the direction of rotation of the generator and blank is intermittently changed during the time the two are in mesh with each other. He has accordingly invented and obtained a patent upon another generating machine in which this intermittent motion is automatically and regularly obtained. This machine is shown in the lower illustration. The generator spindle is driven from a shaft placed lower down in the body of the machine, the connection between the two being through a spur pinion and gear. This lower driving shaft is rotated in one direction by an open belt running over its pulley and in the opposite direction by a crossed belt running over a second pulley adjacent to the first but separated from it by an interposed loose pulley which acts as loose pulley for both belts according to which is at any moment driving the shaft. A belt shifter is placed between the two belts and is arranged so that when it throws one belt off its tight pulley and onto the loose pulley it throws the other from the loose pulley and onto its tight pulley. The shifter is operated by a cam engaging its lower end and driven by a cross shaft rotated by an independent belt. Thus the direction of rotation of the spindle is intermittently reversed, the number of revolutions it makes in one direction before being reversed depending upon the relative speeds of the cam and shaft which drives the spindle.

#### German Taper Gauge Tubing.

Taper gauge tubing and tubular parts manufactured by the German Arms and Ammunition Works of Karlsruhe, Germany, are being introduced in the English market and are mentioned as especially attractive in finish and design.



THE CYCLE AGE

Among the pieces in which the gradual taper gauge principle is embodied is a single piece fork and crown of the design shown in Fig 1. It is stated that the crown is drawn as shown with a flashed lug ready to be brazed to the fork stem. Fig. 2 represents a brazeless handlebar teepee of the same manufacture. The whole line is being recommended especially for assemblers on the ground that taper gauge tubing renders reinforcements unnecessary and thereby, besides saving work, removes the danger of burning the steel by repeated brazings.

#### Defective Machines in Australia.

Many serious accidents on road and track have occurred in Australia during the past year or two to riders of a certain much boomed English machine of inferior quality. The last of these happened at the East Melbourne race meet, January 9, when J. Farrell fell on the track and was almost killed. The forks had snapped like a carrot and the rider was thrown on

his head. He is still in the hospital lingering between life and death. When the fall occurred the officials of the meet took charge of the machine, placing it in the center of the arena. The agents, noticing this, sent an employe to take the machine away. When the officials missed it later they traced it, and now have it under lock and key awaiting the result of Farrell's injuries. There were no reinforcements whatever in the forks, and in case of Farrell's death an effort will be made to hold the agents responsible.

#### PROFIT IN CASH DISCOUNT

Frequent Turning Over of Capital Gives Seller Larger Returns and Buyer Lower Prices.

An organized effort is being made to impress upon retailers the very considerable profit there is in paying cash for purchases, or paying at such times as will secure to them the cash discount. It is justly contended that the cash plan is really the only way to do business with any prospect of success in this competitive age of small profits and quick returns. Considered from any standpoint, it is the only rational system. Reason, common sense and self-interest alike are opposed to the superannuated system of long credits which are hurtful alike to retailer and wholesaler, and a brake on business progress.

A very convincing letter in relation to this matter was sent by a wholesaler to his customers at the first of the year. He says:

The better you keep me paid, the better I can buy and sell you goods. Always remember that the man who sells you goods on long time makes you foot the bill not only for the use of his money but also for bad debts. We want to be all the help we can to customers, but we do not have a dollar to loan, and goods are dollars.

Let us show you how it works: I pay \$1 for goods, sell in thirty days for cash at \$1.10, take the same \$1 and buy again. If I can do this ten times in one year, I have made \$1 clear. I sell the same goods to you for \$1.30 on six months' time; I turn my \$1 only two times and make only 60 cents, and you have paid me three times as much profit. Can you see the difference?

The difference is quite large enough to be visible to any business man. The country is in an unusually prosperous condition at present, and never was there a more opportune time to adopt the plan of cash payments which is yearly becoming more of a business necessity. In this age of evolved systematization, business-doing is becoming more and more an exact science, from which the element of risk is being slowly but surely eliminated. Hence this campaign of education in regard to the profit in the cash discount.

#### Liability of Bicycle Makers.

To the Editor:—Your editorial in the last issue about the liability of manufacturers is O. K. It is the greatest wonder in the world they get off so easy. All that protects them is the distance which separates them from maimed customers, which distance effectually prevents suit.

Some years ago I sold about 250 bicycles here, and over one-half of them broke down. Scarcely a day passed but a customer would break a crank axle and go over the handlebars at the same time. Broken forks and frames time and again led to severe accidents among my customers, sometimes right in front of my store. You can imagine how from a series of disasters like this the reputation of a dealer suffers. It is hundreds of dollars out of his pocket, and his judgment in the selection of stock is ever afterwards questioned. For my part, I say it is a pity that some of the makers have not been sued.

Not long ago I myself was riding a 20-pound racing machine, when it collapsed, and I was thrown forward with such force

as to break my jaw. I wrote the firm who made the machine, asking them at least to pay my doctor's bill, but this was refused. I was riding on a macadamized road and at least six people saw the machine collapse. In this case both bars broke square off at the head.

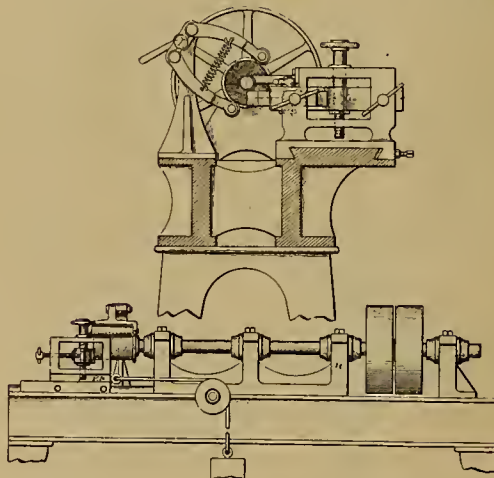
In the many articles appearing in the Cycle Age on the subject of extortionate express charges I observe that the eastern dealers have no kick coming. The other day I got a machine from New England, the express charges on which to Chicago were \$1. The express charges from Chicago to this point, however, were \$3. Nice, isn't it? L. C. WAHL.

Colorado Springs, Col.

#### METAL WOOL MAKING!

Machine for Shaving Thin Filaments From the End of a Roll of Sheet Metal.

Since wood has entered into the construction of bicycles through the introduction of wood rims, guards and saddle bases the makers of these cycle parts have been to some extent interested in and purchasers of metal wool which they use for polishing purposes. Sigmund Feust, of New York city, was granted on February 7, patent number 619,076, the subject of his invention being a machine for manufacturing metal wool from sheet



metal in the roll. The machine, which is here illustrated, comprises in the main means for supporting the roll of sheet metal in such a manner that the broad flat cutting tool will engage the end of the roll and cut therefrom thin filaments of metal. In the construction specified by the inventor the roll is rotated on a shaft placed longitudinally in the machine, and the cutting tool is mounted in a slide carrier to be moved toward the end of the roll and thus keep the tool in constant cutting relation to the rolled metal. The tool is adjustable in the carrier so that it may be made to engage different portions of the end of the roll and also so that it may be moved to and from the roll when it is desired to vary the depth of the cut. The roll rotates in the direction in which it is wound, and to prevent any tendency to unwind a pair of horizontal rollers mounted on arms pressed together by coil springs roll on the surface of the roll above and below the spindle. The slide carrier is fed along the bed automatically by a weight which keeps it at all times in the proper relation to the roll, the weight pulling the slide along in correspondence with the rate at which the cutting tool shaves off the metal from the end of the roll.

J. E. Mulholland, president of the International Union of Bicycle Workers and Allied Mechanics, has presented a resolution to the common council of Toledo for the passage of an ordinance creating an eight-hour working day in that city. The resolution was approved by the mayor and unanimously passed by the council.



**Friend Builder of Bicycles!** You who prefer to build from first-class component parts, which Fit to the Designs furnished and are True to Angles specified in catalogue!

<p>YOU WANT THIS COMPLETE SELECTION:</p>	}	<p>HUBS HANGERS EXPANDERS FRAME FITTINGS SEAT POSTS HANDLE BARS</p>	}	<p>FOR</p>	}	<p>RACERS ROADSTERS TANDEMS TRIPLETS QUADS QUINTS</p>	<p>EVAN EW ETELPMOC SIHT :NOITCELES</p>
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## Will there be any Racing in 1899?

Any amount of it. More than ever before. L. A. W. says so. But that is not all.

THIS WILL BE THE TEST YEAR between Chain-Driven Bicycles, Bevel Gear Bicycles, Straight Roller Gear Bicycles and Bevel Roller Gear Bicycles. The Test will be on the Race Track with a vengeance. Remember, THE RACE IS TO THE SWIFT.

THEREFORE —————

You want the very best Racing Hubs—the “W & E”

THEY  
ARE PERFECT IN  
ALL DETAILS



THE CUT  
GIVES NO IDEA OF  
THE FINISH.  
SEND FOR THE HUB.

These Racing Hubs are among our leading specialties.

**Rule of Safety  
for Builders:**

In case of trouble, dealing with us, your trouble is ours. We must see that you have none. We are responsible manufacturers. Dealing with several firms, your trouble is your own and remains so. This applies especially to frame construction.

# WALKER & EHRMAN MFG. CO.

WASHINGTON AND UNION STS.

CHICAGO

## MOTOR TRICYCLES IN U. S.

### Builder of Motor Carriages Expresses Conviction That Uncovered Tricycles Have Been Found Wanting

In view of the extensive sales which have been made in Europe of motor tricycles and other motor vehicles in the construction of which no attempt is made to shelter the occupant from weather and the driving mechanism from the dirt of the road, the prospects of selling this class of vehicles in United States have been widely discussed of late, and the opinion has seemed to prevail that the comparatively low price at which such vehicles might be sold—from \$500 down to \$250 apiece—would probably open a considerable market for them among that large class of people who are neither rich nor poor and who, having passed the age at which the inclination for athletics is dominating, yet preserve their sympathy with all forms of outdoor exercise in which profuse perspiration is not an indispensable feature.

#### Substitute for High Priced Bicycles.

The motor tricycle especially seems to offer this class at once recreation and utility at a comparatively low cost, and bicycle makers as well as bicycle dealers have evidently in many cases accepted the conclusion that it might be made to fill that void in their sales which the extinction of high-priced bicycles has created. Under these circumstances the dissenting voice of one who has given the subject of tricycles in general much practical attention will be listened to with interest, and the following letter from Charles E. Duryea of Peoria, Ill., expressing the opinion of one who is not only unusually conversant with the past history of tricycles in United States but actively engaged in motor vehicle manufacture, will therefore have its weight in the general deliberation. He writes:

To the Editor.—To your inquiry of February 3, the writer submits his opinions, as follows: The early cycle enthusiasts in this country took up the tricycle as being a safe and satisfactory machine, but found it too heavy for our bad roads, too narrow gauge for our rough roads, too unprotected for our muddy roads, and generally unsatisfactory. This experience does not prove that the motor tricycle will fare likewise, but it is a very strong pointer that way. The motor tricycle abroad has been the lightest machine available, and therefore has had a very large sale. Their roads are much smoother and cleaner, so that the machine is fairly comfortable and practical. Further, they are not so mechanically esthetic as our Americans, and will accept a much clumsier and cruder mechanical device than can be sold here.

#### Cumbersome in Emergencies.

The writer bought one of the popular De Dion motor tricycles some time back and used it in his daily goings for a while. It was generally reliable and was not found objectionable on that score, but it had many faults that rendered it less satisfactory than the ordinary bicycle. It was too heavy to handle up and down stairs or in and out through doors comfortably. It could not be led over bad stretches or up hills without over-exertion. A rough bit of road gave so much sidewise vibration that one needed a spinal column laterally hinged. Following a sprinkling cart for half a block would deluge it with mud so completely that an hour or more was required to clean it. It was not an easy thing to mount or dismount from, and required as much attention to the motor, batteries and other parts as a full-fledged motor carriage. On good roads the motor would do all the work, but on hills it was very likely to shirk and leave the rider to do it all.

Putting these facts in connection with the experience of the tricycle before mentioned, indicates that the motor tricycle has no market in this country. This is borne out by statements of the concern which has been manufacturing and offering for sale such a machine. They say that the Ameri-

can public does not take to this type of carriage. So much from the practical and experimental standpoint.

Theoretically, the tricycle has no future. If three wheels are to be used, the American public will insist upon a light buggy body mounted thereon, and a comfortable carriage appearance. This, too, will be easily supplied, will bring a better price, and will give far better satisfaction. Small, light buggies are therefore quite possible, and, judging from our inquiries, will be quite saleable. We have designs for such a vehicle already prepared and are at work building same now. We expect to market some of these within a very few months and give our theories a trial.

#### As a Pacemaker.

As a pacemaker, the tricycle has a number of objections. It cannot run as close to the curb as the ordinary cycle and, therefore, will not properly shield the rider following. It is not so fast a machine as the two-wheeled and is more likely to upset in turning corners. We believe the pacemaker of this country will be a tandem bicycle equipped with large power motor, having one man to steer and the other to manage the motor and control the speed in accordance with the instructions of the rider being paced. Such a machine would go anywhere that a bicycle could go and can easily be built to have a speed of one mile per minute, or more if desired.

A prominent ex-racing man and mechanical expert has been corresponding with us along this line, and we have advised such a machine for this purpose. We are very busy with our present work, but intend to put something in the line of a motor bicycle on the market before many months. We believe the motor two-wheeler will meet young America's ideas better than any other machine. It will be cheaper, lighter and faster. It will be able to go practically anywhere that the bicycle now goes, and this is very essential in a country where so many bad roads exist, but where a single path can usually be found.

#### Plenty of Exercise With Motors.

The argument that the motor bicycle deprives a rider of needed exercise is all bosh. A motor vehicle of any kind offers plenty of opportunities for excitement, exercise, life, or any other amusement possible with the bicycle. The motor cyclist can assist his motor on the hills or assist it when great speed is required, and if covering a mile a minute over country road does not give him all the exercise desired, he can practice walking back and lugging the machine. But leaving jokes aside, there are a large number of former cycle riders who are not anxious to see how fast they can push a machine with their own muscles, and to them the motor vehicle will appeal strongly. They can assist as much as desired to get proper exercise, and need not take more exercise than they feel inclined to, in order to keep up with the ordinary crowd. Many of them are men who labor for a living physically and do not need exercise. To them the cycle will save time and give recreation with rest.

There is no doubt that this form of vehicle will rapidly crowd its way into the ranks formerly occupied by the high-priced bicycle.

#### No Permit Needed for Motor Buses.

Washington, D. C., Feb. 13.—The attorney for the District has rendered an opinion on the question of permitting motor cars and carriages to use the streets of this city. The attorney held that if the power to be used in propelling the motor vehicles is dangerous in itself, it would be the duty of the commissioners to prohibit their use. If, however, no danger need be feared, they may be used without a special permit.

#### Racing Board for Automobiles.

Speed contests between motor bicycles, tricycles and road quadricycles are becoming so numerous in France and attracting so much interest that the French sporting papers are urging the Automobile Club of France to form a committee

of its members, with functions similar to the racing board of the L. A. W., to officially recognize all records made under certain rules to be laid down. It is proposed to have a certain number of timers to replace the timers of the U. V. F. Automobilmism is making such rapid progress and motor vehicle races are becoming so frequent that a step of this kind is very important, and it is believed that an official racing and records committee will be formed very soon, and it is predicted that before long an international motor vehicle racing league will be organized.

The suggestion of the sporting papers has been favorably received by the Automobile Club, and such a committee, consisting of twelve members has been appointed to have entire charge of motorcycle racing and records. The timers to be selected by the racing commission will be paid according to a schedule fixed by the commission.

#### THIRTY MILES AN HOUR

##### French Petroleum Motor Vehicle Makes Locomotive Speed in 132-Mile Road Contest.

Four motor vehicles started in the Perigard challenge road race run January 26, from Paris to Rouen and back, a total distance of 132½ miles. The four competitors were Girardot, Mors, Charron and Lefeare, and with them also started two others, who, however, were not qualified competitors for the prize. All of the vehicles started out smoothly and rapidly, with the exception of that of Girardot, whose burners had gone out, and thus caused a delay of four minutes. Girardot made up this lost time, however, on the way to Rouen, and was the first to reach the turning point, covering the distance in 2 hours and 18 minutes. His return trip was not delayed and he finished first in 4 hours and 26 minutes for the entire distance, making his average speed nearly thirty miles per hour. The total time lost by Girardot during the race on account of necessary stops was about twenty minutes.

Charron finished second, one-half hour after Girardot. He came in with the tire of the left rear wheel punctured, having ridden several miles on the rim. Mars and Lefeare were compelled to give up early in the race on account of accidents, and the two unqualified starters were also compelled to quit after going but a short distance.

The winner's time is said to be record for the distance. His machine was a Panhard & Levassor petroleum vehicle, weighing 1,600 pounds. It is driven by an 8 horse-power, four-cylinder motor. The same machine finished sixth in the Paris-Amsterdam road race.

#### LEITER PROJECT LOOKS DARK

##### Nothing Done By Compressed Air Truck Companies Since Incorporation—Engineers' Views.

Recent events point to the belief that the Leiter compressed-air power enterprise, which was started two weeks ago, will never materialize. The truth is that the trustees of the bondholders of the Rhode Island locomotive works have little or no faith in the deal. Since the organization of the syndicate nothing has been done, save that the syndicate people have sent several communications to the trustees asking for modifications of the terms of the contract on which the purchase was to be based. The latest of these overtures was flatly and emphatically rejected. Subsequently it was ascertained that some of the trustees considered that the deal was practically off.

The attitude of most engineers toward the proposal of the auto-truck companies to use compressed air for motors

for omnibuses is one of languid interest only, tinged with faint hope but great doubts. It appears to them that the first thing needed by an "auto-truck" corporation would be a successful "auto-truck," and that if such a machine were found it might make a basis for raising capital. The compressed air promoter, however, does not see things with the narrow view of the engineer. He is an expansionist, and not a conservative. He knows that in order to do anything with compressed air one must "raise the wind." The air must be compressed, but the air company's stock must be inflated and floated. There are companies galore and lots of stock to be put on the market. It may be many years before New York is beautified by the removal of the horse and the substitution of the auto-truck, but it will be only a few months, probably, before the people will own the stock of the company.

**Motor Vehicles for Buffalo Parks.**

Buffalo, Feb. 13.—At a recent meeting of the board of park commissioners the matter of granting a franchise for the operation of a line of motor carriages in the park system was favorably considered. The National Transit Company, whose motive power is gasoline, put in a bid for the exclusive right to operate its motor buses. Similar bids were received from others. The board deferred action in order to permit investigation of the merits of the different motor systems.

During the meeting a practicing physician, who is the owner of a motor carriage, gave the board the benefit of his experience. The doctor stated that he had used his carriage a little over a year and that during that time he had traveled 4,972 miles at a total cost of \$70.62. He stated that in his opinion motor vehicles were a success and that the board could not do better than to adopt them.

**INVITE AMERICAN COMPETITION**

**MOTOR FREIGHT VANS WANTED**

**English Association to Arrange Open Contest Between Makers of Motor Trucks in September.**

Ever since 1895 the Self-Propelled Traffic Association of Liverpool, England, has busied its members with the problems of self-propelled freight road wagons and similar vehicles for city freighting. The association considers this branch of automobilism as by far the more important from an economical standpoint and involving more mechanical and engineering difficulties than the application of motor power to light carriages and pleasure vehicles.

The high railway freight rates for short hauls and generally unsatisfactory freight service of the railways in England make it appear very desirable to English business men to establish competition with the railways through a motor freight road wagon system, if possible, and this is especially the case in all of that territory adjacent to Liverpool in which manufacturing establishments depend upon raw material shipped from that city.

It is the opinion of American Consul James Boyle, at Liverpool, that there will be a large and profitable market for American freight vans if our constructors succeed in devising a practicable pattern for this class of vehicles in advance of the English engineers who are engaged in solving the problem.

**Limitations for Construction.**

The development of auto-motor freight wagons has been much retarded in England in the past by the law. Formerly, all motor wagons were classed as "traction engines," which meant that, under

the law, they could only travel on a highway at the rate of two miles an hour, with a man walking in front carrying a red flag; and almost every county and municipal authority had obstructive regulations. In 1896, however, a law was passed under which the tare limit of a single motor wagon for use on the highways is three tons, exclusive of fuel, water, or accumulators. It is allowed to have one "trailer," and in that case the tare limit is four tons. The speed limit is eight miles per hour for a wagon of two tons tare or under, five miles per hour for a wagon of between two and three tons tare, and in the latter case when the wagon has a "trailer," a speed limit of six miles per hour is allowed. The maximum width allowed for a vehicle is 6 feet 6 inches. The minimum width of tires is 2½ inches for wagons of fifteen hundredweight to one ton tare, 3 inches for wagons between one and two tons tare, and 4 inches for wagons above two tons. It should be remembered that an English ton is 2,240 pounds. Other important requirements of the law are that auto-motor freight wagons must be so constructed as to be capable of being moved backwards by mechanical application and must have two independent brakes, and the motor must not emit any visible vapor except from temporary or accidental cause.

It was the Liverpool Self-Propelled Traffic Association under whose auspices the contests between motor freight wagons took place in May, 1898, which were described at length in this paper. The conditions of the contest were severe in regard to the condition and gradients of the roads and the vehicles which took part were all powered by steam.

The awards in this contest were made last summer, but the official report of the judges, who were all expert mechanical engineers, was formally presented only a short time ago. In this report nothing



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mends any single tube tire. Quick and sure cement repair for small punctures, quick and sure plug repair for large ones. Only tool that does the work of two kits at price of one. Write for prices.

**A MOWING MACHINE...**

costs more than a scythe—but it cuts more hay.

A fine tire costs more than a cheap—but it rides faster and farther. What made the solid tire give way to the cushion—the cushion to the pneumatic? For precisely the same reason the slow pneumatic is bound to give way to the fast.

Nobody wants slow tires; nobody buys them knowingly. And it isn't good, sound business to let people do it unknowingly. If you don't tell them, somebody else will, and they get the impression that they've been cheated.

League Tires need no explanation. Nothing goes into them but the finest rubber and fabric; nothing comes out but speed and staying qualities. "Get there and get back" tires look well in the store, ride well out of the store and, present or absent, are working steadily in somebody's interest—yours, if you handle them.

- New York..... 25 Park Place.
- Boston..... 24 Summer Street.
- Philadelphia..... 308 Chestnut Street.
- St. Louis..... 210 No. 12th Street.
- San Francisco..... 509-511 Market Street.

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**NEW YORK BELTING & PACKING CO. LTD**

Mention The Cycle Age

is said in regard to the motor power, but it has been learned that it is the opinion of the judges—and this opinion is shared generally in England—that, as at present developed, internal combustion, oil, and electric motors are of little practical value for heavy hauling, and that steam, at least for the present, is the only power capable of meeting the requirements.

#### Judges Favor Steam.

Among the conclusions presented by the judges, those of greatest importance to American constructors are probably the following:

The form of wheels and tires adopted by all the manufacturers, though probably perfectly efficient as carriers, were all structurally more or less inefficient as drivers.

None of the vehicles were able to maneuver into and out of an embayment as effectively and rapidly as may be expected when time and experience have effected improvements in design, but they were capable of going anywhere that horse-drawn vehicles are ordinarily required to go.

The general control—stopping, starting, and steering—of the vehicles, when working on the road and amongst traffic was at least as good as with the best types of horse-drawn vehicles.

The hill-climbing powers of the vehicles were much superior to those of horse-drawn vehicles, when commercial efficiency is considered.

At least two speed gears, or an equivalent reserve of power, are essential to successful working on common roads with steep or even with average gradients.

Generally, too much attention was required by the various operations of regulating and driving the vehicles, and, in order that self-propelled vehicles may command a wider adoption than can yet be confidently recommended, there must be an extended use of automatic arrangements analogous to those in other fields of mechanical science. When such improvements are made, they will have a great effect in placing motor vehicles upon a more practical basis for traffic in cities, by enabling comparatively unskilled attendants to undertake their management.

The imperfections of common roads are the principal causes of the heavy maintenance and depreciation charges, and of the element of uncertainty which at present attaches to any service of motor vehicles. On good macadam roads, with moderate gradients, the vehicles to which prizes were awarded would do good service with the respective loads carried during the trials, but none of them could be relied upon for a regular service on roads such as those of the routes selected for the competition.

#### Good Carriers—Bad Drivers.

It is asserted that since the trials the shortcomings arising from poorly constructed wheels—which were from all sides admitted to be the most serious and those that caused most breakdowns—have been remedied by English constructors of freight vans, and that no troubles from this cause are to be expected at the next series of travels, which will be held some time during this year, probably in September. This new contest will be managed by the same association, and it has been officially ascertained that American competition for this contest will be welcomed.

The secretary of the association, through whom the rules of the competition may be obtained, is E. Shrapnell Smith, Royal Institution, Colquitt street, Liverpool.

Indianapolis, which controls between 65 and 70 per cent. of the bicycle chain output of the United States, made more than 650,000 chains last year, many of which went to Europe. The present production is 60 per cent. larger than at this time last year.

A large number of German cycle makers are now turning their attention to the manufacture of motor tricycles and light motor cars, also sets of parts and fittings for same.

Motor cars in France are to be registered by the war department in order to be available for use in time of war.

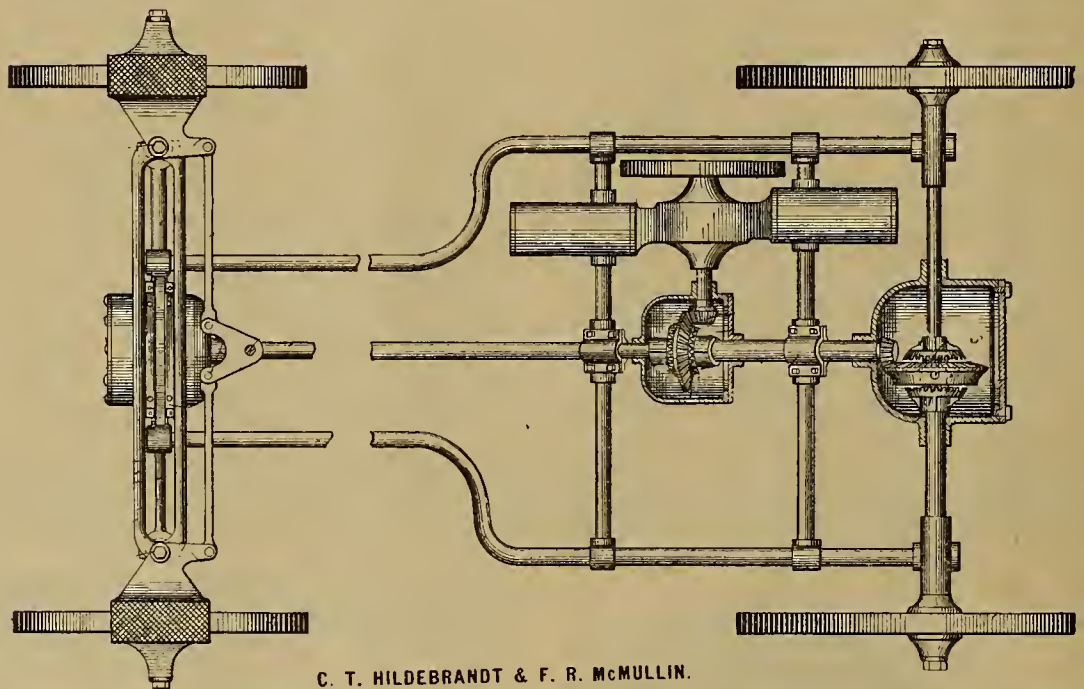
## U. S. MOTOR VEHICLE PATENTS

### TWO HARD PROBLEMS TACKLED

#### Wagon Body Yieldingly Supported By Chains—Lengthwise Shaft Driving All Four Wheels.

C. T. Hildebrandt and F. R. McMullin, of Chicago; patent No. 613,272. November 1, 1898. Motor-driven vehicle.

The object has been to devise a construction which will permit either or both the front and rear axles to be connected with the driving motor while yet allowing perfect steering as well as oscillation of the stub axles of the front wheels in a vertical plane. To attain this object the driving motor is supported on the running gear and bevel gear pinions are employed to transmit power to and from a shaft that extends lengthwise under the vehicle. The front wheels are mounted upon stub axles, so supported that both wheels may be turned simultaneously by a steering mechanism while the inner ends of the stub axles are connected by universal joints to the outer ends of the



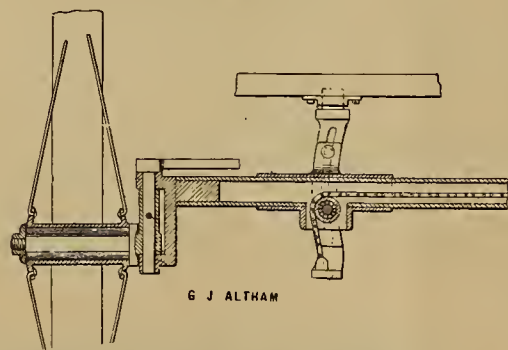
C. T. HILDEBRANDT & F. R. McMULLIN.

main front axle. Power may thus be transmitted to the front wheels to cause them to rotate even while the steering mechanism is being operated. The customary compensating gears are employed. Either electric or gas engine power may be employed with this construction, say the inventors.

#### Designed to Make Riding Easy.

George J. Altham, Swansea, Mass.; patent No. 614,781. November 22, 1898. Running gear.

The object of the invention is to provide an arrangement whereby the body of



G J ALTHAM

the vehicle may be supported flexibly and the axle may have a yielding movement in a plane transverse to the wagon body.

The illustration represents a vertical section of the front wheel axle, only one-half being shown. The axle is tubular

and the two brackets supporting the wagon body are hung upon the ends of a flexible chain which passes through the axle, as shown, and over roller studs fixed in it. Obviously swaying of the wagon body will cause the chain to move over the rollers. When this arrangement is applied to the rear wheel axle, the vertical pivoting of the wheels which is shown in the illustration and which serves for steering purposes, is omitted, but nothing is indicated by the inventor to show how his device may be made compatible with a positive and rigid driving gear connection between the motive power in the wagon body and the drive wheel axle. The invention can therefore only be intended for electric wagons and in no way solves the problem of producing easy, joltless riding in steam or gas engine driven vehicles.

### GASOLINE AS A POWER SOURCE

As Fuel it is Odorless While in Explosive Mixture Its Combustion is Imperfect.

Whether gasoline for motor vehicle propulsion is more advantageously used as a fuel for generating steam or on the

principle of the explosion gas engine, is one of the questions to which the recent successful steam engine vehicles of New England have imparted renewed interest for prospective purchasers of motor vehicles.

In the broad view the advantages of using the gasoline as fuel are most conspicuous.

The combustion of the fuel is continuous with steam, and one great trouble with the explosion engine is that the fire must be lighted and extinguished many times each minute the engine is in action.

With continuous combustion the gasoline can be so perfectly burned as to leave no odor whatever behind it. A pair of double acting steam engines gives a practically uniform propelling effect, and the steam engines and boiler weigh no more than the explosion engine and its fly-wheel. In the Whitney steam vehicle the boiler, empty, weighs 85 pounds, and the engines weigh 19 pounds.

The steam engine reverses perfectly, while the explosion engine does not reverse at all. With steam, almost all of the difficulties in propelling wagons with gasoline disappear, and the steam wagons leave no odor behind, and show no more waste steam than do the water-jacketed explosion engines. The steam wagons, however, use much more water than the explosion engines of equal power, which is a demerit.



A good ladies' bicycle is an important feature in any dealer's line.

A bicycle which is attractive to that most critical buyer is a winner.

There are many of them who want the best they can buy, but the lines, finish and general appearance must be perfect. The seat and handle bar must be just the right distance apart. The machine must be easy to mount, the pedal must be dainty and without projections to catch the dress and above all the finish must be superb.

We have considered all these points and in the Model 26 National, you will find

**THE Lady's Wheel of the Year.**

Get our Catalog . . . . .

**National Cycle Mfg. Co.**

Bay City, Mich.

Have you ever thought how few bad accounts you make on Lady's Wheels?

# Plain Talks on **ANDRAE** Cycles

VIII—Light Roadster for Men, \$50.

This is the most handsome bicycle built.

Its taking points have been turned into selling points.

There's more money in selling than there is in talking. We needn't argue that with agents.

The Andrae improved pattern frame, Andrae rigidity, quality, bearings sell the bicycle without talk.

The Andrae hub, with sprocket-like flange for direct spokes is another selling point.

This light roadster is to be shown to the "elite" of your city. There is no reason why a man should not buy an Andrae after he sees it.

There are 14 models in the Andrae line. Every one a seller on sight. Write for trade prices and our monthly paper, "The Andrae Agent."

**Julius Andrae & Sons Co.**

MILWAUKEE, WIS.

Mention The Cycle Age

# THE Waverley



FOR

1899

is a beautiful piece of skillful workmanship beautiful in design, beautiful in finish and every detail, and beautiful in the sterling quality that gives endless satisfaction.

We have tested and proved it until we know its worth.

And we have placed a price upon it that should be within the reach of everybody—

THE FINEST BICYCLE  
EVER BUILT **\$40**

For those who must have a lower priced bicycle, yet want a good one:

THE IVANHOE SPECIAL, - \$35  
IVANHOE BICYCLES, \$25 and \$26

## ELECTRIC MOTOR VEHICLES

The lightest, simplest, handsomest and most efficient Motor Carriages yet placed before the public. Entirely beyond the experimental stage. We can now fill orders for some styles at short notice. Good Waverley Agents get the preference.

**INDIANA BICYCLE CO.**

INDIANAPOLIS, IND.

# THE PASTIME AND SPORT

## PIERCE LEADS COAST GRINDERS

San Francisco Six-Day Race Began Monday—New Records Made—The Preliminary Events.

San Francisco, Feb. 13.—The international six-day race under the auspices of the American Cycle Racing Association started to-night at 10:35 at Mechanics' pavilion. There were eighteen starters, all of whom were in excellent condition after the month of training on the roads of Golden Gate park and between this city and surrounding towns.

The track is eight laps to the mile and banked eight feet in sixteen. It is said by Miller, Waller, Michael, Elkes, Bald and other champions to be the fastest ever built indoors, and the only fault found with it by the six-day men is that it is rather steep for the finishing hours of the long grind.

The contest is to continue for the full 144 hours instead of 142, and it is the opinion among the men that 2,250 miles will be ridden during the week by the leaders. Several of the riders expect to remain on their machines continuously during the first twenty-four hours, or until they gain the lead. The battle therefore promises to be hard fought.

Following is a full list of starters: Charles W. Miller, Frank Waller, W. B. Pierce, Frank Alberts, Louis Gimm, John Lawson, J. W. Nawn, Oscar Aaronson, Teddy Hale, Ed Stevens, Oscar Julius, Fredericks, Charles Turville, C. W. Ashinger, John Chapman, Tom Barnaby, Henry Pilkington and George Hannant.

### Stevens Defeats Eaton.

The event of the evening in the preliminary sprint races was a one-mile match race between Orlando Stevens and Jay Eaton, paced for six laps by Fournier on his motorcycle. Stevens won the first heat in 2:04 1-5, and the second heat and the match in 1:59 3-5.

The first semi-final of the professional tandem pursuit race resulted in the making of a new indoor record, Cotter and Downing defeating Lawson and Julius in 1:59 4-5. The final resulted in a victory for Cotter and Downing over Stevens and Goodman in 1:59 4-5. Summaries:

Half-mile handicap—Lawson, 30 yards, first; Cotter, 55 yards, second; Chapman, 20 yards, third. Time, :59.

Half-mile unpaced, exhibition, by Charles W. Miller. Time, :59 2-5, indoor record.

One-mile, exhibition, paced—Harry Gibson. Time, 1:58 3-5.

Half-mile, exhibition, paced—Eddie Bald. Time, 1:00 3-5.

Two-mile exhibition, paced—Harry Elkes. Time, 4:01 2-5.

One-mile motorcycle exhibition—Fournier. Time, 1:58 4-5.

One-mile exhibition, paced—Jimmy Michael. Time, 1:57 1-5.

Racing began in the pavilion last Saturday night. A mile professional tandem handicap was won from scratch by McFarland and Stevens in the record time of 1:59 from scratch, passing the limit men twenty feet from the tape. Harry Elkes, paced by two tandems, rode an exhibition mile in 1:54, breaking all previous indoor records.

### Pierce and Ashinger Leading.

San Francisco, Feb. 14.—Waller and Chapman have been forced to quit the six-day race because of trouble with their eyes. Physicians told Waller that if he continued it might result in permanent blindness. He stopped, sadly dispirited, after riding 334 miles without dismounting. Turville has suffered with cramps since the start and had to quit at noon today after going 263 miles.

From the field of a dozen in the contest who had not dismounted up to the noon hour today there was a slow cutting down one by one until at the nineteenth hour Pierce and Ashinger came out alone into the true contest of endurance, both prepared to fight it out to a bitter finish.

Stevens had a fall and lost ten miles as a consequence of locking handlebars with another contestant, but is now one of the freshest men in the race. Gimm did not dismount until 4:59 this morning and is feeling well and confident.

The score at the end of the twenty-second hour was:

	M.	L.
Pierce . . . . .	428	..
Ashinger . . . . .	427	4
Miller . . . . .	425	1
Gimm . . . . .	423	4
Lawson . . . . .	423	2
Hale . . . . .	419	2
Barnaby . . . . .	419	..
Nawn . . . . .	418	1
Aaronson . . . . .	416	3
Stevens . . . . .	415	3
Albert . . . . .	413	3
Fredericks . . . . .	412	1
Julius . . . . .	406	..
Pilkington . . . . .	379	1
Hannant . . . . .	372	6

The previous world's indoor record for twenty-two hours is 419 miles 4.76 feet, made by Pierce in New York last December. Ashinger is the only rider who has not dismounted up to date.

### Appeal to the Cyclists' Syndicate.

At the meeting of the Cyclists' Syndicate of Northern France, held January 26 in Paris, a letter from the French riders who were disqualified by the L. A. W. and fined by the U. V. F. for participating in the last six-day race in New York city was read. The riders wanted to know what would be their reception if they returned to race in France, and if they could ride under the protection of the Cyclists' Syndicate. Edouard Taylor asked the syndicate to use its influence to get the fine of \$200 imposed upon him by the L. A. W. lifted. The members present at the meeting made no definite statements as to the course which would be pursued by the French riders' syndicate, being willing to let matters rest until the riding season opens. Sympathy was expressed for the outlaw riders in America.

### Circuit During World's Meet Time.

The committee in charge of the National Meet in Boston is conferring with the World's Meet committee at Montreal with view to arranging a circuit of several weeks' duration and embracing such eastern cycling centers as Boston, Providence, Springfield and Montreal. The meets during the circuit as proposed are to be held at times which will make it convenient for riders coming over from Europe to attend the international meet to stay and compete in the circuit races. In this way it is thought a larger number of foreign riders can be induced to come to the I. C. A. meet.

### Brady Plans Co-operative Team.

W. A. Brady is planning to form a racing team of fifteen or twenty riders whom he will retain for the season and guarantee each a certain amount for the season's work and expenses, with a share in the winnings, which may or may not amount to more than the guarantee. The team would follow the large circuits and be entered in all open events and in case of a dearth of meets Brady would run races of his own which would be open, riders not members of his team being invited to compete.

## L. A. W. NATIONAL ASSEMBLY

Delegates at Providence Elect Keenan President and Decide to Continue Control of Racing.

T. J. Keenan of Pittsburg elected president. H. W. Foltz of Indianapolis, first vice-president.

R. W. Kingsbury of Keene, N. H., second vice-president.

J. W. Tattersall of New Jersey, treasurer.

Jacksonville, Fla., selected for next National Assembly.

Control of racing retained by the League.

Professionals denied admission to membership.

Professionals allowed one representative in the assembly.

All amateurs required to register in the L. A. W.

Providence, Feb. 13.—The above summary shows the most important acts of the state division delegates of the L. A. W. assembled here in national convention last week, and the very liberal concessions made to the dissatisfied professional racing interests to appease their discontent and effect a compromise which shall bring the "outlaws" once again willingly under jurisdiction of the League. These concessions amount in toto to granting the racing men representation to the extent of one delegate to the National Assembly, whose feeble voice cannot be heard for at least another year.

### Will Not Conciliate Racing Men.

The white-haired fathers of the League again showed their disapproval of the professional racing men by denying them admittance to membership, but they are sufficiently interested in the sport to want to control all the racing in the country. That they have adopted a course conducive to that end will be doubted by most persons at all interested, as it will appear that the granting of one absolutely powerless representative to the annual convention is more in the nature of a direct affront than an earnest desire to treat with the racing contingent honestly.

### Road Improvement Discussed.

The assembly opened on Wednesday with 100 delegates and members present, and as many more scattered snowbound over the railroads of New England. The convention having been called to order by President I. B. Potter, the day was devoted to the discussion of the improvement of the highways of the country, with G. W. Parsons, of the national good roads committee, presiding. President Potter spoke of the benefits of cycle paths. E. G. Harrison reviewed the work the Department of Agriculture is doing for the cause. F. O. Stanley gave an address on the motor vehicle and its relation to good roads.

### Welcome By Governor and Mayor.

At the afternoon session a hearty welcome was extended to the delegates by Governor Dyer of Rhode Island and Mayor Baker of Providence. Dr. Mendenhall spoke on road building, contending that the improvement of roads generally was first agitated by the wheelmen, and citing Massachusetts as a pioneer state in wagon road improvement whose good road laws are a model for other states. Sterling Elliott spoke briefly. Conway Sams discussed the co-operative agitation between wheelmen and horsemen, who have drawn closer together during the past few years. The afternoon closed

# Mr. Dealer

Hundreds may apply for that vacancy in your store, but with **Intelligent Discrimination** you select the man whom, after careful investigation, you ascertain to possess those **Sterling Qualities** which will make him a **Valuable Adjunct to Your Business**. As Dealers, alive to the importance of securing the most **Intelligent Line of Cycles** built to-day, we ask that you cheerfully **Inspect Our Product** and **Investigate Our Record**, which represents the most remarkable stride into popular favor ever known. **Why?** Apply for our agency. The **ORIENT** on your floor will open up **Possibilities for Business** beyond your most sanguine hopes. Send for our catalogue. Write for territory. Our agents are already beginning to **Reap the Results** of our past work, and they easily **Hold Their Own**.

Write us at once.

“They all  
ride the  
**ORIENT.**”

## Waltham Mfg. Co.

315 Crescent Park,

Waltham, Mass.

# Have You Discovered Our Double Paper

## Kind of **Transfer Decorations?**

### Oh, Dealers!

If you have not, you are a step behind many competitors. You want your own “name plate” on your own Special. You want it on everything that leaves your store if possible. Our Double Paper Transfers make it possible.

### Oh, Enamellers!

If you have not, you are a step behind many competitors. They are business-makers. They are price-improvers. They are time-savers. Nothing in Decalcomania work compares with them.

### Oh, Jobbers!

If you have not, you are a step behind many competitors who catalogue them and illustrate them. Electros and samples free.

## The Meyercord Co., Inc.

American Manufacturers, Guaranteed Decalcomania Transfers,

NEW YORK OFFICE:  
805 St. James Bldg.

Main Office: Chamber of Commerce Bldg., Chicago.

ST. LOUIS OFFICE:  
621 Holland Bldg.

with a short talk on the roads of Europe and America, illustrated by lantern slides.

#### Election of Officers.

Thursday was devoted to the election of officers, the discussion of racing matters, and the presentation of officers' reports. W. J. Van Valkenburg of Milwaukee nominated Keenan for president, and was seconded by Chief Consuls Boyle of Pennsylvania, Kireker of New Jersey and Elliott of Massachusetts. Keenan was then elected unanimously and made a short speech thanking the delegates for the honor.

Herbert W. Foltz was nominated for first vice-president by Conway Sams of Baltimore, and seconded by Sterling Elliott. The secretary was directed to cast the vote of the assembly for Foltz.

Robert T. Kingsbury was nominated for second vice-president by President Potter, and instead of opposing the nomination as was expected both Chief Consuls Cooke of Rhode Island and Locke of Illinois seconded the nomination and a unanimous vote was cast. James W. Tattersall of New Jersey was unanimously re-elected treasurer.

#### Auditor Criticizes Racing Board Statement.

George G. Greenburg criticised the laxity of the racing board in failing to attach vouchers to its report showing how the receipts from registration and sanction fees have been expended, and presented an amendment proposing an auditing committee. This was adopted, and the following committee elected: Howard L. Perkins of Portland, Thomas M. Skiles of Maryland and Clarence W. Small of Portland, Me.

Invitations were extended to the assembly to hold its next meeting in Detroit, Jacksonville and Philadelphia. After a warm discussion with the new president in the chair, it was decided by a proxy vote that the convention be held in the city of the balmy winters.

#### Ex-President Potter's Report.

President Potter reported that the work of the year was carried on under trying difficulties. The outbreak of the war took many members and some prominent officers of the League to the scene of conflict. There had been some gains, but they had been small and not at all commensurate with the great amount of work done.

The report of Treasurer Tattersall showed a balance on hand January 1, 1899, of \$7,326.84; receipts since then, \$917.33; total, \$8,244.17; total expenditures, \$4,155.53; balance, \$4,088.64.

Secretary Abbott Bassett's report stated that there were enrolled last year 77,091 members, including applicants and renewals, surpassing the records of all previous years saving that of 1897.

#### Control of Racing Retained.

The executive committee on the abandonment of racing reported that after examination into the circumstances of the case the committee unanimously decided there is no other body in this country which is capable of governing racing, and that the transfer is not feasible at this time. The report was accepted on motion of Mr. Peleouze of Kentucky. The year vote was large and the nay vote was light.

At 5:30 the assembly started to consider Sterling Elliott's amendment to abandon the control of racing. The subject was contested for half an hour and then allowed to go over to Friday.

At the morning session the following day Elliott spoke in support of the amendment, and, the opposition having waived the right to speak at that time, he was followed by Judge Sims of New York, Conway Sams, G. F. Kireker and A. W. Robinson advocating the dropping of racing control. Elliott then closed the

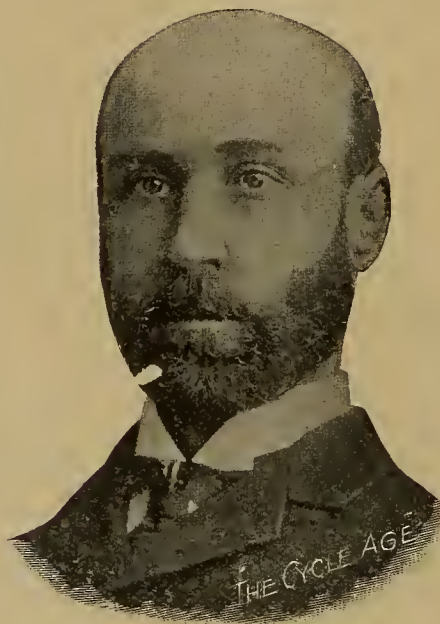
debate for the anti-racing side and a vote was taken. Before the roll call was more than half over the necessary one-third needed to defeat the amendment had been cast and the final result showed that it had been lost by 69 to 161.

#### Professionals Allowed Representation.

Conway Sams then offered an amendment permitting professional racing men one representative in the National Assembly, which was adopted without division.

An amendment by Walter Sherwood of Indiana to strike out the word "amateur" from the constitution then came up for action and was defeated, the vote being 144 to 105 against, but the necessary two-thirds being lacking.

There was a long debate on the question of allowing former presidents, vice-presidents, chief consuls and secretary-treasurers who have served more than three years in divisions having a membership of 1,000 or more a seat in the National Assembly. Mr. Seward of Massachusetts made a speech in opposition to



T. J. KEENAN,  
PRESIDENT OF THE LEAGUE OF AMERICAN WHEELMEN.

the amendment, claiming that it would give "dead" men a representation and reduce the "live" ones to a minority.

The afternoon began with President Keenan's announcement that Boston had been selected for the League meet of 1899.

A resolution was adopted urging our government to secure a speedy settlement in the matter of indemnity from the Turkish government for the death of Frank Lenz.

#### Racing Men Reinstated.

Chairman Mott submitted a list of suspended racing men recommended for reinstatement, and when the report of the racing board was adopted later these suspensions were raised.

A strong appeal for the reinstatement of Earl W. Peabody, who was thrown into the professional class last year for riding a loaned bicycle, was opposed by two members of the racing board. A resolution recommending that the board reinstate him as an amateur was adopted, but as it lacked 11 votes of being unanimous the ex-amateur champion cannot be whitewashed for another year.

Conway Sams offered an amendment compelling all amateur racing men to register hereafter the same as professionals. If they are members of the League only 50 cents will be required; otherwise they must pay \$2 annually. Passed.

Kireker's amendment giving L. A. W. consulates and local organizations as well as League clubs representation on the state division board was adopted.

On a motion by Van Valkenburg the

assembly voted to re-enroll all those who, having been in the army and navy, had allowed their names to drop from the League. They will also continue to be members while in the service.

The president was empowered to appoint a press committee and establish a touring department.

The assembly adjourned at 4 o'clock.

#### Chairman Mott's Report.

Excerpts from the annual report of Albert Mott, chairman of the racing board, follow:

There are 621 professionals registered and the records show over 20,000 wheelmen engaged in racing either as professionals or amateurs. With the exception of a few of the larger cities, bicycle racing has been a financial success for both promoters and racing men. This is due to the fact that in the smaller places the expenses are much lighter and the attendance nearly as great on the average as in the principal cities. Especially is this true when some local amateur celebrities participate in the contests.

The classification of the racing men as professionals and amateurs still gives rise to the same conflict as has existed since the amateur definition was first incorporated in the constitution. Many amateurs, after they have been transferred to the professional class, have frankly admitted that they preferred to be amateurs simply because they could command a larger revenue in the amateur class than they could in the professional.

There are nearly 5,000 professionals upon the records, but only 621 participated in racing last year. There was a large falling off in the number of race meets in the west and there was no occupation for the thousands. Of the 621 registered professionals, ninety-eight are under suspension for participating in unsanctioned races.

#### Hits at the Seceders.

In the spring of 1898 a rather disorganized organization was formed by racing men, adventurers, speculators and one track association, and one of their leading men visited the office of the chairman and informed him that it was intended he (the chairman) should be at the head of the new government. The time before the opening of the racing season proving too short to attempt to carry their plans into effect, and owing to not meeting with the expected encouragement from track owners, they decided to postpone positive and definite action until the autumn of 1898, in the meantime keeping up the work for their cause.

The last National Assembly had forbidden the issuing of sanctions for six-day races, and the various promoters who annually give those exhibitors also promoted many other meets where sprint and middle distance races were held. The best material was required for these exhibitions, and accordingly the men who desired to form another organization received the aid and encouragement of those promoters in the autumn of 1898. While there was some temporary local success of the enterprise during the indoor season, it now has a precarious existence, and owing to well-known conditions can be but short lived.

#### National Circuit of 1898.

The National Circuit of 1898 was one in fact, where the professional national championships were run and where commensurate prizes were required. Before forming the National Circuit it was the universal understanding with racing men and promoters—even so much as in effect to amount to a contract—that if promoters assumed additional expenses of larger prizes, the racing men would follow the circuit. The racing men were held to their part of the contracts by the refusal of the board to grant special permits to other promoters to exceed the prize limit where it would conflict with the National Circuit meet. In every case where a National Circuit meet was given the promoters faithfully performed their contracts and promptly paid their prizes to the men winning them. The men made few attempts to get bonuses or appearance money before entering these races, and only once were they tempted to violate their implied contracts, and this was promptly checked.

For the first time in the history of the L. A. W. the members of the racing board have received a small remuneration for laborious and anxious work. In accordance with my agreement with the last National Assembly, when offering the registration amendment, to pay each member a sum not to exceed \$1,000, the funds of the board have permitted the transmission to each one of \$500. The sum received from registrations was \$1,242, but more than a like sum was added to the fund for this purpose by the practice of strict economy.

The financial statement shows that the total receipts were \$9,046.42. The expenditures were \$3,883.69, and this leaves a balance of \$162.73.





# \$10 FOR A TITLE==

and Advertisers in its Efforts on their Behalf. \$10 will be Paid to the Subscriber who suggests the best Title for the purpose within 6 Days from the Date of this Issue.

This Space will be Used Occasionally by the CYCLE AGE to Advance its Own Business and to Interest Subscribers

the Subscriber who suggests the best Title for the purpose within 6 Days from the Date of this Issue.

VOL. XXII. No. 16.

THE CYCLE AGE OFFICE.

FEBRUARY 16, 1899.

## What Advertising Should Cost.

NEWSPAPERDOM, an authority of newspaper work furnishes the following:

"Here are the lowest rates, per 100 circulation per week, at which a country paper ought to accept electrotyped advertisements:—

600 circulation.....	6c. an inch
800 " .....	8c. "
1,000 " .....	10c. "

Ten cents an inch per 1,000 copies figures thus:

Cycle Age columns.....	11 inches
Rate per column, per 1,000.....	\$1.10
Rate per page, per 1,000 .....	3.30

At that price, CYCLE AGE need print less than 12,000 copies weekly to equal the lowest country newspaper scale—the scale adopted by the cheapest form of general medium.

### AN ADVERTISING AGENCY

will tell you that space in trade journals of the better class—such as the CYCLE AGE—is worth one cent per agate line per 1,000 copies, or 14 cents per inch.

Hence we obtain the following result:

Cycle Age columns.....	11 inches
Rate per column, per 1,000 copies.....	\$1.54
Rate per page, per 1,000 copies.....	4.62

On an advertising agency basis, therefore, the CYCLE AGE should print less than 8,500 copies.

As a matter of fact, the CYCLE AGE provides about twice the service which newspaper experts and advertising agencies say is fair.

## Plain Talks to Agents.

### The Man Who Buys

A dollar hat receives a dollar's worth —and no more.

### The Man Who Buys

A five-dollar hat of an honest hatter receives five dollars' worth.

### Something for Nothing

Cannot be obtained honestly or in the regular course of business.

### The Same Argument

Applies to newspapers. When you buy a fifty-cent journal

### You Get Good Measure

But the quality is poor because you obtain it at some other person's expense. When you buy a two-dollar newspaper you get quality as well, because

### You Pay Your Share

Of the cost of its production.

### Here Is the Proof:

The 50 cent newspaper lives on its advertisers.

It is published entirely at their expense.

It presents what THEY desire and that only.

It thereby misleads its readers.

The \$2 paper is supported to a great extent by its subscribers.

They contribute largely to its support.

It presents a great part of what its advertisers desire.

But it distinguishes between good and bad—Honesty and dishonesty—

Good goods and shoddy goods.

It doesn't guarantee everything an advertiser offers.

It is honest with its subscribers.

The CYCLE AGE is a \$2 paper.

If it printed twaddle in the shape of reading matter, designed to please advertisers but to FOOL you, your \$2 a year would cease.

It doesn't. That's why

The CYCLE AGE has the largest list of paying readers ever known in cycle trade journalism.

## Announcements.

The CYCLE AGE will shortly publish an up-to-date Repair Book. Price, \$1. Order now. The CYCLE AGE is prepared to address your circular matter to any or all of the 38,000

.....

● **CYCLE AGE, First.**

● **All Others } Distanced.**

● **Combined. }**

.....

In a letter relative to an experimental advertisement, Mr. Matthew Strauss, jobber and selling agent, of Buffalo, says:

The advertisement was more of a test of the different wheel papers than anything else. We received MORE INQUIRIES through YOUR PAPER than from ALL THE REST PUT TOGETHER, and are satisfied that either your circulation must be larger, or that your paper is read more than the others.

● **More Inquiries**

● **from CYCLE AGE**

● **than All Other**

● **Papers Combined.**

.....

agents in the United States and Canada, and to 19,325 abroad. Send for analysis of the list and select the districts you desire to cover.

## Driving It Home.

Every blow of the pile-driver on a spile sends it into the ground a little way. The last blow sends it no further than the first, but it is the last blow, and it drives it home. It could not drive it home without all the blows that went before. Every advertisement helps which appears in the columns with previous advertisements before it. The longer your advertisement has been running, the harder it hits each time. The first time it appears in the newspapers, it does not do as much good as the second time; the second time is not so effective as the third time.—Princess Anne (Md.) Journal.

## \$25 FOR A KICK==

The CYCLE AGE will pay its Subscribers to Tell how it can best Please them.

The best Answer to the following Question received at the CYCLE AGE Office before March 1st is worth \$25 to the Subscriber who sends it:

Suppose you were the Editor of the CYCLE AGE, what changes, if any, would you make and why.

- Would you { Enlarge any Department?  
Decrease any Department?  
Omit anything it now Prints?  
Add anything?
- Do you like { The Illustrations?  
The "Information for Buyers?"  
The Motor-Car matter?
- Do you read { The Sport Department?  
The facts about America's Increasing Foreign Trade?  
For Amusement or Information?

Don't try to tickle our vanity by saying the CYCLE AGE is so good that it cannot be improved. If that were so every agent would be a subscriber. There are still a few who are not. We want them all.

Applicants for the 25 need not consult a dictionary for choice of words. Write as you feel—you'll hurt no one's feelings.

**IN TEN DAYS**

**Modern**

**Cycle Repairs**

will be ready for mailing.

**New Methods**

**New Drawings**

**ONE DOLLAR**

**THE CYCLE AGE**

**CHICAGO.**

Send your order NOW. First come, first served.

## SAILING ON SKATES

### Difficult Sport to Master Which Has Many Devotees in Germany and Scandinavia

There is one connection between outdoor winter sport and cycle trade which is seldom fully appreciated. Outdoor sports are ordinarily competitors of cycling. The more polo, golf, baseball, football, etc., are encouraged the greater is the danger that persons won over to those games may think less of cycling as a pastime, but in the case of skating and skate sailing and other exercises which are strictly confined to the season when

One of the most difficult of all sports to master is skate-sailing. It is not practised extensively anywhere, but has ardent devotees in Germany and the Scandinavian countries, where it is considered more exciting and therefore more attractive for real sportsmen than iceboat sailing. It has the advantage over iceboating that the equipment is simpler and cheaper and that it keeps the sailor in constant bodily activity. Maneuver-

trations, all of which have been used, probably only the two last ones would be acknowledged in this country as at all acceptable and those two forms have indeed also in Europe driven the three earlier styles almost entirely out of use.

At the regattas for skate-sailors which have been held on the "Havelseen" near Berlin, Germany, the triangular sail shown in Fig. 4 was generally preferred. Scandinavians on the other hand claim superior ease for maneuvering close to the wind with that of Fig. 5. In both cases the weight of the rig is supported on the sailor's shoulder by means of the gaff or cross yard.

#### Should Learn With Small Sails.

According to general experience the sail area should not exceed four square yards for the strongest and most skillful skater.

For beginners a much smaller area is



cycling is perforce dormant, the effect is reversed. They serve the purpose of keeping the desire for athletic diversions alive and tend to prevent the growth of those more effeminate winter habits which are likely to get the best of men after the age of twenty-five and cause their early withdrawal from all outdoor exercises. When catered to by the cycle dealer the winter sports also bring the class of people to his store during the otherwise dull season, who constitute his best patrons for bicycle business.

ing when once learned is also much quicker than with the long and cumbersome runner-supported frame which is termed an ice-yacht. The skating sail may be furled when the wind stills off and the skater may continue his pastime while with a boat under similar circumstances he is confronted with the task of towing the boat home—a labor which is so irksome as to discourage the most enthusiastic.

Of the five different forms of skating-sails shown in the accompanying illus-

sufficient with a brisk wind, to cause much trouble in keeping clear of the shore, open water or fellow athletes, but as soon as body and limbs have become accustomed to bracing each other mutually and the whole equipment against the fitful force of the atmosphere, and self reliance to lean against the wind and bend the body into the required positions has been gained, accurate and easy steering becomes an apparently easy art.

Long and flat skate runners are best adapted for the sport.



ALCAZAR CHAINLESS. PRICE \$75.00

THE ALCAZAR is built with 28-inch and 30-inch wheels. ❁❁

THE NEW CASTLE has diamond front forks and diamond rear stays.

THE ATLAS is a stout roadster. ❁

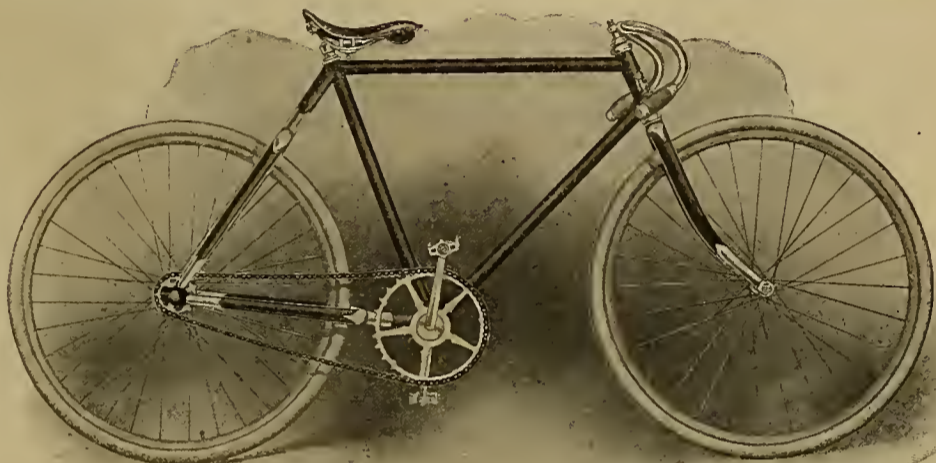
We build Ladies' wheels in each model shown. ❁❁❁

# To Prove ❁❁

that we have one of the finest, best and most complete lines of wheels in the market

## We Here Show

you a few cuts of our different models. ❁❁❁❁



ALCAZAR RACER. 28-Inch Wheels. PRICE \$55.00

The cuts shown here are exact pictures taken from photographs of Alcazar, New Castle and Atlas wheels and represent the real appearance of these wheels.

But no picture can give an adequate idea of the faultless material, perfect workmanship and matchless running qualities they possess.



GENTS' NEW CASTLE. PRICE \$40.00

THE  
**Speeder Cycle**  
**Co.** New Castle, Ind.

GOOD AGENTS WANTED  
IN UNOCCUPIED  
TERRITORY

SEND FOR CATALOGUE

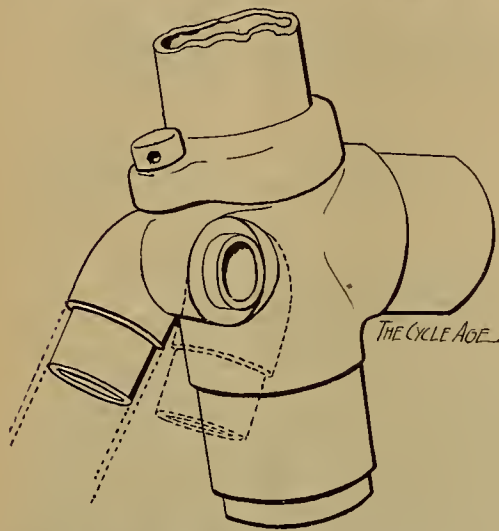


GENTS' ATLAS. PRICE \$35.00

# INFORMATION FOR BUYERS

## "ALL-RIGHT" ADJUSTABLE SEAT CLUSTER.

The Maxim Mfg. Co., 258 Lake street, Milwaukee, Wis., maker of bicycle frame sets and fittings, calls especial attention of cycle builders to its "All Right" seat post cluster, which is shown in the accompanying illustration. The stay-tips on the cluster may be turned in their relation to the lug so that any angle required in building the frame may be secured, thus making the lug a universal fitting for high or low frames. Another feature of the cluster is the seat post



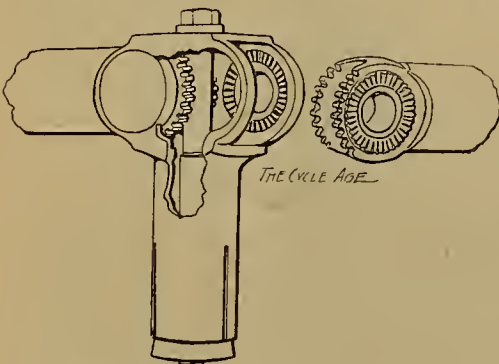
clamp, which, as will be noticed in the illustration, is operated by a small vertical screw placed at the rear of the post. This clamp binds tightly and is simple and durable. The company also manufactures the Axiom pedal, in which the bearings are placed at the extreme ends of the frame. The adjustments are outside and easily effected, and the bearings are large and durable, 5-32 balls being used.

## BIG SADDLE COMPANY REORGANIZED.

Some time ago the Cutting-Kaestner Co. of Chicago, successors to Cutting, Kaestner & Co., the well known firm of saddle manufacturers, was incorporated and a meeting of the stockholders held. Officers for the ensuing year were elected as follows: A. Kaestner, president; G. W. Bice, secretary; E. P. Ederer, treasurer. For the past five years this firm has been large producers of bicycle saddles, and reports an excellent outlook for '99. Ten distinct styles of saddles are catalogued.

## SANGER BAR WITH EXPANDER.

A very ingenious but simple method of fitting an expander to a reciprocating adjustable handle bar is employed by the Sanger Handle Bar & Plating Co. of Milwaukee, in its Sanger bar. As shown in the drawing herewith, the company simply grooves through the intermeshing ratchets which operate the two halves in unison and passes the expander bolt downward through the top of the tee. The lower end of the stem is split as usual and a tapered plug in-



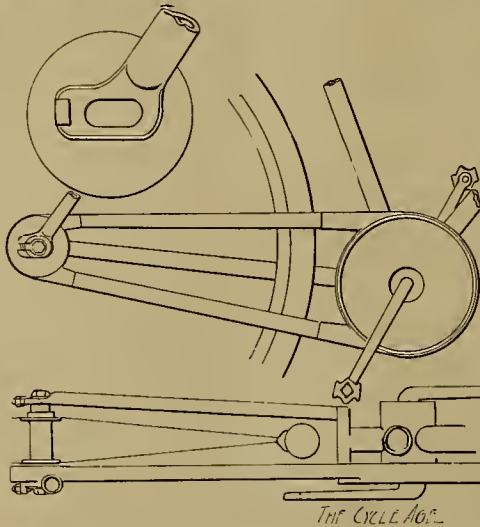
serted and screwed onto the end of the bolt. About an eighth of an inch of the ratchet teeth is left on each side of the bolt, which is amply sufficient to allow the co-operating of the two sides or halves of the bar. The spur ratchet teeth simply cause the two halves to rise or sink in unison and play no part in the clamping, which is done by the meshing of the face corrugations drawn together by the bolts and nuts.

The Sanger is an adjustable bar which does not require turning around in the stem to change from low position to high or vice versa. Once set in the head of the bicycle

there is never an occasion to release the handle bar clamp or expansion bolt fastening, but the position can be altered at will and the wrist position is always correct, from highest to lowest point—a range of fourteen inches—and both sides are always automatically brought to the same level.

## BLODGETT'S BICYCLE CONSTRUCTION.

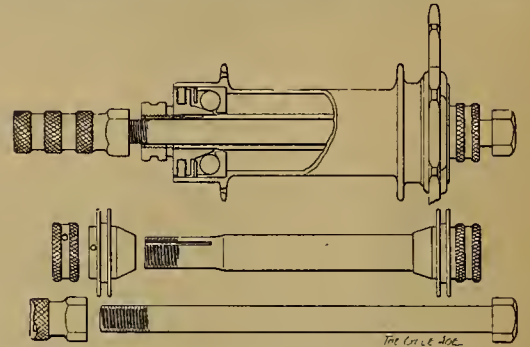
The accompanying illustrations show a gear-casing frame construction and a hub, which the inventor, J. W. Blodgett, 68 North Jefferson street, Chicago, intends to manufacture. The bicycle frame is intended to supply the demand for chain-driven bicycles with dust proof and self-oiling transmission gear, and Mr. Blodgett, having reached the conclusion that detachable gear cases cannot be made in a manner that will satisfy the American public, has incorporated the casing in the frame work, making the tubes which contain and protect the upper and lower chain reaches take the place of one of the lower rear fork sides. The machine which he has now made has an aluminum front sprocket wheel casing which is pressed over the bottom bracket end and also a rear sprocket casing of aluminum, and the two steel tubes, of oval cross section, which connect the sprocket casings are placed in the mold when the casting is made in such manner that the aluminum shrinks around the steel tubes. As the shrinkage of aluminum after casting is three times that of steel, while the fusion point is much lower, no further fastening of the connection is required, and the steel tubes are not injured by the process. In regular manufacture Mr. Blodgett will not use aluminum, however, and will construct the bottom bracket with a vertical flange to which the sprocket casing will be bolted. At the rear edge the casing is secured to one side of



a tee-shaped forging which takes the place of the lower rear fork crown and stem as known in three-crown construction. The circular flange of the sprocket case has a shoulder near its outer edge against which is set the cover lid secured with small screws. The central opening of the lid is provided with a dust and oil proof lining held in position by a metal disk on the inside and saturated with helmet oil, so as to allow the sprocket wheel hub or crank boss to revolve practically without friction. As there is no intention of adapting the construction to machines already made no difficulty is expected in securing perfect fit, smooth running and oil-retaining properties. The junction between the rear sprocket casing and the rear hub and the slotted opening in the disk which closes the rear casing are protected by similar means against the entrance of dust. A novel feature is the connection of the right side upper rear stay with the rear sprocket casing. Instead of the customary fork end fitting the stay has brazed to its lower end a circular disk, slotted to permit chain adjustment, and this disk fits exactly against a shoulder within the flange of the sprocket case and is held in this position by the axle nut only. So long as the axle and nut are in place the connection is firm, but when the axle is removed the union between the gear casing, which takes the place of rear fork side, and the stay is loose similarly as in one of the well-known English models in which the stays are assembled on the axle on the outside of the lower fork sides.

The rear hub construction shown is intended to be used in the Blodgett bicycle, but will also be sold in the trade separately in sets for front and rear. The axle is re-

movable, the cones being mounted on a sleeve, and together with the frame construction this serves the purpose of permitting the wheels to be removed from the frame, and again inserted, without separating the chain, so that riders in case of punctures or other causes which necessitate removal of the rear wheel, will have no more trouble than with an uncovered gear. It is a point of refinement as well as simplicity in the hub that the cones are mounted on the sleeve without screwthreading, the fixed cone being pressed against a shoulder turned on the sleeve and the adjustable cone provided with a feather entering a groove in the sleeve and preventing it from rotating



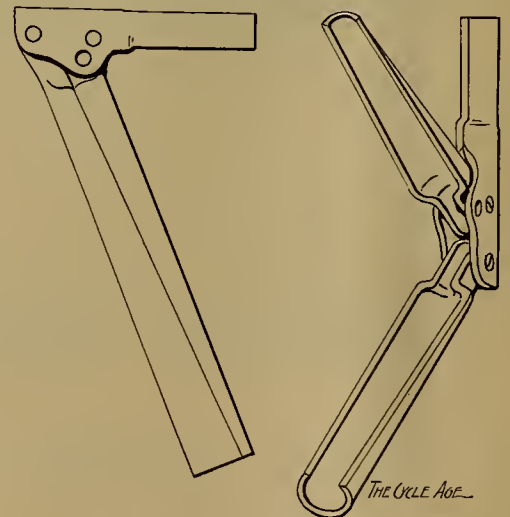
when it is pressed into proper adjustment by turning the operating nut on the screw thread. A close sliding fit between cone and sleeve is, of course, provided. To loosen adjustment all that is necessary is to spin the wheel. The dust flanges are double, as shown, and are to be fitted with felt washers.

## WORKING NIGHT SHIFT ON STEEL BALLS.

The Grant Ball Co. of Cleveland, O., which is catering to the buyers of high grade tool steel balls only, is gratified to find that the trade is largely discontinuing the use of cheap balls, which have proved very costly in the end, especially when they have been used in the hubs and crank hangers of bicycles. The company expects to run until midnight in every department until it can catch up with the orders already booked. The case hardening department has been enlarged in order to meet the growing demands for doing outside work. Balls up to nine inches in diameter are being made especially for use in large size derricks and similar work.

## MCGILL AUTOMATIC SEAT POST.

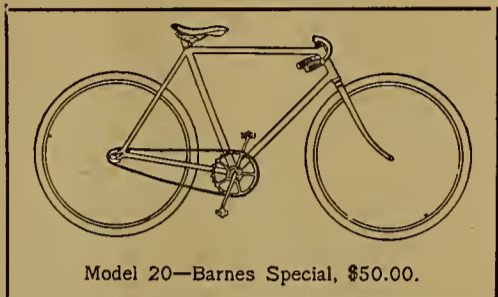
The McGill Automatic Seat Post & Handle Bar Co., 207 South Canal street, Chicago, is manufacturing a split seat post which is neat in appearance and simple in construction. The post is shown in the illustration herewith. As it operates by simply raising or lowering the pommel of the saddle when it is desired to release or tighten the post, it is not only a very convenient fitting on any rider's machine, but is especially adapt-



ed for use on renting bicycles, the saddles of which have to be constantly raised and lowered in order that the parties renting the machines may be suited. The annoyance of wearing off the corners of binding nuts through constant manipulation in rental stores is thus obviated, and the task of putting a cycle in shape for the patron much simplified and quickened. The sections of the post bind on the seat mast wall for their entire length, and so the tubing is

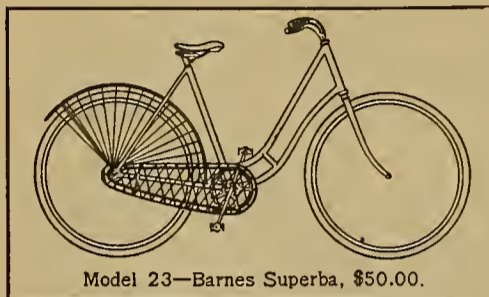
# A PAIR OF BICYCLES

THAT IT IS HARD TO BEAT



Model 20—Barnes Special, \$50.00.

These bicycles are light, graceful and easy running, and we doubt if a better wheel can be produced at the price. Our sales thus far on these models have



Model 23—Barnes Superba, \$50.00.

been away ahead of anything ever experienced by us before. We would therefore suggest that agents who are looking for a line to place them in the lead of their competitors should write us at once, provided we have not an agency in their city.

Our Handsome Art Catalogue with full particulars  
mailed upon application.

**The Barnes Cycle Co., - Syracuse, N. Y.**

*Thousands in use!*

*The Morrow Coaster & Brake!*

*It is not an Experiment.*

*In a 50 mile ride you pedal  
only 30! Centuries made Easy!*

*Double your sales and increase your profits  
by selling your wheels fitted with the Morrow  
write us for prices! Eclipse Cycle Co. Elmira, N.Y.*

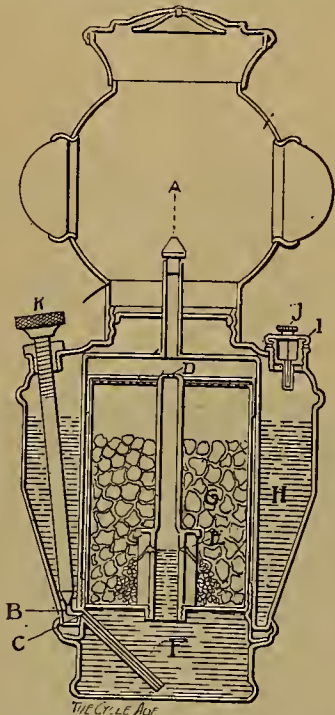
saved from the danger of bulging sometimes caused by limited binding surface upon which great pressure must be brought in order to hold the post. Each section of the post is made from a single stamping, there being thus but three parts to the post in addition to the small pivoting screws. This construction allows the post to be made very light, without sacrificing strength or durability. By changing the position of a screw from one hole to another, the post may be changed from a front to a back L or vice versa.

**READING STANDARD SUCCESS.**

The Reading Standard Mfg. Co. of Reading, Pa., states that its sales of Reading Standard bicycles have been very gratifying and that its list of agents has already been much increased over last year. Shipments in 1898 amounted to 9,436 bicycles, and the company has calculated on building 12,000 machines this year, the bulk of this proposed output being already sold. The factory is running full force and the company is now ready to fill all orders from stock upon receipt.

**PLUME & ATWOOD'S ACETYLENE LAMP.**

A sectional view of the acetylene lamp made by the Plume & Atwood Mfg. Co., New York city, is shown in the accompanying illustration. The lamp is 6 3/4 inches in height. Granulated calcium carbide is used. Water is introduced through the feeder cap I to the reservoir surrounding the body of the lamp, the water supply being regulated by the valve K. The manufacturers state that the lamp is self-controlled and self-generating; that there is no need of adjusting the water supply as it is automatically controlled by the gas. A is the lava tip; B the valve hole in the lamp body; C the tube



entrance in the equalizing chamber; D the opening in the equalizing pipe; E the rubber distributor surrounding the equalizing pipe; F the equalizing chamber; G the carbide; H the water tank; and J the tip cleaning tool.

**SIDWAY STIRRUP CLIP PATENTED.**

The well known Sidway stirrup pedal, manufactured by the Sidway Mfg. Co., 240 Lake street, Chicago, is the invention of W. J. Grotenhuis, who has recently been granted a patent on the device. The patent claims embrace the construction of stirrup clips in which a metal base plate with upwardly projecting toe stops at the front end is furnished with a leather band forming a stirrup which is braced and maintained in its proper shape by metal strips curving upwardly and backwardly from the forward corners of the base plate. The patent also includes the use of a leather cover split through the center and laced together to form an adjustable stirrup.

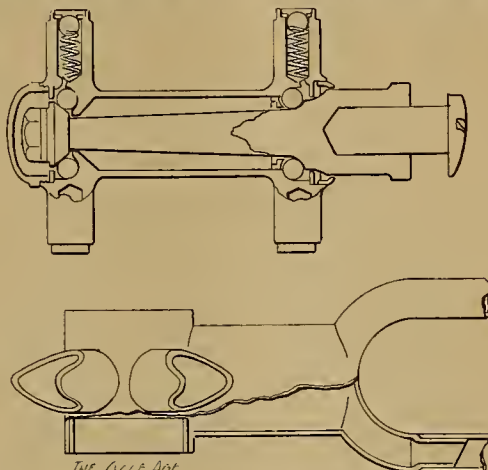
**CLIPPER CHAINLESS AND CHAIN BICYCLES.**

The first few pages of the catalogue of the Grand Rapids Cycle Co., of Grand Rapids, Mich., are devoted to the interests of the Clipper bevel gear chainless. The Clipper people are ardent advocates of the bevel gear mechanism and have given much attention to the designing and making of such products. The attitude of the company on the chainless question is clearly brought out by the cover design, which depicts a male figure with hands bound together by a chain stretching his arms toward a bevel gear, from which is cast a flood of light symbolic of progress and release from the manacles.

Besides the men's and women's models of the chainless, a pair of Clipper Specials, a

Special racer, Model 44 with 30-inch wheels, two models of staunch \$40 machines, and a convertible tandem, are listed in the catalogue. The \$40 models do not have all of the novel improvements found in the Specials, but are offered as honest value for the price and without fear of their being frequenters of repair shops.

The Specials are fitted with a hanger yoke which has been used for some time by the Clipper people, and which has proven very



satisfactory as a means toward the necessary end of providing a narrow tread, ample tire clearance, and room for large sprockets, without weakening the construction of the rear frame or lessening its rigidity. It comprises, as will be noticed in the accompanying illustration, an elliptical section branch made integral with the bracket and having an arch crown on its rear end, to which straight D rear forks are attached.

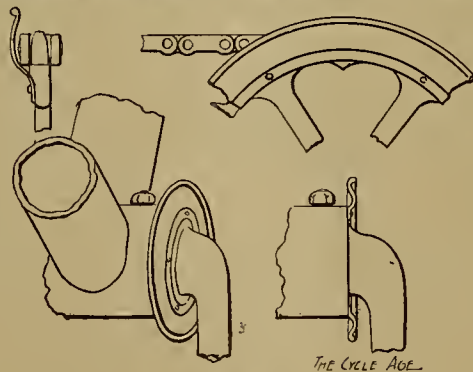
A feature of the Clipper pedal is the oiling device. The cross bars of the pedal frame are hollow and lead to the ball races. Light spiral springs keep the balls in close contact with the mouth of these oilways when not pressed back for the insertion of the oil can nozzle. The catalogue is handsomely designed and printed and presents a novel idea in illustrating the various models, each pattern being shown in front view as well as the usual side views.

**ATTRACTIVE LIBERTY BROCHURE.**

The introductory remarks of the Liberty Cycle Co. of Bridgeport, Conn., in its catalogue state that the company does not desire to indulge in high art to excess nor to lead the prospective buyer by pictorial or other display, away from the consideration of the policy of making but one grade of bicycle. Throughout the catalogue, which has a very attractive cover in a red and brown relief effect, the idea of describing everything as briefly and intelligently as possible is carried out. The Liberty company calls especial attention to the fact that frames are furnished in two lengths. Those machines intended for riders who prefer the upright position are shorter than those for the scorching fraternity. The makers thus expect to fit the needs of all without requiring riders to assume cramped and unhealthful positions merely because the frames are not designed for the positions assumed.

**ATTACHED TROUSER GUARD.**

The illustration below shows a trousers guard which is the invention of C. W. Slevor of Keyser, W. Va., and for which the inventor has filed a patent application. The guard is placed on the sprocket wheel. It comprises a dished ring which projects



above the chain and, as stated by the inventor, makes unnecessary the use of the common ankle guard. A similar ring, though smaller, is secured to the left end of the hanger bracket to keep the trousers from catching on the oil cup.

**THE BANKER LINE OF STANDS.**

The Banker Bros. Cycle Co., of Pittsburg, Pa., has issued circulars describing its complete line of exhibition stands, street stands and home exercisers. All these are finished

in aluminum bronze, except the street stand, which is finished in black enamel.

The No. 2 exhibition stand is constructed of spring steel and sets the wheel three feet from the floor, thus placing the cycle in position to show its construction and talking points. An elegant felt covered display tray, with embossed brass moulding, adjusts automatically. This stand will take any length of wheel base up to 50 inches.

The No. 4 exerciser is constructed of spring steel. The friction roller has a brass boxing which revolves on a steel axle, and has an adjustment to take up the wear. This stand takes any length wheel base or width of hub, and holds a ladies' machine as well as a diamond frame.

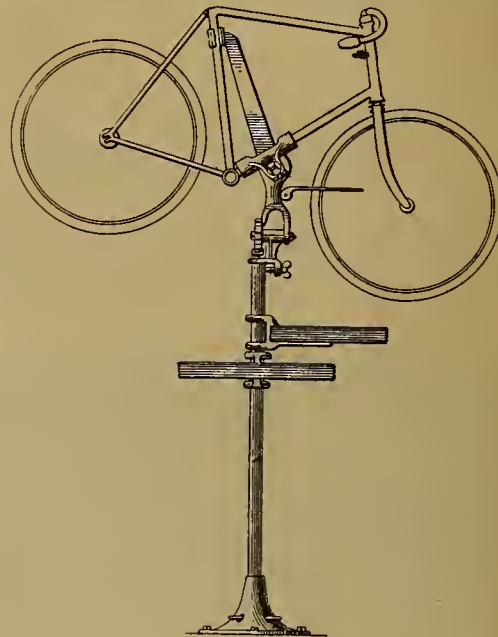
The No. 5 stand is similar in construction to the No. 2 and will hold any size bicycle or multicycle.

The No. 6 street stand will hold eight bicycles and folds into compact form for shipment or storage.

A number of the largest cycle manufacturers in the United States are using the No. 2 stand for exhibiting their machines. Jobbers and exporters are requested to write for prices and electrotypes for catalogue purposes.

**NEW ENGLAND SUPPLY CO.'S REPAIR JACK.**

The accompanying illustration shows the assembling jack which is one of the many repair shop and factory tools manufactured by the New England Cycle Supply Co. of Keene, N. H., and on which a patent has been allowed, the patentee being H. T. Kingsbury. The jack holds the bicycle by the seat mast and lower frame rail, the grasp being cushioned so that the enamel is not marred and the release being quick and easily accomplished. The running parts of the bicycle are not interfered with, making it possible to entirely assemble or "knock down" a bicycle without removing



the frame from the stand. Conveniently placed foot and hand screws make it possible to tilt the bicycle in any desired position and to turn it over on its side for assembling or removing the hanger bearings. Attached to the metal standard are swinging shelves on which parts and tools may be laid while working on the machine held on the jack.

**BLUE STREAKS WELL CATALOGUED.**

The catalogue of the Black Mfg. Co. of Erie, Pa., shows the same care in every particular of its make-up as has characterized the Blue Streak Tribune bicycles. The decorative work in the book is treated in a tasty blue tint, which through purpose or by chance well symbolizes the company's well known blue finish. The illustrations of the light colored patterns are more than ordinarily attractive, it being usually found quite difficult to reproduce strikingly by half-tone cuts any but dark enameled machines. Besides picturing and describing the models, the catalogue includes illustrated paragraphs on the various distinctive points in Tribune manufacture and has also a page dedicated to a few good words for the cycloidal sprocket.

**CHANGE OF BULLIS BALL GEAR.**

After prolonged experiment, the Bullis Ball Gear Company, of Rochester, has found it possible to introduce an improvement which will prolong the life of the gear without interfering with its most valuable feature, which lies in the fact that the running qualities of the machine on which it is used are not seriously affected by knocking the gear out of its proper alignment. The improvement consists in changing the ball rollers on the transmission shaft into hollow cone rollers, which conform to

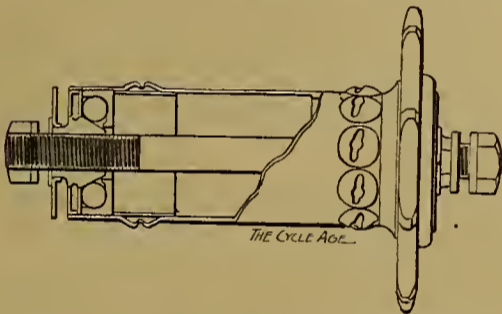
the curvature of the ball rollers on the front driving gear wheel and on the hub pinion in the same manner as the balls in a durable two-pivot ball bearing conform to the hollow races. Two-point bearings in which the races are well hollowed are now generally conceded to last much longer than those in which there is a strictly point contact, and on the same principle the improved Bullis Ball Gear will resist wear much better than the older form. Another advantage by the new design is that adjustment of the rollers is much simplified, so that now in fact all wear may be taken up by adjusting the cone rollers either in or out. An illustration showing the new form of the rollers on the shaft pinions will be found in connection with the company's advertisement in this issue.

**HURD AND ROCKFORD CYCLES.**

The Rockford Cycle Co. of Rockford, Ill., illustrates in its lately issued catalogue four patterns of Hurd bicycles and two patterns of Rockfords. The Hurd line is the highest in price and includes men's and women's road machines selling at \$50 each and a racer and 30-inch wheel machine listed at \$55 each. All of these models are of similar construction and have flush joints and popular frame lines and equipment. Standard finishes are Brewster green and black. The racer is enameled in vermillion. The tires specified include such standard makes as Morgan & Wright, Goodrich, Hartford and Kokomo. The men's and women's Rockford patterns sell at \$35 each. The style resembles in general lines that of the Hurd cycles though the options offered are not as broad. The frames have flush joints except at the seat cluster.

**TRINITY STRAIGHT SPOKE HUB.**

The direct spoke hub used in the models made by the Trinity Cycle Mfg. Co., of Kenne, N. H., are shown in the accompanying illustration. Adjustment can be made with the fingers by means of the disc wrench attached to the hexagonal end of the cone shown in the cut-away portion of the drawing. When adjustment is once made it is firmly locked by screwing up the axle



nut on the adjusting side. The dust groove in the cone in connection with the felt washer in a dust proof ball retainer is a device patented by the manufacturers. The cone is cut away from the outer side of the dust cup, so that when wiping the wheel the tendency is to carry the dust away from the bearings rather than to force it into them. For dust to reach the balls it is necessary for it to pass over the raised outer edge of the dust groove, which is constantly in contact with the washer, then through the greased groove itself, and again past the inner ridge of the groove and the felt protection, which is practically impossible.

**LINES TO A LATHE.**

"You will perceive from the inclosed," writes the W. E. & John Barnes Co. of Rockford, Ill., makers of all kinds of iron and wood working machinery and mechanics' tools, "that poetry sometimes finds its source even in the hearts of machinists and bicycle repairmen. An admirer of the Barnes lathe has compiled the following poem, incidentally suggesting at the end that we throw in a few tools and 'call it square.' Of course it was a bad precedent to establish, but we could not decline in this case. The poem was written by W. J. L. of Burlington, Wis., and may interest some of the readers of Cycle Age:"

**BARNES' LATHES.**

Ever graceful in their outlines,  
 Ever turning work that's true;  
 Ever made by Barnes at Rockford,  
 Ever seeming bright and new;  
 Lathes that run so smooth and noiseless,  
 Lathes with speeds both fast and slow;  
 Lathes for turning wood or metal,  
 Best of all the lathes we know.

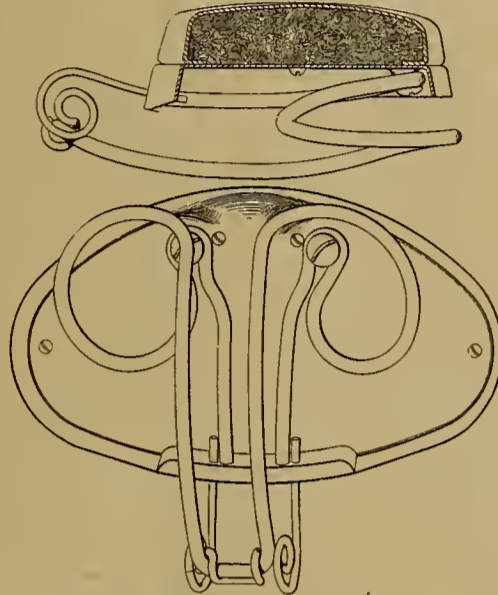
**CATALOGUE OF FANNING BICYCLES.**

The colored cover of the catalogue of the Fanning Cycle Mfg. Co. of Chicago, displays a Fanning model finished in cardinal and bears the catch phrase, "Ride a Fanning and keep cool." The catalogue con-

tains, in addition to the usual illustrations of models and constructional features, a full page illustration of the Tribby front sprocket, which is of special Fanning design and protected by a design patent. On the last page is a price list of parts.

**HUNT SADDLE PATENTED.**

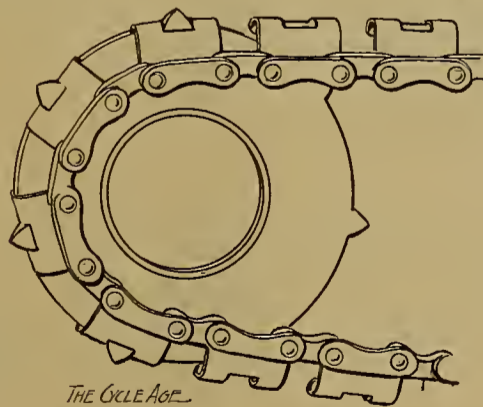
Among the patents granted last week is one allowed to J. A. Hunt of Westboro, Mass., on a form of saddle which is one of the popular patterns in the line manufactured by the Hunt Mfg. Co. The saddle, as described in the patent specifications, comprises a substantially elliptical base on which two pads or cushions are placed in the manner common to anatomical saddles. An important feature of the invention is



the arrangement of the springs. The main spring is of one piece of wire so bent that it practically forms an upper and a lower pair of springs. The wire doubles backward from the forward loop where it interlocks with a small light spring fastening to the front of the saddle base, and at the rear end is formed into two spirals which are secured at their highest points to the rear of the saddle. The free ends of the wire then extend forward again and pass through holes in the flange along the under side of the front of the base.

**KLING POWER CHAINS AND CYCLES.**

The illustration herewith shows the chain and rear sprocket used on the Kling Power bicycles made by the Kling Power Chain & Wheel Co. of Unionville, Conn. By hanging the links below the rim of the sprocket as the chain travels around it, the gear raising effect of a smaller rear sprocket is attained and the necessity for using excessively large front or dangerously small rear sprockets in order to obtain high gearing is avoided. The manufacturers claim that the chain also produces a saving in power of approximately 25 per cent. The chain and sprockets are furnished in sets for fitting to



any make of bicycle, and the company also builds complete bicycles fitted with the Kling Power chain. These machines retail at \$40 each, and in order to advertise them the firm has offered one \$25 share of preferred stock in the Kling Power Chain & Wheel Co. to each of the first 500 purchasers of its machines. The company is confident that its chain will become popular, one ground for hopeful expectations being that the chain does not present the bulky and ungainly appearance that has marked some of the previous chains of similar nature.

**KIRK MFG. CO.'S CATALOGUE.**

The catalogue of the Kirk Mfg. Co. of Toledo, O., is agreeably free from tiresome reading matter, and forcefully states the main points of interest about Yale bicycles

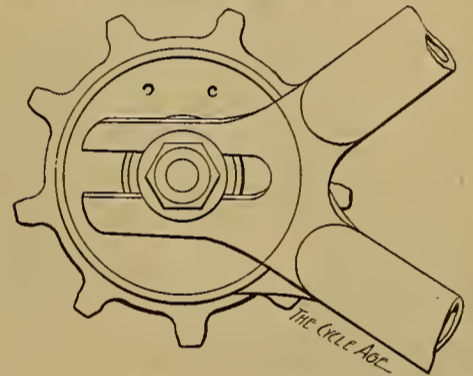
in as brief and systematic a manner as possible. Besides illustrating the various models in the Yale line, the different styles of handle bars, saddles and tires fitted to the machines are also shown. A paragraph in the introduction invites all patrons or prospective patrons of the house to call at the factory whenever in Toledo, and states that the firm will be glad to show them through the works for the purpose of demonstrating that its claim for care and skill in the construction of its bicycles is something more than catalogue and advertising talk.

**McELROY AUTOMATIC COASTER AND BRAKE.**

The manufacture and sale of the McElroy patent automatic coaster and brake has been undertaken by the Frank E. Bundy Lamp Co. of Elmira, N. Y., in connection with the Bundy Automatic acetylene lamp.

The coaster and brake device is very compact and simple, as shown in accompanying illustration, and can be made to fit to the rear hub of any bicycle; it also avoids wearing of the tire, while at the same time doing all the work that is expected of such devices. It is composed of two disks revolving with the hub with a wedge mechanism in the center, and is operated with the chain by a slight backward pressure on the pedals, thus allowing the rider to coast at will with his feet on the pedals and also to control his machine by applying back pressure on the pedals as the emergency requires. If necessary, the rider can stop his rear wheel altogether. In its normal position the rear sprocket is locked and there is absolutely no friction. The device is also so contrived that, should the rider desire to give up the use of the coaster and brake by removing one small part, it can be made to run as an ordinary rear sprocket.

The mechanism has been thoroughly tested in the factory and a large number have been ridden from five to six months. The great advantages claimed for it are that it is neat, compact, and can be attached to any bicycle or removed at will by the rider; is simple in construction; always responds quickly to a



forward pressure; increases the weight of the wheel only 10 ounces and the rider can dismount with pedal in any position. The Bundy company is now fitting up its plant with new machinery to place this on the market, and will send full description and prices to all applicants.

**CATERING TO SMALL MAKERS.**

'Twenty-two years' experience in endeavoring to meet promptly and satisfactorily the demands of a multitude of customers has enabled the Excelsior Supply Co. to so systematize the work of its various branches that Mr. George T. Robie, the manager, is now able to claim, with justice, ability to supply anything and everything required by bicycle builders. No matter how small the order, so long as it reaches the company before 4 o'clock a very good reason must be given for failure to ship the goods the same day.

A rapidly increasing volume of business recently rendered a large increase in available space necessary. The company therefore secured a lease of the entire building at 88 and 90 Lake street, Chicago, and took possession at the beginning of the year. The work of arranging the immense stock of parts, sundries and material of all kinds is not yet quite complete, but the system under which all things are handled furnishes satisfactory evidence that, come what may, the company can supply, at a few minutes' notice, anything an agent, repairman or builder may require.

Heavy stock, such as tubing, forgings and rough parts, is of course stored in the basement. The first floor is devoted to offices and such stock as is necessary to supply on the instant, goods sold over the counter, which, by the way, means an immense volume of business in itself. The four floors above are used for store rooms, drawing rooms and advertising department, an experimental department also forming part of the outfit. Each department can tell, down to a gross of balls, exactly what it has in stock.

The sources of supply, however, do not end there. Experience shows the desirabil-

ity of being able to provide parts of machines long out of date but treasured by some old-timer. The company figures that the goodwill of the agent who enquires is worth cultivating, and that his knowledge that his every requirement will be met will make him a permanent customer. Hence a small but complete machine shop is kept for the purpose of producing such antiquities or special parts as may be required.

The company is preparing to send out its new catalogue. It consists of 96 pages of matter descriptive and illustrative of all sorts of supplies. These are to be addressed largely from its own lists, which, by the way, are handled with the same attention to detail as characterizes other departments. Every agent who has been in the business long enough to have made a record, good or bad, may rely on it that he is on file and rated at the offices of the Excelsior company.

Mr. Robie is fully convinced that the small maker is a fixture in the trade and furnishes many incidents to support his opinion. Just so long as that idea prevails will the Excelsior company persevere in a determination to prove the truth of its motto, "Everything for bicycle builders."

#### CARBIDE CARTRIDGES ARE SAFE.

The Frank E. Bundy Mfg. Co., makers of acetylene lamps, recently received the following letter from the chairman of the acetylene gas committee of the Underwriters' Association of the State of New York:

"I brought your lamp before the committee of which I am chairman and they agreed with me that it will not be necessary to have any permit granted in order that a storekeeper may keep the cartridges that you use for your lamp in stock. Our ruling is that they comply with the present insurance requirements, which say that calcium carbide can only be kept in an insured building when contained in hermetically sealed tin cans, and this plan you have complied with in your construction of the cartridges."

#### THE REMINGTON CATALOGUE.

The recently issued catalogue of the Remington Arms Co., of Ilion, N. Y., is plain and neat, and while covering every important feature of Remington construction is not loaded down with tiresome descriptive matter or uninteresting illustrations. All illustrations of models and parts are carefully made tooled half-tones. The policy of the company as brought out in the catalogue embraces the same conservative, reliable methods as those practiced for many years so successfully in the manufacture of firearms, and the models shown have the same simplicity and refinement of design which have so long characterized Remington bicycles.

#### THE VANGUARD BICYCLES.

The catalogue of the Vanguard Cycle Co., 140 S. Capitol avenue, Indianapolis, Ind., illustrates several machines of the popular type listed at moderate prices. The company's catch phrase states that the cycles are "Built for service." The Vanguard, Model B, is built in both men's and women's patterns, and lists at \$35. Two models of the Progress list each at \$25, and boys' and girls' machines in three sizes each are cata-

logued respectively at \$20, \$25 and \$30. The company is also building a chainless with the Sager gear. This machine sells at the standard chainless price of \$75.

#### WORKING DAYS AND NIGHTS ON VICTORS.

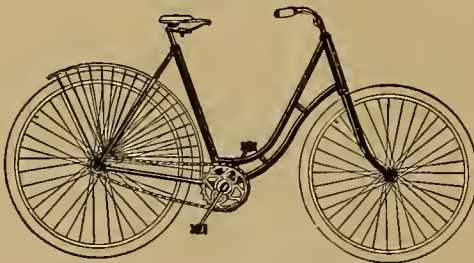
Notwithstanding the Overman Wheel Co. of Chicopee Falls, Mass., has orders for nearly 15,000 bicycles on its books, the company's agents are to have their wants supplied promptly, for the factories are being run twenty-two hours out of every twenty-four and the stock of completed machines is increasing rapidly. Production is very much facilitated, it is claimed by the fact that only one model is being manufactured for this season's trade. In this one model, however, are combined all the best qualities and



mechanical features of the preceding Victor machines, together with a number of new features which makes this latest product superior to any Victor that has been brought into existence before.

The chainless Victor which attracted so much attention at the New York show, will not be ready for delivery before the latter part of March, however.

A large sale of Victor tires, which the company offered to the trade a year ago, is reported by the company. The capacity of the tire plant has been doubled within the year. The company now announces that it



is prepared to supply Victor saddles to the trade in any quantity and desires agents for Victor goods in all places in the United States and foreign countries where agents have not already been appointed.

#### MONARCH CYCLES IN GREECE.

The Crown Prince of Greece recently placed an order for a Monarch bicycle during an interview at Athens with Mr. Krausz, foreign representative for the Monarch Cycle Mfg. Co. Mr. Krausz writes his house that the sport of cycling has not yet developed to any great extent in Greece, there not being over three hundred machines in the whole country. These are mostly English and cheap American models. The roads

being good, and the country recovering somewhat from the late war, there will doubtless be an increase in the bicycle business in that country in the near future. At Athens, on January 23, the Monarch scored in two racing events.

#### MAGNET HUB PATENTED.

The hub manufactured by the Magnet Cycle Co. of Chicago is not protected by a design patent recently granted to P. H. Barker. The distinctive feature of this hub resides in the spoke flanges, which are much larger in diameter than usual and for the sake of appearance and lightness have drilled through them concentrically arranged holes. The value of the large flanges is that a greater angle of spoke spread may be obtained without widening the hub and chain line, thus giving the hub an apparent advantage when used in 30-inch wheels.

#### TO PUSH MONARCHS IN CANADA.

Robert Jaffray, recently connected with W. H. Fligg of Montreal, who represents the Columbia line in that city and in eastern Ontario, has associated himself with the Monarch Cycle Mfg. Co. as traveling representative in western Ontario. Mr. Jaffray was at the Monarch factory the first of this week and left on Tuesday night for Toronto.

#### INCREASED FACILITIES FOR PEDALS.

Edmonds & Metzel, makers of the Perpetual pedals, have removed from 115 Monroe street, to larger quarters at 253 South Canal street, Chicago, where their greatly increased manufacturing facilities place them in position to fill orders on short notice and quote interesting prices on light running pedals of superior quality.

#### TRADE NOTES.

Chas. Beltz & Son, 5811 Penn avenue, Pittsburgh, Pa., dealers in bicycles, saddles, accessories and sporting goods, are desirous of receiving catalogues and lists from manufacturers of parts, fittings, sundries, etc.

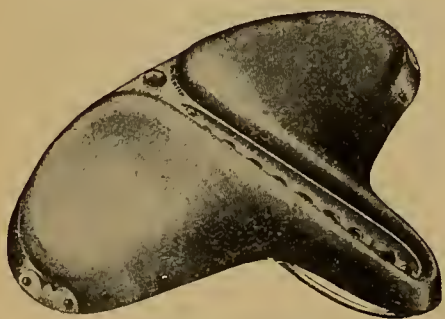
Coincident with the re-organization of the Frontenac Mfg. Co. of Syracuse a policy of general extension of the business was decided upon. The services of C. Edward Wood, recently connected with the Hollenbeck Saddle Co., have been secured and he will have charge of the sales department.

New specialties are being continually added to the already large line made and sold by the National Cement & Rubber Mfg. Co. of Toledo, O., which has a businesslike way of saying nothing until it is ready to market each new article in quantities, when it comes out boldly and pushes it hard, frequently to the discomfiture of competitors.

During the New York cycle show the Olive Wheel Co. of Syracuse was well represented in connection with the National Cement & Rubber Mfg. Co. of Toledo, the following representatives of the bicycle house making their headquarters in the sundries company's booth: C. A. Benjamin, C. J. Batchrie, Henry Trebert and George N. Jordan.

## AFTER ALL.....

### A PERFECT SEAT.



FOR MEN AND WOMEN.



Cyclists are not slow to appreciate a good thing, and the wheelmen generally are singing the praises of



LIGHT—PRETTY—DURABLE.

## The Hollenbeck Rawhide Saddle

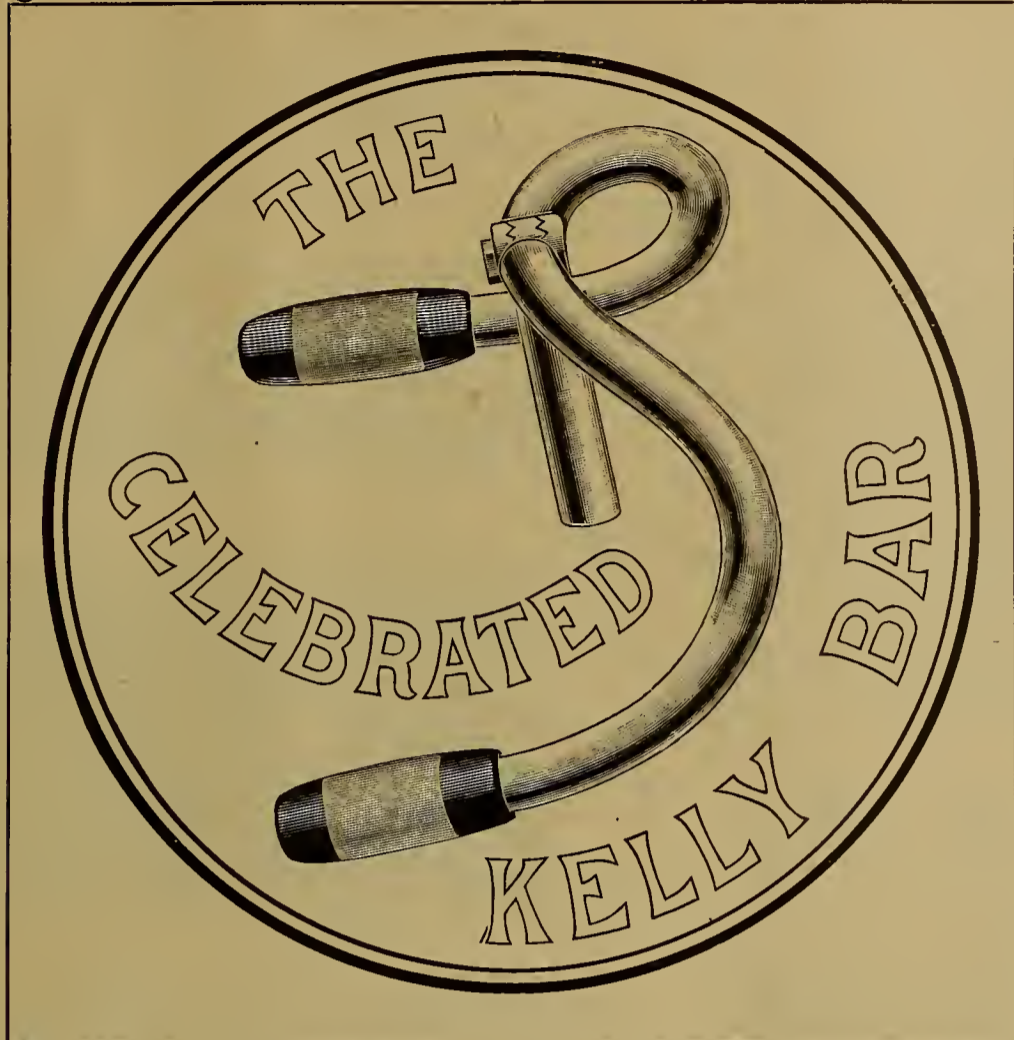
And Comfort to the Rider and Beauty to the Bicycle

By using the HOLLENBECK HYGIENIC SADDLE, made of the best materials, and on perfect anatomical principles. It will add to the beauty as well as the riding qualities of your machine. It is fitted with our new lock-tilting clamp and improved spring, giving a 4-inch range of adjustment, without disturbing the position of the saddle.

Mr. Dealer:—You want these Saddles in stock. Our prices are attractive.

**HOLLENBECK SADDLE CO., SYRACUSE, N. Y.**





## The Standard Bar of the World

Has 15-inch adjustment and 25 positions, with no change in pitch of grips, same as demonstrated at the shows in Chicago and New York



Over fifty of the leading manufacturers are supplying these Bars as their regular equipment. . . . .

Kindly say in your letter in which paper you saw this ad.

**The Kelly Handle Bar Company**

Cleveland, Ohio, U. S. A.



### PATENT NOTICE.

#### S. & G. STIRRUP TOE CLIP.

Our U. S. patent No. 618,937 for the S. & G. STIRRUP TOE CLIP, was issued Feb. 7, 1899, and by its provisions gives us exclusive control of the STIRRUP TOE CLIP in all its practicable forms of construction.

We now respectfully give notice to all concerned, that we shall take such steps as are necessary, to protect ourselves against the manufacture or sale of any TOE CLIP which is an infringement on our rights, under this and our similar patents, in Canada, Great Britain and France.

SIDWAY MFG. CO., = Chicago, Ill., U. S. A.

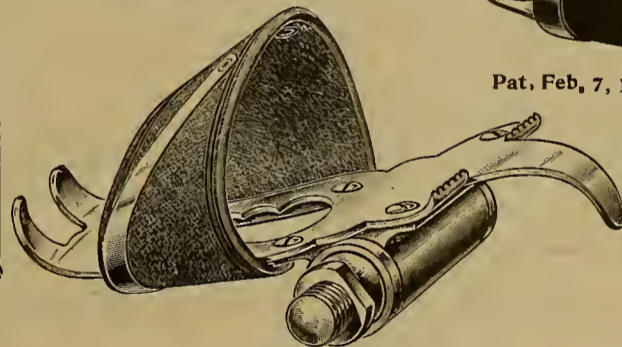
### "CONSENSUS OF OPINION"

THE S. & G. COMBINATION PEDAL

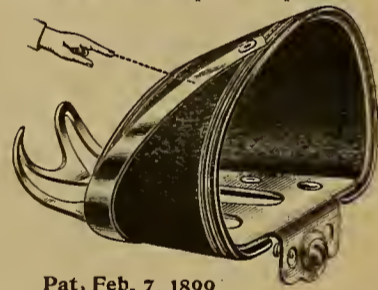
Perfect in every respect. Is the finest ever devised.

Write for Catalogue and Jobbers' Discounts.

Price per pair \$3.00



S. & G. Stirrup Toe Clip.



Pat. Feb. 7, 1899

The most popular Toe Clip ever put on the market. Over one hundred and eight thousand pairs sold in 1898. Price per pair, 50 cents.

PATENT APPLIED FOR.

SIDWAY MFG. CO.,

Chicago, Ill., U. S. A.

# WHEELER SADDLES

ALWAYS have the name "WHEELER" stamped on the apron.



There are imitations of these popular saddles on the market. You are not obliged, however, to accept them on your wheels. They would not be offered to you if it were not for the fact that they cost a few cents less. The imitations do not compare with the original in appearance or durability.

Insist on having WHEELER saddles and you will get them. Send for catalogue.

**THE WHEELER SADDLE CO.,**

1427-1457 Woodward Ave., DETROIT, MICH.

Chicago Distributing Agents: HIBBARD, SPENCER & BARTLETT. New York Distributing Agents: HARTLEY & GRAHAM.



**MISCELLANEOUS.**

Advertisements under this head 5 cents per word first insertion, 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received.

**WANTED**

**WANTED**—A man having full knowledge of the manufacture of double-tube bicycle tires and inner-tubes. Address G. H. R., Postoffice Box 1553, New York, N. Y.

A **GENTLEMAN** with long experience in the bicycle business, both in this country and Europe, and now connected with one of the leading bicycle manufacturing companies, will leave for London and the continent shortly in the interest of his company to place agencies and in connection with bicycles would like to make arrangements with a few leading manufacturers in kindred lines, such as parts, fittings, or accessories, to represent them on some equitable basis, either commission or share of expenses. Is well acquainted with the foreign trade, competent to handle important business and absolutely reliable. This is not a pleasure trip but strictly business. Any one interested may address M. C. Co., care Cycle Age.

**WANTED**—Good agents in all parts of the United States and Canada to sell our contracts. We are the oldest bicycle protective company in the world. Our contracts sell easily. Write at once for particulars and territory. Liberal commission. **UNION WHEELMEN'S PROTECTIVE CO.**, 618-630 The Temple, Chicago, Illinois.

**POSITION WANTED**—A No. 1 repairman, with tools and good references, wants position. **H. G. FREEMAN**, 712 W. 8th St., Sioux Falls, S. D.

**BEST LOCATION**—Largest store in Minneapolis. Offers invited from manufacturers to add bicycles. **UNION BOOK CO.**, 6 Washington Ave. S., Minneapolis, Minn.

**WANTED**—Salesman to carry complete line bicycle sundries on commission. **CLARK, HORROCKS & Co.**, Utica, N. Y.

**WANTED**—A motor phaeton to seat 16 or 18 people. In answering state style of machine, what per cent of grade will climb, and cost. **L. F. SNOEDAL & Co.**, 2552 Madison Ave., Baltimore, Md.

**MANUFACTURERS**—Gentleman, trained engineer with central London office, many years' experience in the cycle trade, large connection amongst manufacturers, factors, shippers and agents, is open to take up and thoroughly work through travellers and himself a good sole agency for cycles, components or stampings, etc.; best firms only entertained. **R. M. P.**, care Cycle Age.

**FOR SALE**

**FOR SALE**—A nearly new quad, address **ROY HOWARD**, San Diego, Cal.

**FOR EXCHANGE**—High class hubs and two-piece hangers for machinery. Address **C. H. B.**, care Cycle Age.

**FOR SALE**—Half or whole interest for patent in cane covered grips. Address **A. R. WIENS**, 225 Cedar St., Milwaukee.



America's Representative  
**Bicycle**  
Write for Catalog

BRIDGEPORT, CONN.



1899 MODEL

**WATERS WHITE SCORCHER**

Fitted with Our One Piece Hanger, made under Fauber licenses. Retail Price, \$22.00  
**3 CROWN, \$28.50.**

Send for net price and 1899 catalogue.

**F. S. WATERS CO.**, 155 W. Washington St., Chicago. Put the company on so we will get letter.

GET THE GENUINE.....

**DIAMOND E** Nickeled Spokes...

and you will find this trade mark



on every spoke. It is conceded to be the most important feature of the season.

Western Office....  
204 Lake St., CHICAGO.

**EXCELSIOR NEEDLE CO.**,

Torrington, Conn.

THE HART & COOLEY MFG. CO., So. Chicago, Ill.

**HOT and COLD ROLLED STEEL**

Geo. Nash & Co., General Sales Agents, 35 South Canal Street, CHICAGO.

**HULLO BOYS!**

HERE WE ARE, RIGHT SIDE UP WITH CARE.

**...JUST GOT HOME...**

From Europe; sold \$100,000.00 WORTH of Bicycles — All shipped and got the money. Now I'm ready to talk biz.....

**ON BICYCLES PHONOGRAPHS .... CAMERAS.**

Can Sell you a Mighty Good "Phonograph" for \$5.00.

"Cameras" from 50c. Upwards.

And "Bicycles" for Less Money Than You Ever Heard of.

What's the Matter with Giving Me a Try?

**THE RALPH TEMPLE CO.**,

82 LAKE STREET, - CHICAGO.

**Liquid Brazing Crucibles**

All sizes and shapes as required to fit any make of furnace, made by the original makers of brazing crucibles and the largest and oldest manufacturers of plumbago or graphite crucibles in the world.

**JOSEPH DIXON CRUCIBLE CO.**,

Jersey City, - - - New Jersey.

A NEW LIGHT ON AN OLD SUBJECT  
It saves from 33 to 50% propelling force.



Notice to... **BICYCLE MANUFACTURERS.**

The riders of 1899 will insist upon their wheels being equipped with

"The Star Ball Retainer."

Send us samples of Cups and Cones and write for prices.

**THE STAR BALL RETAINER CO. LTD.**  
LANCASTER, PA. U.S.A.

"I USE THE STAR BALL RETAINER!"  
"I DON'T!"  
ALL ROADS ARE EASY WHEN THE **STAR BALL RETAINER** IS USED



# THE CYCLE AGE

VOL. XXII—No. 17.

CHICAGO, FEBRUARY 23, 1899.

NEW SERIES No. 66.

## DENVER DEALERS ARE ALARMED

**The Population is Too Small to Support Those Who Are Competing for Custom.**

Denver, Colo., Feb. 19.—The opening of the present season for the cycle dealers of Denver is to mark the beginning of a "hot time." The trade conditions are serious. To the dealer they are vital. While this city may not be alone in presenting such knotty problems, the conditions are at least interesting to the trade in general.

### Too Many Bicycle Dealers.

Denver has an estimated population of 150,000 and boasts of at least thirty regular bicycle dealers, including three department stores, all of which handle at least one high grade line. Among the regular dealers there are several whose retail sales were near the thousand mark for 1898 and a large number between three and six hundred for the season. Nearly 7,500 machines were sold in 1898 and the present season must see a sale of from 10,000 to 12,000 to make a reasonable business for the dealers to show even a small profit. The question is whether a city of this size will furnish so many new customers each year, 30,000 people being already in possession of mounts that will do service for a few years more.

All those connected with the cycle trade realize that a critical time is at hand for them, but every dealer has hope and expectancy in his eye when asked about his prospects for the coming year.

### Side Lines in Demand.

Side lines are sought by all. The wholesale sundry houses have added from two to five separate lines to enable them to stay in line. Sundry dealers have increased at an alarming rate and eastern prices are quoted by many with Denver deliveries. The knife is applied vigorously to all prices and goods can be had at bed rock prices everywhere.

During the week beginning February 20 a cycle show will be held at the scene of two former shows. This show will present the novelty of furnishing exhibition spaces, platforms, etc., to all exhibitors at absolutely no cost. The promoter, G. A. Wahlgreen, of Cycling West, has formed a plan that meets with general approval and will have a larger number of exhibits offered than he can furnish space for. The exhibits will include autocars and motor driven vehicles of all kinds.

The unprecedented cold weather has delayed the opening of the season at least a month, but the "hot time" will begin not later than March 1.

### Fire Will Cause Little Delay.

The fire which damaged the plant of the Manhattan Brass Company in New

York city February 12 did no injury to the rolling mills, wire mills, tube shops or lamp burner department, and will not interfere with the work of these departments nor to any extent with the production and shipment of lamps. The lamp factories and a portion of the manufacturing department were partially destroyed but will be immediately rebuilt. After an unavoidable delay of two or three days, however, all orders will be taken care of with the usual promptness.

### Death of David Bradley.

David Bradley, president of the David Bradley Manufacturing Company of Chicago, one of the largest concerns in the country producing farming implements and which also makes the America bicycles, died Sunday morning at his residence in Chicago, aged eighty-seven years. He moved to Chicago in 1835 and the following year established a small shop for the making of mechanics' tools. From this has grown up the immense business now conducted in Chicago and in the new plant located just outside of Chicago in the town of Bradley. It is expected that the business will be managed hereafter by his sons, J. Harley Bradley and B. C. Bradley, vice-president and treasurer of the company.

### New Warwick Company Formed.

All the bicycle tools and stock of the old Warwick cycle plant have been taken over by an entirely new company which has been organized under the style of the Warwick Cycle Co., with New York offices at 34 Union Square, East, which will continue the manufacture of Warwick bicycles in Springfield, Mass. George A. Russel, president of the former company, is president of the new concern, while A. O. Very, former treasurer, will occupy the same office with the new company and at the same time be general manager.

Nothing but first class machines will be produced and a feature of the work will be the manufacture of chainless machines. The New Warwicks will be marketed only from the New York office.

## RIVALRY OVER SUB-AGENCIES

**Buffalo Dealers Alert for Trade of People Who Reside in Remote Parts of the City.**

Buffalo, Feb. 21.—Quite a bit of rivalry has sprung up among the Buffalo retail trade in the matter of placing sub-agencies in the city. While the idea is by no means new here it was not followed out to any great extent until last season, when one of the local branch managers believed he saw in it an opportunity to increase his business at a little additional cost. He placed a few sample machines with several of the repairmen and in small shops in districts remote from the business center of the city. The experiment proved so successful that he expanded, as it were, and soon had the most desirable territory covered by agents under contract to sell his machine.

### Competitors Get to Work.

When it was learned by others of the craft that there was some business to be had through this channel they set about getting some of it, but everywhere they went they found that the other fellow had done his work so well that no openings were left. The various schemes that are alone known to the trade were then launched, it is said, in an attempt to get his agents away from him, but he was so firmly entrenched that all efforts were in vain. As the time approached for making contracts for '99 there was a general scramble for the most desirable districts and the rivalry increases daily.

### Sub-Agency System Pays.

A surprisingly large business was done last year through these agencies. The manager referred to claims to have sold over a hundred machines, and others who had agencies, or later established them, did a paying business. The sales were made on commissions said to net the seller \$5 per bicycle.

There can be no question as to the value of these establishments to the trade at large, especially in districts remote from the business centers. The laboring classes reside largely in these districts. They go to their labor early and return late, and it is seldom, even if they have the inclination, that time can be found to visit the city stores; so when it is found that the same advantages can be had at the agency in their neighborhood, as at the up town stores, they will buy, where if the conditions were different the probabilities are that two-thirds would not.

J. H. Johonnot has retired from the firm of Cassette and Johonnot, Buffalo agents for Olive bicycles, and has accepted the position of manager of the bicycle department of Weed & Co., who handle Wolff-Americans.

Finn & Sullivan, who shifted from the bicycle to the grocery business last fall, have returned to the cycle and will sell Orients this season.

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## LOCAL CYCLE SHOWS

### The Philadelphia Exhibition Draws Well Despite Poor Weather—The Springfield Show

Philadelphia, Feb. 20.—It is perhaps fortunate that the cycle show which was opened last Saturday evening under the management of the local cycle board of trade partook less of a national character than its promoters had hoped, for otherwise the evidences of unpreparedness manifest at many of the booths must have been increased manifold. As it was, some of the dozen or more out-of-town exhibitors were not on hand, their show material having been snow-bound on the road as a result of the blizzard earlier in the week. This was especially noticeable in the case of the automobiles, several of which were held up somewhere between here and Chicago and a number of others between Boston and this city.

#### It Rained the Opening Night.

While the pouring rain and the ankle-deep slush undoubtedly interfered with the opening night attendance, there was nevertheless a paying crowd present. President Brewster is hopeful that the present week, with its two holidays, election day and Washington's birthday, will more than make amends for the comparatively poor opening night crowd. Last Saturday night's crowd, under the meteorological conditions, certainly indicated no lack of public interest. The majority of the exhibitors seem to think that the show will have a beneficial effect, upon the retail trade especially. Those of the exhibitors who were represented at Chicago and New York were satisfied with the prospects, and intimated that in general appearance the exhibition compared favorably with its two prototypes, although not so comprehensive.

A striking feature of the show is the rivalry among the lamp men. Oil, acetylene gas and electricity—each has its advocates and followers, and the constant din of explanatory volubility gives one the impression of side show barkers at a country fair. But they're doing business, which, after all, is what they are after.

While the souvenir feature is not so apparent as in former years—due, perhaps, to the comparative smallness of the crowd—advertising schemes are not wanting. Guessing contests and free chances on pianos, phonographs, bicycle lamps, etc., may be mentioned in this connection.

#### The Exhibitors.

The following list of exhibitors will give an idea of the extent and character of the show, which is the third held under the management of the Philadelphia Cycle Board of Trade:

W. E. Anderson, Harrisburg, Pa.  
C. S. Armbruster, Philadelphia.  
Armbruster & Reed, Elmer, N. J.  
James Bellak's Sons—Keating and Elgin King lines.  
Frank E. Bundy Lamp Co., Elmira, N. Y.—Acetylene gas lamps.  
Claus Handle Bar Co., Milwaukee, Wis.—Adjustable handle bars.  
Clothier & Burrows, Philadelphia—Roman bicycles.  
Collins Pneumatic Hub & Wheel Works, Sayre, Pa.—Pneumatic hub wheel bicycles.  
Cosmos Bicycle Mfg. Co., Philadelphia—Capitol bicycles and specimens of enameling and electroplating.  
Michael J. Costa, Philadelphia—Union, Relay, Laurel and Viking bicycles.  
Cressman & Co., Philadelphia.  
Cushman & Denison, New York City—Pocket oilers, etc.  
Cycle Syndicate, New York City—Cycle specialties, Rusch saddles and Excelsior lubricant.

Devine Wheel Mfg. Co., Philadelphia—Luxury cushion tire bicycle.  
William Diebel, Philadelphia—Reading Standard bicycles and specialties.

Jos. Dixon Crucible Co., Jersey City, N. J.—Graphite in various forms.

F. L. Donlevy & Co., Philadelphia—Syra-cuse, Packer, Don and Andrae bicycles.

W. A. Ennis, Philadelphia.  
R. D. Garden, Philadelphia—Crescent bicycles.

B. F. Goodrich Co., Akron, O.—Tires.  
Hart Cycle Co., Philadelphia—Columbia, Hartford and Vedette bicycles.

Hawthorne & Sheble, Philadelphia—Dayton bicycles.

A. R. Justice & Co., Philadelphia—Iver Johnson, World, Trinity and Emerson bicycles.

Keeler Mfg. Co., New Albany, Pa.—Keeler flexible bicycle coupler.

LeFevre Mfg. Co., Philadelphia—Specialties, including bicycle stand, enameling stand, truing stand, wheel truer, sanitary saddle and spoke wrench.

John S. Leng's Son & Co., New York City—Ensign and Snell bicycles and specialties.

H. A. Lozier & Co., Cleveland, O.—Cleveland bicycles.

Manufacturers' Supplies Co., Philadelphia—Bicycles, supplies, fittings and sundries.

McCallister & Van Mater, Philadelphia—Crawford, Crown, Hoffman, Pierce and Race cycle bicycles.

William P. Miller's sons, Brooklyn, N. Y.—Excelsior bicycle lubricants.

Norman Wheel Co., Philadelphia—Norman bicycles.

Philadelphia Optical Co.—Bicycle glasses.  
Ramsay Swinging Pedal Co., Philadelphia—Swinging pedals and toe clips.

Jacob Rech & Sons, Philadelphia—Sterling, Clipper and Featherstone bicycles.

Wolfgang Richter, Philadelphia—Acetylene gas lamp.

Wm. B. Riley & Co., Philadelphia—Bernasco saddles.

Roach & Barnes, Philadelphia—Stearns, Waverley, National and Clover bicycles.

George W. Robb Cycle Co., Philadelphia—Light and Olive bicycles.

Rose Mfg. Co., Philadelphia—Neverout lamps.

Rowland & Christ, Philadelphia—Exercisers.

H. H. Sawyer, Philadelphia—Wolff-American bicycles.

D. B. Saxton, Philadelphia.

J. B. Shannon, Philadelphia—Remington bicycles and sporting goods.

Charles S. Smith & Co., Philadelphia—Rambler, Ideal and Reading Special bicycles.

Marshall E. Smith & Bro., Philadelphia—Spalding and Marshall bicycles, sundries and sporting goods.

N. Snellenburg & Co., Philadelphia—March bicycles and bicycle clothing.

R. C. Stevens, Philadelphia—Erie bicycles.

A. P. Swoyer Co., Philadelphia—Searchlight gas and oil lamps.

W. W. Taxis, Philadelphia—Union, Delaware and Peerless bicycles and Record pedals.

E. K. Tryon, Jr., & Co., Philadelphia—Stormer and Pennant bicycles and general sporting goods.

Twentieth Century Mfg. Co., New York City—Oil lamps.

Veeder Mfg. Co., Hartford, Conn.—Cyclometers.

Wessels & Walz Cycle Co., Philadelphia—Liberty bicycles.

H. T. Wise & Co., Philadelphia—Cements and lubricants.

William Wrigley, Jr., & Co., Philadelphia—Wrigley and Kinzie bicycles.

### SPRINGFIELD CYCLE SHOW

Local Exhibition in Massachusetts Succeeds Despite Untoward Weather—Business Transacted.

Springfield, Mass., Feb. 20.—The cycle show held in the Auditorium last Tuesday, Wednesday and Thursday was the most pretentious effort in that direction that has yet been made in Western Massachusetts. The number of exhibits was not so large as the management had hoped for, but those who had booths express themselves as satisfied with the

experiment and willing to engage space another season.

The show encountered the severest snow storm in recent years, and it was found impracticable to get motor vehicles inside the Auditorium. Despite these drawbacks the show cleared expenses. Several exhibitors made sales for spot cash and one manufacturer placed agencies in four neighboring towns.

The exhibitors of bicycles were as follows: M. D. Stebbins, the Chilion wood frame bicycle; George Sibley, the Dayton; White Sewing Machine Company; E. A. Nelson, Trinity and Olive; Forbes & Wallace, Keating and Lenox; Hendee & Holden, Indian; Guy Furniture Company, Monarch; Luther-Eames Company, Eagle; Taylor & Son, Stearns; Industrial Cycle Company.

### Week's Exports from New York.

Exports of bicycles and bicycle materials from the port of New York for the week ending February 14 are recorded as follows:

	Bicycles.	Mtls.
Germany . . . . .	\$14,343	\$9,258
France . . . . .	11,634	2,146
England . . . . .	9,656	3,534
Belgium . . . . .	3,355	1,575
Argentine Republic . . . . .	3,988	.....
New Zealand . . . . .	2,489	.....
Russia . . . . .	2,047	.....
Holland . . . . .	1,818	387
Brazil . . . . .	1,343	.....
Australia . . . . .	108	540
Denmark . . . . .	500	170
Mexico . . . . .	243	398
Uruguay . . . . .	420	.....
British Guiana . . . . .	399	.....
Scotland . . . . .	50	250
British East Indies . . . . .	97	160
China . . . . .	232	.....
Austria . . . . .	.....	210
Sweden . . . . .	176	.....
Cuba . . . . .	156	.....
Venezuela . . . . .	.....	41
Porto Rico . . . . .	38	.....
British West Indies . . . . .	20	.....
Totals . . . . .	\$53,115	\$18,669

### Freezing of Acetylene Lamps.

Several instances have been reported this winter of the freezing of the water in the reservoirs of acetylene lamps when riding on cold days. To avoid this one should not fill the reservoir until approaching darkness warns that lighting up time is at hand. Nor should the light be permitted to go out while the rider is resting and warming himself indoors. Except in excessively cold weather the heat of the chemical action in the carbide and of the burning gas is sufficient to prevent freezing of the water when the lamp is in use.

### Fire Damages Artemis Plating Works.

The offices and salesroom of the Artemis Plating Works, at 73 West Jackson street, Chicago, were damaged by fire last week at an estimated loss of from \$75,000 to \$80,000 on stock and fixtures. Insurance adjusters are now taking an inventory, and it will be a week or ten days before affairs can be straightened out and shipments made. The factory is on West Fourteenth street.

### Restraining Order Against Vehicle Tax.

A temporary restraining order against the enforcement of the new ordinance passed in Terre Haute, Ind., requiring the payment of a license by all users of vehicles and bicycles in the city streets, has been issued by Judge Piety upon the petition of a large number of cyclists and prominent citizens who own carriages.

Most of the goods exported to the South African Republic pass through Port Elizabeth, which is 839 miles from Cape Town by rail, has a population of over 25,000, and is the second city of Cape Colony in importance.

**SHOW FOR NEW YORK DEALERS**

**SUBSTITUTE FOR "OPENING DAY"**

**Houses Not Represented At January Exhibition Are Evincing Interest in the Affair.**

Somehow or other it has come to be recognized as the correct caper for outsiders to charge a smart price for serving the interests of the retail cycle trade in such matters as local shows. To this general custom there is but one noteworthy exception, to wit, the Denver function, which is being housed and staged free of cost to exhibitors by a man of experience whose affectation of interest in the affairs of his exhibitors is real and not spurious. The cry of "free space" has been heard so often of late that it would not be surprising if this much coveted gift were really to be the trade's portion on the occasion of all future shows, except in such cases as when the dealers or makers finance and conduct the exhibitions.

A \$16,000 Guarantee.

Though the promoters of the New York dealers' show, which is to take place at the Grand Central Palace from March 23 to April 1, declare that they are meeting with hearty encouragement, yet like the promoter of the January exhibition they will take no chances on the gate.

Nothing but the test of public attendance, however, will decide whether the promoters of this second cycle exhibition are ahead of time with their project or have been blanketed by the prince of showmen, as Col. Pope admirably calls the urbane Sanger. But be this as it may, they are shrewd enough at finding a philosophy to match their enterprise, and here it is:

**Argument for the Show.**

"The show is designed to take the place of the 'spring opening' scheme which was tried last year by the New York dealers, offering an opportunity for agents to display their lines at a time when the roads are beginning to become suited for continuous riding and wheelmen may be presumed to be ready to place orders and deposit money for immediate deliveries. 'Spring openings' attract buyers, but, widespread as are the establishments of the New York dealers, it is not possible for any of them to secure the visits of more than a comparatively small portion of the entire number of buyers, few of whom are able to find time to go the rounds of all the stores in which the goods they wish to examine are on sale.

**Certain Makers Evince Interest.**

"Space diagrams and other printed matter concerning this exhibition have been distributed among all the dealers in bicycles and sundries in New York and among local branch houses, and have also been sent to manufacturers, as it is presumed that many of the latter will wish to take up with their agents and branches nearest New York the matter of having their product represented. Considerable interest is being evinced by manufacturers who were not represented at the recent shows, and who, according to their statements, regard the local show as an institution to be cultivated."

**Tourists' Customs Privilege Abused.**

The reciprocal customs arrangement consummated last year between the United States and Canada, whereby members of the L. A. W. and C. W. A. can

take their bicycles across the border free of duty by presentation of their membership tickets to the customs officers and a statement that they will return with the machine within a certain limited period, is in danger of being abrogated because of the failure of about fifty riders from this country to return within the specified time. L. A. W. officials are making strong efforts to keep the agreement in force and the League may even go to the extent of paying the duty on the fifty machines, which will be small, rather than have the privilege revoked. A more careful watch is to be kept hereafter on those who take bicycles across the border as tourists, their names and League numbers being recorded so that they cannot take a second machine into Canada until the first is brought back.

**ELEVATED CYCLE PATH**

**Work on Nine-Mile Wood Structure from Pasadena to Los Angeles to Begin At Once.**

A company has been organized in California for the purpose of constructing an elevated roadway from Pasadena to Los Angeles exclusively for the use of cycles and motor carriages. It will extend for a distance of nine miles through a charming country, by oak-dotted hills, through orange and lemon groves, through narrow valleys and broad streets in the most direct route possible, at an easy grade of one per cent. The way is to be elevated sixteen feet above the level of the streets, though it is sometimes fifty feet above the valleys.

The right of way, with the exception of two miles, has been purchased, and arrangements are being made for a terminal depot at Pasadena. The Los Angeles terminus will be on the plaza. Midway between the two cities, on a hill, 200 feet above the river bed, will be erected a casino and cyclists' club house, where open air concerts will be given and a cafe established.

In the center of the cycle path will be a three-inch rail to prevent collisions of cyclists going in opposite directions. Entrance and exit will be controlled by toll gates, and the sum of ten cents will be charged for the use of the path for the round trip. Work is to be begun immediately on the first six miles.

The projected cycleway will be ten feet wide and allow plenty of floor room for four riders abreast; the side rails—of base board and wire netting—will be five feet high, affording ample protection against accidents, yet allowing full view of the country; the floor itself will be of Oregon pine, an inch and a half thick; and great care will be taken to place the structure upon strong and well braced supports. The posts will all be charred at the base and filled in with cement, to protect them from decay and the entire structure will be painted dark green. When it is brilliantly lighted from end to end by incandescent lamps placed two hundred feet apart over the center of the wheeling space, a trip over it at night will be a treat new to cyclists.

In India the natives are often seen riding bicycles fitted with rat-trap pedals, which they push with their unprotected feet. From lifelong exposure and use on all kinds of ground the soles of their bare feet become toughened and insensible to ordinary pricks and scratches.

Tires of German military bicycles are reported to be made with an ordinary outer cover enclosing another tire, the lower half of which is of soft, spongy rubber, while the half nearer the rim is composed of solid segments of cork which are severed transversely at places.

**NEW CYCLE REPAIR CHARGES**

**ADOPTED BY COLUMBUS AGENTS**

**First Attempt to Establish Uniform Prices for Repairs—Dealers Take Kindly to It.**

Columbus, O., Feb. 20.—The appended list of prices on bicycle repairs has just been adopted by the dealers' association of this city. It is, of course, a little too early to predict what results will follow the establishment of this list, particularly as no efforts of a similar character have been attempted or tested here before. The dealers, however, have been so unanimous in their action upon all subjects looking to the betterment of all retail trade conditions that it is confidently expected the schedule of prices will be closely adhered to. Every effort will be bent to persuade the repairmen that it is also to their advantage to maintain the prices herewith quoted:

Frames cut down and re-enameled, plain colors, wheel brought knocked down .....	\$5.00
Re-enameled, plain colors, knocked down .....	2.50
Re-enameled, plain colors and striped .....	3.50
Re-enameled, fancy colors and striped .....	5.00
Taking wheel apart and putting together, extra .....	1.00
General overhauling, bearings only ..	1.00
General overhauling, bearings and cleaning nickel .....	1.50
Truing and aligning frame.....	\$1.50 to 2.00
Truing and aligning forks.....	.50 to 1.00
Spokes, one .....	.25
Spokes, two .....	.35
Each additional put in.....	.10
New rims put on, plain.....	2.00
Pair rims put on, plain.....	3.50
G. & J. rims put on, each.....	2.50
Truing wheel in frame (fair condition).....	.25 up
Truing wheel in frame (bad condition) ..	.50 up
Punctures double tube, laced tires....	.50
Single tubes, one plug .....	.25
Single tubes, two plugs.....	.50
Jiffy or Vimoid, each hole.....	.25
Clincher tires .....	.35
M. & W. valve and stem.....	.50
Cement on tire .....	.25
Vulcanizing, casing and repairing tube, small hole .....	.75
Vulcanizing, casing and repairing tube, large hole.....	1.00
Vulcanizing end of inner tube, removed and replaced .....	.50
Vulcanizing valve stem, single tube...	.75
Straighten crank .....	.25
Straighten handle bar .....	.25 up
Truing sprocket .....	.25 up
Cleaning bearings .....	1.00
Vulcanizing single tube, small hole...	.50
Vulcanizing single tube, large hole....	.75
General overhauling .....	1.50
Cleaning spokes and varnish and enamel rims, per pair.....	1.00 up
Chain guard complete and lacing.....	1.00
Dress guard, complete .....	1.00
Lacing mud guard .....	.50
Lacing chain guard .....	.25
Put on rear stays .....	.50
Pedal rubber put on.....	.40
Repair chain .....	.25

**Acetylene Gas for Lighting Stores.**

What is the cheapest way to illuminate a store?

This question was discussed in a meeting of dealers one day last week, when it was stated that new methods of illuminating were coming up which might be used to advantage. One man said he had some experience with acetylene gas, finding it satisfactory. He had trouble at first, but learned how to operate it and now liked it very much. Electric light in his store had cost him \$3.95 per month for six lights. He now has twelve acetylene gas lights, which cost him \$4 per month or about the same, but he gets at least one-third more light and has it for use at all times of the day, whereas electric light was not furnished in the morning when probably it would be necessary to have light if the day was very cloudy, or on winter mornings when days are short.

Thirty-inch wheels are becoming popular in France.

# CRESCENT Bicycles

## at the Crest of Favor.

High Grade and  
Low Price tell the  
Story for 1899.

In '95 we talked a good deal about the Crescent Bicycle.  
Sold 57,000 that year.

In '96 the Crescent spoke for itself on thousands of American roads.  
Sold 70,000 that year.

In '97 every Crescent rider was talking about the wheel to everybody else.  
Sold 83,000 that year.

In '98 we told what the Crescent was, what the Crescent did, and what Crescent riders said.  
Sold over 100,000 that year.

Our illustrated catalogue  
No. 2, free.

WESTERN WHEEL WORKS,  
CHICAGO. NEW YORK.

NEW TESTIMONIALS EACH WEEK.

# MILWAUKEE TIRES

## PUNCTURE PROOF

Pneumatic

Resilient



Single Tube

Easy Riding

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PRESENTING TESTIMONIALS.

HUNTINGTON, W. VA., Dec. 1, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen:—It affords me much pleasure to give you a testimonial of your Milwaukee Patent Puncture-Proof Tires. I have been using your puncture-proof tire for some time and consider it THE BEST TIRE I ever saw, notwithstanding the fact I have ridden some of the best tires on the market including the Palmer. Respectfully, (Signed) W. F. BOWEN.

THE ERNST WAGNER COMPANY,  
Wholesale and Retail Hardware and Bicycles.

MANITOWOC, Wis., Nov. 22, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen:—I have used one of your tires on my own wheel, and I do honestly believe it to be the BEST TIRE made to-day. (Signed) E. WAGNER.

Representatives Wanted. Write for Prices and Other Information.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.

# THE CYCLE AGE

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

Published every Thursday at 324 Dearborn Street, Chicago.  
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ALL remittances should be made to THE CYCLE AGE COMPANY.

## LOCAL CYCLE PUBLICITY

The disbandment of the National Board of Trade of Cycle Manufacturers has apparently created a very widespread impression to the effect that hereafter all organized work within the cycle trade must be considered hopeless. It was the signal for a go-as-you-please policy diametrically opposed to the previous policy of central regulation and may have affected the enterprise and vitality of several local cycle boards of trade.

In reality the National board fell because it failed to regulate or regulated too harshly, and not because it regulated too much. It died through internal disagreement, because the interests of its members and those of the trade at large clashed. In the beginning of its existence it organized about forty local boards of trade and these are continuing after the parent body's disruption. For the cycle dealers who compose these local organizations to lag in their work would undoubtedly be a mistake. They possess the vital principle which the national board lacked, namely identity of interests of the members. And they have a hundred and one ways of accomplishing good results in all towns not exceeding, say, 150,000 inhabitants.

It has never been the hidebound local organizations that wanted to regulate everything which thrived; but much good work has been done by local boards whose members came together at short intervals and after talking things over agreed upon certain informal rules for conducting their business.

In the past year such boards have found it possible, for example, to suppress all donations of cycle sundries with the sale of bicycles, and by this alone have saved their members several hundred dollars apiece. They have also found it practicable to maintain reasonable prices for repairs by keeping the same within the limits of two schedules, one giving the maximum price that the public should be expected to pay and another the minimum price for the dealer or repairman to accept.

Besides other forms of work, which may be best prosecuted by local cycle boards in conjunction with other branches of trade in a community, the regulation of local publicity for cycle matters presents an attractive field for energetic cycle dealers. Many newspapers in the minor towns have been in the habit of casting slurs upon the cycle trade and echoing every rumor of low prices, etc., without giving heed to the harmful effect to local trade of so doing and without investigating at all if the rumors were well founded. Their desire for printing matters pertaining to cycling should be turned in another direction; and it is easily within the power of local cycle boards to do so by furnishing reading matter which will stimulate the public interest in cycling instead of holding it back. It may be obtained from cycle trade papers in this country and England and from journals devoted to outdoor sports. Manufacturers may also be laid under contribution to supply it.

In local advertising the boards may assist their members by contracting in block for the season's work, obtaining not only lower rates but impressing the publishers with the necessity of catering to the trade by good composition and press work and open-handed hospitality for cycling news of reliable character and general interest.

Since it is being gradually acknowledged that the hardware man or the jeweler or the farm implement dealer who also sells bicycles, will make his advertising much more effective if he does not mix his goods in his announcements but advertises bicycles separately from other lines, it should

be comparatively easy to induce members of local boards to appropriate a certain sum for cycle advertising at the beginning of the season and invariably hand their advertisements to the publishers through the secretary of the board.

The saving would be instantaneous; the ultimate effects to encourage cycling in the many social forms of the pastime which have not yet been much cultivated, would be incalculable if the practice of supplying good reading matter became general.

## EXPRESS COMPANIES YIELDING

All the bicycle dealers and other merchants who during the last few months have expressed their opinions in regard to express rates and the means for regulating them in communications to this paper may feel that they have contributed their share toward bringing about a reform which the defunct National board of the cycle trade proved powerless to cope with. The Merchants' Association of New York which led the crusade against unjust express charges has ordered a truce pending negotiations with the express companies looking toward an amicable agreement.

This is probably the first time in the last three decades that the express companies have found it politic to keep their ear to the ground and listen to an argument in favor of reducing their income, and while the communications to this paper alone would have been without effect to bring about this first step toward a betterment of conditions, they have proved valuable material of war in conjunction with the ammunition furnished by other trades and by the New York association.

"In case agreement by negotiation cannot be reached," says the latter, "we shall resume with vigor our efforts to have express charges regulated by law." From this statement it may be surmised that the Merchants' Association will try to give the negotiations now pending a national scope so that the entire cycle trade will share the benefits of whatever amicable agreement the association sees fit to enter into. Doubt might be entertained on this point, because it is the avowed object of the combined merchants of New York "To foster the trade and welfare of New York" and not of any other part of the country unless incidentally.

In this instance the grievance is national, however, and a local remedy would not prove effectual or lasting or lawful.

Whatever inducements the express companies may hold out to the association in regard to express rates from and to New York, the association will not fail to see that it would cripple itself for all future work of any magnitude by taking a local view of a matter in which it has received aid from all over the country.

To the cycle trade the satisfactory progress which has so far been made points unmistakably to a new conception of the proper means for redressing troubles in the trade. In the past it has been attempted to do so through organizations within the cycle trade only and the results have not been flattering when dealing with large issues. Now the cue has been given for a more comprehensive method by which the cooperation of other trades should be enlisted, whenever their interests are identical with those of the cycle trade.

For local efforts as well as for those of national scope this means the hearty participation of cycle manufacturers, cycle jobbers and retailers in public movements which have a bearing upon their own prosperity.

\* \* \* \*

More than one concern now exclusively engaged in cycle manufacture is restlessly scanning the horizon for a sign which may be interpreted as a happy augury for the future. Three years of savage competition attended by countless follies and hardships has resulted in such a thinning of hopes that even the bravest recoil from considering the further stages of a strife which must leave the field eventually in possession of those who are best fitted to survive.

\* \* \* \*

Exclusive bicycle makers want side lines as badly as exclusive dealers, but do not desire to pick up with manufacture which will be as burdensome as that which they now carry on.

## BRAZING BY IMMERSION

### Frame Brazing Cost Largely Reduced By Anti-Flux—Experiments in the Hoffman Factory

The use of anti-flux for preventing the accumulation of brass on the outside of frame connections during the brazing process promises to be one of the most important operations tending toward the general adoption and economical practice of immersion brazing. Nearly every shopman who is thoroughly familiar with the dipping process concedes that the operator of the immersion furnace can braze more frames in a day, braze them more uniformly secure and with the consumption of less fuel than can the operator of the flame brazing table. The riddance of superfluous spelter is a problem which deserves much attention from experimenters because it is at present the point in immersion brazing which entails the most expense.

#### Filing is Expensive.

Though there are several improved methods for economically removing brass none has shown sufficient practicability to warrant the dropping of the long standing plan of filing. Pickling baths and emery belts have been only partial successes and each is open to severe objections. The bulk of the factories still file, and though the filing of a frame brazed by dipping is but little if any more difficult than the filing of a flame brazed frame the general desire for economy in this branch of cycle building which the dip process has stimulated makes the money spent in filing frames seem like a sheer waste.

The very fact that the brass that is filed off a frame joint is in no way necessary, and the further fact that the expense gone to in order to remove it is caused by the shortcoming of brazing methods, make it obvious that the best reduction of frame finishing costs is not through improved methods of spelter removal, but through practical prevention

unable to obtain satisfactory results from the preparations that have been known. The popular recognition of the fact that immense savings could be made by the use of a successful anti-flux has led to individual experimenting in various factories, and several superintendents and brazing foremen are now almost satisfied that they have compositions which will meet the requirements.

#### Anti-Flux Reduces Expense Two-Thirds.

Where a brazing furnace is installed and operated successfully, the cost of brazing per frame should not amount to more than 4 cents and the spelter used should not exceed 5 cents' worth, making a total brazing cost of 9 cents per frame. Systematic practice can doubtless lower these figures to 6 or 7 cents. Now if the frames be subjected to a sand blast before sending to the filers an additional expense of 4 cents each is added, and as an average on regular frames the filing will cost 35 cents per frame. This means that while doing 4 cents' worth of work and using a few cents' worth of spelter, the brazer has made necessary, because of the accumulation of brass on the outside of the joints, work amounting to 39 cents or a little over four times as much as the entire original expense of brazing.

Supposing that a perfect anti-flux were used in connection with the immersion brazing, the cost of spelter consumed would be reduced one-half or more, say to 2 cents per frame. Letting the actual cost of brazing remain at 4 cents, the total cost of brazing would be reduced at the start to 6 cents per frame, and there being but little brass on the outside of the joints the bulk of the usual filing work would be unnecessary. Adding 4 cents for sand blasting and 5 cents for what filing and emery cloth polishing would be needed the frames could be turned over to the enameling room for about 15 cents each. This figure in comparison with the average cost of brazing by the flame process and removing the accumulated spelter by filing, which altogether brings the expense up to about 53 cents, shows very clearly the advantages that are to be gained through the immersion process when once the right composition is found to use as an anti-flux.

#### A Successful Anti-Flux.

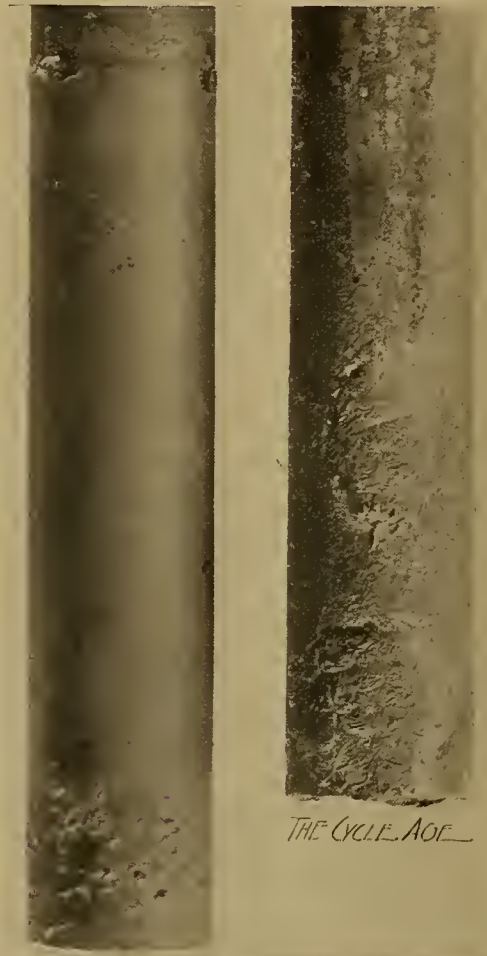
In the factory of the Hoffman Bicycle Co., of Cleveland, where the dipping method is regularly employed, an anti-flux is in use which yields the results shown in accompanying illustrations. The brass left on the outside of the steering head shown is practically limited to the portions in the immediate vicinity of the joint where it was necessary to leave the metal uncovered by anti-flux in order to insure perfect flow of metal into the joint. The cost of removing what spelter there is on the outside of the joint should not, after sand blasting, amount to more than 15 cents per frame, giving a probable total cost of brazing and finishing the frames ready for the enameling room of about 24 or 25 cents.

The left of the two straight tubes in the second illustration was painted with the Hoffman anti-flux and dipped in the brazing crucible as though it were a joint to be brazed. The only brass adhering to the outside of the tube was a light ring around the tube at the point

which marked the depth to which it was dipped and a few very small lumps scattered around the end of the piece. The other tube had before dipping been painted with an anti-flux which is on the market for general use. Either from the action of flux in the crucible, or on account of the heat, or because of both, the anti-flux only partially succeeded in keeping the brass from the tube, there being several large spots thinly coated with the spelter. After the dipping the anti-flux coating appeared in a striated condition and was as hard as a borax scale, thus making necessary either extra work for the filer, sand blasting or pickling.

#### Preparation of Anti-Flux.

Graphite has been the base of all anti-flux preparations made thus far on account of its heat resisting properties. It



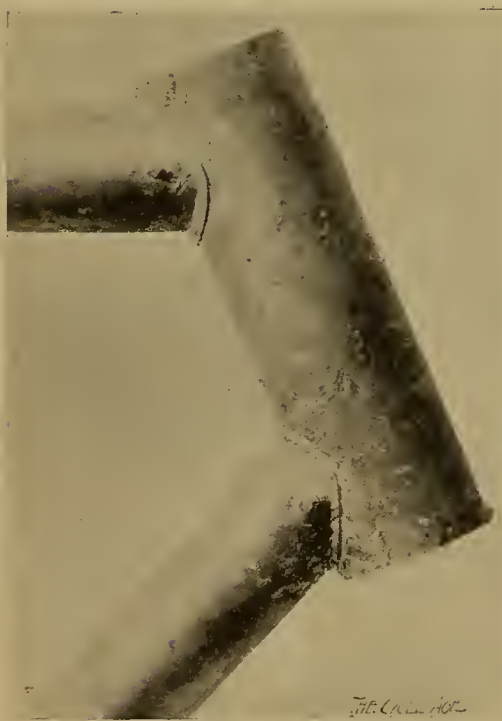
THE CYCLE AGE

GOOD AND BAD RESULTS.

is not known if late experimenters with anti-flux are using graphite, though from the appearance of the coating left on samples of work it is probable that the compositions contain some graphite. One of the earliest forms of anti-flux consisted of equal parts of rust or ferric-oxide, graphite and whiting or calcium carbonate, mixed with enough turpentine to give the composition a pasty consistency. Then in order to supply the necessary body for painting purposes varnish was added. Similar mixtures have been thinned with water, linseed oil and even stale beer, the exact nature of the mixing liquid seeming not to matter except as it furnished a good paint. Whether the oil used should be of a mineral rather than of a vegetable nature is not known. In fact so open are the various questions concerning the mixing of such preparations, the exact utility each of the various substances incorporated in them, that there is plenty of room for the intelligent experimenter.

#### Mineral Paint Can Be Used.

Thick bodied creosote paint, or any form of mineral paint such as is used by railway companies for painting property subject to exposure, gives fair results as a preventive of superfluous spelter. Such material has been used in a few instances



THIS PIECE WAS ANTI-FLUXED.

of superfluous spelter. For this reason, then, anti-flux becomes an important item in immersion brazing. Though anti-flux was proposed almost as early as was the dipping process it has never been widely adopted because brazers have been



by flame brazers who brushed it over the joints, covering all of the outside surface except that portion immediately around the joint into which the brass had to be flowed. If it should prove a satisfactory anti-flux for immersion brazing its advantage of being quite cheap and readily obtainable would count much in its favor.

One of the latest attempts at the production of a new anti-flux compound is that of a Chicago manufacturer who states that he has a very successful preparation, but that it demands the use of a specially constructed furnace. All of the successful immersion furnaces now in operation are arranged so that the flame and heat rising from the fire box are deflected to pass over the top of the crucible and keep the surface spelter at the proper temperature. This experimenter's anti-flux while it stands the heat of the brazing furnace will not stand direct contact with the flames, and so to use it successfully a furnace must be constructed in which there are no flames covering the crucible. How well this can be done is a matter of conjecture, but it certainly opens up a field for careful study on the part of furnace builders. If a furnace could be built in which the flames were confined and not allowed to pass over the top of the spelter, and which would still heat the brass at the top as well as at the bottom of the crucible, it would have the added advantage of affording much more comfortable operation than do the furnaces as now ordinarily built.

**FAVORS IMMERSION BRAZING**

**Hofman Bicycle Co. Finds the Process Satisfactory and More Reliable Than Flame Brazing.**

The following letter received from the Hoffman Bicycle Co. is good evidence of the fact that when intelligently operated the dip brazing process has many points of superiority over the old flame method. It particularly brings out the fact that not until the immersion process was adopted were manufacturers able to successfully braze fish mouth reinforcements or internal lug branches. The Hoffman Co. strikes a true note in its remarks about the fitting of joints and the impossibility of brazing poorly fitting joints by the immersion process.

To the Editor:—Having had considerable experience in dip brazing, we beg to say that in our judgment it is preferable to the old style of brazing. Up to the present season we used the old blow pipe process. We found in many instances that it was difficult to braze fast fish mouth reinforcements with this process. The difficulty was to get the spelter to run evenly all around and to make sure it was brazed, as we were unable to see on the inside of the tube. We find with the new process, properly handled, it is an easy matter to braze fast a fish mouth reinforcement, or any sort of internal joint.

To illustrate the fact that such brazing can be handled perfectly, we are sending you under separate cover one of our regular bicycle heads, onto which we have brazed a short section of tubing such as we use in the construction of our bicycles, which we have sawed open to prove that dip brazing can be done successfully. We ask you to criticize this joint and find any fault you may be able to with it.

The trouble seems to be that a great many people criticize a certain line of work before they are familiar with it. In the first place, to braze with this process successfully it is necessary to have the right kind of apparatus, and in the second place it is necessary to know when the work is right. We have no difficulty in brazing with the dip process. We have overcome all obstacles in this line and have a perfect system, whereby the brazing can be done with absolute certainty. Regarding burning the tubing, would say that in our judgment the tubing is not so liable to be burned as by the old process, as the old process of brazing usually heated the tubing hotter on one side than the other, and sometimes it was necessary to get an excessive heat in order to get the spelter to flow evenly all around, and then there was no certainty that the joint was brazed. With the new process the spelter can be made to flow evenly, and at the same time the tubing heated evenly all over and it is not necessary to get the tubing so hot it will burn the carbon out.

Regarding the joints having to be made perfect, would state it has always been our policy to make perfect fitting joints, and a joint that is not perfect enough to braze with the dip process is not perfect enough to put into a bicycle, as it not only makes poor and defective construction but it endangers the life of the rider, which is certainly the most important feature of the lot. Owing to the sharp competition many manufacturers, in their efforts to make their goods at low cost, disregard many important features that should be attended to.

If the heads of all manufacturing concerns were mechanics, and would look into the construction themselves more carefully, in our judgment there would be a tendency to make a better class of goods, which would command better prices. The public is willing to pay for a good article providing they are sure of getting a good article, but competition has been so sharp that each one is trying to beat the other in price, and the result is that bicycles are being made today, and sold at ridiculous prices, which are not only unsafe but which are a disgrace to the bicycle business. In our judgment the time is near at hand when better construction will have to be made, and we hope this time will arrive very soon.

HOFFMAN BICYCLE CO.

**Susan Van Doozen.**

I'll write, for I'm witty, a popular ditty,  
To bring to me shekels and fame,  
And the only right way one can write one today  
Is to give it some Irish girl's name;  
There's "Rosy O'Grady," that sweet "steady lady,"  
And dear "Annie Rooney," and such,  
But mine shall be nearly original, really,  
For "Susan Van Doozen" is Dutch.

"Oh! Susan Van Doozen, the girl of my choos'n',  
You stick in my bosom like glue,  
When this you're perus'n' remember I'm mus'n'  
Sweet Susan Van Doozen, on you;  
So don't be abus'n' my offer, and bruise'n'  
A heart that is willing to woo,  
And please be excus'n', not cold and refus'n',  
Oh! Susan Van Doozen, please do!"

Now, through it I'll scatter—a quite easy matter—  
The lines that we all of us know,  
How "the neighbors all cry as she passes them by,  
"There's Susan the pride of the row!"  
And something like "daisy" and "setting me crazy"—  
These lines the dear public would miss—  
Then chuck a "sweetheart" in, and "never to part" in  
And end with a chorus like this:

"Oh! Susan Van Doozen, before I'd be los'n'  
One glance from your eyes of sky blue,  
I vow I'd stop us'n' tobacco and booz'n'—  
That word is not nice, it is true—  
I wear out my shoes 'n', I'm los'n' my roos'n'—  
My reason, I should say, dear Sue—  
So please change your views 'n', become my own Susan,  
Oh! Susan Van Doozen, please do!"  
—L. A. W. Bulletin.

**SPEED ON HILLS**

**Keeping the Effort Constant—Overexertion Avoided by Proper Regulation—Effects of Wind.**

Experienced riders well know that a constant amount of exertion in riding is less fatiguing than intermittent bursts of speed efforts alternating with periods of relaxation. It would seem, therefore, that it would conduce to ease in cycling if one were careful to exert himself just as much going up a slight slope as down one, and, of course, he could do this by properly adjusting his speed, according to the deductions of an English professor from some experiments to determine the air resistance to cyclists. Thus, supposing one's usual rate of riding to be about 12 miles per hour, then if he comes to a hill whose flanks slope at 1 in 60 the proper pace to ride up the hill would be 4 miles an hour, and 20 miles per hour down the opposite side; this would provide for the same exertion going up or down; similarly, if the slope be 1 in 120, the speed up is 8 miles per hour, and the speed down is 16 miles per hour.

When a rider is going very fast, as in going for a record on the road, he should pay far less regard to the hills and ride

more as if they never existed; in fact, while for ordinary riding a hill of 1 in 80 changes a speed of, say, 12 miles an hour (on the level) to 6 miles an hour up the hill, and 18 miles an hour down it, yet for a racing pace of, say, 20 miles per hour that same hill will only change the pace (for equal exertion uphill and down) from 20 miles an hour (along the level) to 16 miles an hour up the hill, and 24 miles an hour down. So that the variation in speed is only 8 miles per hour, or 40 per cent in the last case, while in the first case the variation was 12 miles per hour, or 100 per cent.

As an example of the effect of wind other than that caused by one's own motion, first take the case of riding on a straight road at 12 miles per hour with the wind dead against one. If the velocity of the wind (relative to the road) be 8 miles per hour, the effect on the cyclist is as though he were climbing a hill of 1 in 60 all the time, and if the velocity of the wind increases to twenty miles per hour it is as if the cyclist were climbing a slope of 1 in 20—a good stiff hill.

Now take the far preferable case of the cyclist having the wind with him. If the velocity of the wind be 8 miles per hour it helps him as though the road sloped downhill at an incline of 1 in 120; should the wind become a brisk breeze of 20 miles per hour the apparent downhill slope becomes 1 in 80, and, lastly, if the wind become a small gale of 40 miles per hour the cyclist feels as if the slope were 1 in 20, and as that is inconveniently steep it would necessitate using a brake.

**English Exports for Three Weeks.**

Exports of bicycles, materials and sundries from all the ports of England for three weeks ending Feb. 3 are recorded as follows:

Perth, Australia . . . . .	\$ 3,785
Rockhampton . . . . .	963
Adelaide . . . . .	842
Sydney . . . . .	3,538
Melbourne . . . . .	26,087
Freemantle . . . . .	673
Brisbane . . . . .	290
Newcastle . . . . .	44
Durban, South Africa . . . . .	15,773
Cape Town . . . . .	12,952
Port Elizabeth . . . . .	7,105
Flushing . . . . .	14,606
Invercargill, New Zealand . . . . .	1,230
Nelson . . . . .	407
Wellington . . . . .	2,895
Napier . . . . .	203
Auckland . . . . .	945
New Plymouth . . . . .	48
Christchurch . . . . .	1,389
Otago . . . . .	1,781
Kurrachee, India . . . . .	1,423
Bombay . . . . .	5,031
Calcutta . . . . .	2,265
Madras . . . . .	1,970
Bangkok . . . . .	774
Colombo, Ceylon . . . . .	242
Boulogne . . . . .	1,592
Amsterdam . . . . .	87
Bremen . . . . .	78
Ghent . . . . .	862
Brussels . . . . .	48
Ostend . . . . .	527
Bordeaux . . . . .	1,031
Hamburg . . . . .	97
East London . . . . .	1,070
Lyttleton . . . . .	1,699
Penang, Straits Settlement . . . . .	702
Shanghai . . . . .	1,176
Hong Kong . . . . .	145
Yokohama . . . . .	92
Tientsin . . . . .	53
Barbados . . . . .	82
Bermuda . . . . .	73
Buenos Ayres . . . . .	116
Madeira . . . . .	48
Malta . . . . .	169
Mauritius . . . . .	310
Mossel Bay . . . . .	174
Gibraltar . . . . .	271
Berbice . . . . .	73
Piraeus . . . . .	402
Townsville . . . . .	261
New York . . . . .	397
Smyrna . . . . .	92
Sourabaya . . . . .	73
Hiago . . . . .	58
Launceston . . . . .	48
Total . . . . .	\$119,177

A street sweeping motor is now to be seen in Paris.

# Current Cycle Manufacture

In the following table, which will be continued in subsequent numbers of THE CYCLE AGE, will be found an amplification of that class of information which is customarily given in catalogues issued by makers of bicycles, saddles, bells, lamps, chains, rims, cyclometers, etc. It will serve as a handy reference for dealers.

Firm Name	Model	List Price	Weight (all on)	Depths of Frame	Width of Tread	Form of Joints	Form of Front Crown	Drop of Hanger	Rear Fork Tubing	Rear Stay Tubing	Lugs at Bottom Bracket	Lugs at Seat-Post Cluster	Crank Hanger Form
FULTON MACHINE WORKS.....	Men's Thistle	\$50	23 lbs.	22, 25	4 1/2 in.	Flush	Oval	3 in.	D sh'pe	Round	4	4	Three Piece
	Women's "	50	24 lbs.	21, 23	4 1/2 in.	Flush	Oval	3 in.	D sh'pe	Round	4	4	Three Piece
	Men's Fulton	40	23 lbs.	22, 25	4 1/2 in.	Flush	Oval	3 in.	D sh'pe	Round	4	4	Three Piece
	Women's "	40	24 lbs.	21, 23	4 1/2 in.	Flush	Oval	3 in.	D sh'pe	Round	4	4	Three Piece
	Thistle Racer	50	21 lbs.	22, 25	4 1/2 in.	Flush	Oval	3 in.	D sh'pe	Round	4	4	Three Piece
GENEVA CYCLE CO.....	Model 1, Men	25	25 lbs.	22, 24, 26	4 7/8 in.	Outside	Oval	2 1/2 in.	Comb.	Comb.	4	4	Two Piece
	" 2, Women	25	26 lbs.	22, 24,	4 7/8 in.	Outside	Oval	2 1/2 in.	Comb.	Comb.	4	4	Two Piece
	" 3, Men	30	24 lbs.	22, 24, 26	4 7/8 in.	Flush	Oval	2 1/2 in.	Comb.	Comb.	4	4	Two Piece
	" 4, Women	30	25 lbs.	22, 24,	4 7/8 in.	Flush	Oval	2 1/2 in.	Comb.	Comb.	4	4	Two Piece
	" 5, Men	50	24 lbs.	22, 24, 26	4 7/8 in.	Flush	Oval	3 in.	D sh'pe	D sh'pe	4	4	One Piece
	" 6, Women	50	25 lbs.	22, 24,	4 7/8 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe	4	4	One Piece
	" 7, Men	40	24 lbs.	22, 24, 26	4 7/8 in.	Flush	Oval	2 1/2 in.	Comb.	Comb.	4	4	One Piece
	" 8, Women	40	25 lbs.	22, 24,	4 7/8 in.	Flush	Oval	2 1/2 in.	Comb.	Comb.	4	4	One Piece
Mod'19, 30-in wh'ls	50	25 lbs.	23,	4 7/8 in.	Flush	Oval	4 in.	Comb.	Comb.	4	4	One Piece	
HAY & WILLITS MFG. CO.....	Outing Men, 25	50	25 lbs.	21 1/2, 23 1/2, 25 1/2	4 3/4 in.	Flush	Arch	2 1/2 in.	Comb.	D sh'pe	4	4	Two Piece
	Outing Women, 26	50	25 lbs.	19 1/2, 21 1/2, 23 1/2	4 3/4 in.	Flush	Arch	2 1/2 in.	Comb.	D sh'pe	4	3	Two Piece
	Outing Men, 28	35	25 lbs.	22, 24,	4 3/4 in.	Flush	Arch	2 1/2 in.	Comb.	Comb.	4	4	Two Piece
	Outing Women, 29	35	25 lbs.	20, 22,	4 3/4 in.	Flush	Arch	2 1/2 in.	Comb.	Comb.	4	3	Two Piece
HOFFMAN BICYCLE CO. ....	Comb. Tandem	100	45 lbs.	22, 24,	5 in.	Flush	Square						Two Piece
	Diamond Tandem	100	44 lbs.	23, 24,	5 in.	Flush	Square						Two Piece
	Model 32, Women	40	25 lbs.	20, 22,	4 3/4 in.	Flush	Square	2 1/2 in.	D sh'pe	D sh'pe	4	4	Two Piece
	" 31, Men	40	25 lbs.	22, 24,	4 3/4 in.	Flush	Triple	2 1/2 in.	D sh'pe	D sh'pe	4	4	Two Piece
	" 30, Women	50	25 lbs.	20, 22,	4 3/4 in.	Flush	Square	2 1/2 in.	D sh'pe	D sh'pe	4	4	Two Piece
	" 29, Men	50	24 lbs.	22, 24,	4 1/2 in.	Flush	Square	2 1/2 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Road Racer	75	23 lbs.	22, 24,	4 1/2 in.	Flush	Square	3 in.	D sh'pe	D sh'pe	4	4	Two Piece
Track Racer	75	19 lbs.	22,	4 1/2 in.	Flush	Square	3 in.	D sh'pe	D sh'pe	4	4	Two Piece	
KEYSTONE M. & M. CO.....	No. 5, Men	25		22, 24, 26	5 in.	Outside	Arch	2 1/2 in.	Round	Round	4		Single Piece
	No. 6, Women	26		20, 22, 24	5 in.	Outside	Arch	2 1/2 in.	Round	Round	4		Single Piece
	No. 11, Men	30		22, 24, 26	5 in.	Flush	Arch	2 1/2 in.	D sh'pe	D sh'pe	4		Single Piece
	No. 12, Women	31		20, 22, 24	5 in.	Flush	Arch	2 1/2 in.	D sh'pe	D sh'pe	4		Single Piece
	No. 15, Men	50		23,	5 in.	Flush	Arch	3 1/2 in.	Oval	Oval	4		Single Piece
	No. 17, Men	40		22, 24, 26	5 in.	Flush	Arch	2 1/2 in.	D sh'pe	D sh'pe	3		Single Piece
	No. 18, Women	41		20, 22, 24	5 in.	Flush	Arch	2 1/2 in.	D sh'pe	D sh'pe	3		Single Piece
	No. 19, Men	35		22, 24, 26	5 in.	Flush	Arch	2 1/2 in.	Oval	Oval	4		Single Piece
	No. 20, Women	36		20, 22, 24	5 in.	Flush	Arch	2 1/2 in.	Oval	Oval	4		Single Piece
	KIRK MFG CO.....	Model L and G	35	25 lbs.	20-26		Flush	Oval	2 1/2 in.	Comb.	Comb.	4	4
Model L and G Racer		50	24 lbs.	20-26		Flush	Square	3 in.	Comb.	Comb.	4	4	Two Piece
30 inch Wheels		60	20 lbs.	20-24		Flush	Square	3 in.	Comb.	Comb.	4	4	Two Piece
		60	26 1/2 "	23-25		Flush	Square	4 1/2 in.	Comb.	Comb.	4	4	Two Piece
LEAGUE CYCLE WORKS.....	28 inch Wheels	40	24 lbs.	22, 24, 26	5 in.	Flush	Oval	2 1/2 in.	Comb.	D sh'pe	3	3-4	One Piece
	30 inch Wheels	50	27 lbs.	23, 25,	5 in.	Flush	Oval	3 1/2 in.	Comb.	D sh'pe			One Piece
LINDSAY & CO.....	Pacific	75	24 lbs.	22, 24, 26 21, 23,	5 in.	Flush	Oval	2 3/4 in.	D sh'pe	Round	4 4	4 4	Fauber
LUTHY & CO.....	Roadster	75	24 lbs.	22,	5 in.	Fish Mouth	Arch		Round	Round		3	Three Piece
	Road Racer	75	23 1/2 "	22, 24,	4 1/2 in.	Fish Mouth	Arch	2 1/2 in.	Round	Round		3	Three Piece
	Special	75	22 1/2 "	22, 24,	4 1/2 in.	Fish Mouth	Arch	2 1/2 in.	Round	Round		3	Three Piece
	Lady Luthy	85	25 lbs.	20, 22,	5 in.	Fish Mouth	Arch	2 1/2 in.	Round	Round		3	Three Piece
	Track Racer	100	20 lbs.	22, 24,	4 3/8 in.	Fish Mouth	Arch	3 in.	Round	Round		3	Three Piece
	Comb. Tandem	150	44 lbs.	22, 24,		Fish Mouth	Arch	2 3/4 in.	Round	Round		3	Three Piece
	Fairy King Fairy Queen Men's Tandem		26 lbs. 27 lbs. 41 lbs.	22, 24, 20, 22, 22, 24,	4 7/8 in. 5 in.	Flush Flush Flush	Arch Arch Arch	3 in. 3 in. 2 3/4 in.	D sh'pe D sh'pe Round	D sh'pe D sh'pe Round	4 4 3	4 4 3	Fauber Fauber Three Piece
MASON & MASON.....	Soudan	40	24 lbs.	22, 24, 26	4 3/4 in.	Flush	Oval	3 in.	D Tapered	Round	3	3	Two Piece
MILWAUKEE ENGINEERING CO....	Famous	25	25 lbs.	21, 23, 25	4 7/8 in.	Comb.	Oval	2 1/2 in.	Oval	Oval			Two Piece
MILWAUKEE M'FG. CO.....	Model A		25 lbs.	22, 24, 25	4 3/4 in.	Outside	Oval	2 1/4 in.	Round	Round	4	3	Two Piece
	Model B		25 lbs.	20, 22,	4 3/4 in.	Outside	Oval	2 1/4 in.	Round	Round	4	3	Two Piece
NATIONAL AMERICAN CYCLE CO..	Pathfinder, 4 Mod.	50	23 1/2 lbs	22, 24, 26	5 1/4 in.	Flush	Oval	2 1/2 in.	Comb.	Round	4	4	Two Piece
NATIONAL SEWING MACHINE CO..	Model 25	60		22, 24,	4 5/8 in.	Flush	Arch	3 1/2 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Model 30	50		22, 24,	4 5/8 in.	Flush	Arch	2 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Eldredge Special	50		22, 24,	4 5/8 in.	Outside	Arch	3 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Ladies' Diamond	50		20,	4 5/8 in.	Flush	Arch	2 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Model 10 Model L	40 35		22, 24, 26, 22, 24,	5 in. 5 in.	Flush Outside	Arch Arch	2 in. 2 in.	D sh'pe Comb.	D sh'pe Round	4 4	4 4	Two Piece Two Piece
READING CYCLE M'FG. CO.....	Simplex	35		22x24 Men 21 Women		Flush	Oval	2 1/2 in.	Comb.	Comb.	4	3	Two Piece
	Vindex	40		22x24 Men 20x22 W'mn		Flush	Oval	2 1/2 in.	Comb.	Comb.	4	4	Two Piece
	Vindex Lt. Road	50		22x24		Flush	Special	2 1/2 in.	Comb.	Comb.	4	4	Two Piece
FRANK STURGES.....	Men, 8	50	24 lbs.	22, 24, 26		Fish Mouth	Arch	2 1/2 in.	Comb.	Tap'rd	4	3	Two Piece
	Women, 9	50	24 1/2 "	20, 22, 24		Fish Mouth	Arch	2 1/2 in.	Comb.	Tap'rd	4	3	Two Piece
	Men, 2	40	24 lbs.	22, 24, 26		Flush	Arch	2 1/2 in.	Comb.	Tap'rd	4	3	Two Piece
	Women, 3	40	24 1/2 "	20, 22, 24		Flush	Arch	2 1/2 in.	Comb.	Tap'rd	4	3	Two Piece
	Men, 6	35	25 lbs.	22, 25,		Fish Mouth	Arch	2 1/2 in.	Comb.	Tap'rd	4	3	Two Piece
	Women, 7	35	26 lbs.	22,		Fish Mouth	Arch	2 1/2 in.	Comb.	Tap'rd	4	3	Two Piece
	Diamond Tandem	75	38 lbs.	22x22, 24x24		Fish Mouth	Arch	2 1/2 in.	Comb.	Tap'rd	4	3	Two Piece
	Comb. Tandem	75	42 lbs.	22x24, 20x22		Fish Mouth	Arch	2 1/2 in.	Comb.	Tap'rd	4	3	Two Piece
	0	35	25 lbs.	22, 24,		Flush	Arch	2 1/2 in.	Comb.	Tap'rd	4	3	
	1	35	25 lbs.	22,		Flush	Arch	2 1/2 in.	Comb.	Tap'rd	4	3	



## LIABILITY OF MAKERS

### Important Decision in English Court Concerning the Protection Granted By the Guarantee

In a recent issue of the Cycle Age attention was drawn to the liability of bicycle makers if it should happen that their machines should break down through defect in structure while in possession of riders to whom the usual guarantee had been given. It was pointed out that the guarantee as it now stands is no guarantee against a lawsuit for heavy damages.

In one of the English courts a case has just come to notice in which verification of the risk which attends defective cycle manufacture has come prominently into view, and the maker who was unfortunate enough to be accused was mulcted in the sum of \$600 damages by a jury which were given no alternative in the matter of conclusion by the judge who tried the case. The case is one of more than usual interest for bicycle makers in this country, not alone on account of the fact that the same common law practice which obtains in England would by inference obtain in this country were a similar case carried to the higher courts, but on account of the fact that so many of our bicycle makers are sellers of goods in England.

#### Origin of the Suit.

An outline of the case is here given: An Irishman bought a bicycle from the Belfast agent of the makers of the Rover. He did not purchase the machine outright, but paid \$52.50 for it in exchange with a second-hand mount. Some months after the purchase he went to England and had the machine sent to his place of residence. One evening while riding at the residence of his employer the machine collapsed and the rider was rendered unconscious, in which condition he remained for four days. The damaged machine was sent to the factory with a polite note stating the particulars of the accident, and requesting that it be inspected and the plaintiff's claim for \$100, incurred through doctor's bills, be allowed. The makers of the machine, however, stood on their dignity and declined to do anything more than make good the parts which proved defective, which happened to be the front forks, but intimated their willingness to supply a new frame. These overtures were not accepted by the cyclist, and as a result he instituted a suit for \$2,500 damages.

#### Makers Stand Pat on Their Guarantee.

In responding to the letter of the injured cyclist, the makers of the machine stated that while the accident was a regrettable one, still they would not go beyond the guarantee contained in their printed catalogue, as they could not tell what abuse the machine might have had after it left their establishment. The attorney for the plaintiff, seizing upon this valuable point, established the fact that the machine had been traded or sold by the agent of the maker while represented as in fit condition to ride. In detail it was shown that the injured cyclist went to the agent's store, was given a catalogue of the Rover company and told that if he wanted a strong and reliable machine which would stand knocking about he should purchase the Rover. The plaintiff stated to the agent that he had heard of Rover machines breaking at the head, but the agent lightly told him not to place

credence in all that he heard. The cyclist took the catalogue home, devoured its contents and made up his mind to purchase a Rover.

The machine was used for six months, and then after an intermission of three months was shipped to England, where it was used for a month in daily trips of six miles each. One night while traveling at the rate of about ten miles an hour the steering post of the machine broke just above the crown, and when the rider recovered consciousness he found himself with the palate of his mouth broken, one tooth knocked out, others loosened, one of his lips cut, his face badly lacerated, and his body generally in as fit a condition for repair as his machine. It was testified that while riding the cyclist encountered no obstacle.

#### Bill for Doctor's Services Disallowed.

A claim of \$6 for spectacles, which doctor ordered, was not allowed the cyclist by the makers of the Rover, and then he pressed a further claim for a larger bill of expenses which, upon disallowance, resulted in the suit.

It was contended by the injured cyclist that the damaged machine was not reinforced in the steering post, a structural condition which, however, was found in the machine which was returned to him repaired. Through the assistance of various witnesses the injured cyclist proved that he was a very careful rider and that the machine did not show any signs of collision—in fact, that the bottom of the steering post was snapped clean off.

#### Defense of the Makers.

Upon presentation of all the evidence on both sides, the solicitor for the plaintiff urged the court to toss aside the value of the specific guarantee given by the makers in the catalogue. The attorneys for the defendant company urged that the onus of proving that the machine was not all that their clients guaranteed rested with the plaintiff, arguing that if the injured cyclist was successful in his action no cycle maker would be safe, and that commerce in cycle manufacture would be paralyzed. The defendants further pleaded through their counsel that they had guaranteed all precautions which were usual and reasonable had been taken by them to secure excellence in material and workmanship, and if the machine met with an accident it was not through neglect on their part. In a final effort to persuade the jury that no fault could be implied to the makers of the machine, it was declared that no evidence had been offered to show that the machine was constructed of bad material or by unskillful workmen; that the plaintiff bought a specified article under its trade name and obtained a receipt showing that it was a specified article; that, in short, there was no real contract between the injured cyclist and the maker or his agent.

#### An Unsympathetic Judge.

The judge, however, was disinclined to be sympathetic with the makers. He rejected as mere rumor that part of the evidence of the plaintiff which tended to prove that it was common for Rover machines to break at the head; summed up the evidence in the case and put the following significant questions to the jury,

which were answered in the manner indicated:

1. Did the plaintiff at the time of the sale make known to the defendants' agent, Mr. Gass, the particular purpose for which it was required, so as to show he relied on his skill and judgment?  
Answer: Yes.
2. Was the contract for the sale of the bicycle to the plaintiff in fact a contract for the sale of a specified article under its trade name?  
Answer: No.
3. Was there an examination by the plaintiff at the time of sale, which ought to have revealed any defect in the steering post, if it existed?  
Answer: No.
4. Was Mr. Gass agent for the sale of the bicycle to the plaintiff?  
Answer: Yes.
5. Did he represent to the plaintiff that the bicycle was then reasonably fit, and proper to ride?  
Answer: Yes.
6. If so, was the plaintiff thereby induced to buy it?  
Answer: Yes.
7. Was the bicycle then reasonably fit and proper to be used by the plaintiff?  
Answer: No.
8. If not, did it, by reason of its not having been sold reasonably fit and proper to be used, break down when used in April, 1898?  
Answer: Yes.
9. Before the sale, had all usual and reasonable precautions been taken by the defendants to secure excellence of workmanship and material in respect to the bicycle?  
Answer: No.
10. If not, did it by reason of such usual and reasonable precautions not having been taken break down?  
Answer: Yes.
11. Did the plaintiff sustain loss and injury by the breaking of the bicycle?  
Answer: Yes.
12. If so, assess his damages for the loss and injury he so sustained.  
Answer: £120 damages.

#### An Important Question.

It may be added that the jury found considerable difficulty in answering the second of the judge's questions. From a legal point of view it was the most important of the series, and had it been answered in the affirmative, judgment would have been entered in favor of the company, as the sale of a specified article under its trade name does not carry any implied guarantee.

The Cycle Manufacturers' Protective Association, which is the English trade organization which in function corresponds to the National Board of Trade of Cycle Manufacturers in this country, is deeply interested in the decision and in another like case which is pending. It is not the guarantee as it is printed in the catalogue of makers which is the center around which the legal battle is being waged, for that is a matter which has been settled out of court before this. But the paramount issue is, does this trade guarantee set aside the guarantee which is implied by common law?

#### Gutter Rights of Bicycles.

An English judge has decided that a bicycle standing in the gutter, propped up by the pedal on the curbstone, is entitled to protection from other users of the public street. Some overhanging wire in a passing cart pulled a bicycle under the wheels of the vehicle by catching the handle bar and the cyclist got his damages in court. Counsel pleaded that the cyclist left it at his own risk, and the accident was the result of his own negligence. Thereupon the judge pulled up counsel sharply and told him he was against the argument.

An important exhibition of motor vehicles is soon to be held in Verona, Italy, whose city council is now considering the programme for the occasion. It is proposed to hold there the first congress of Italian motor vehicle drivers, to have a promenade of vehicles through the city, a general display of the various automobiles and a road race of 103 miles.



TRADE MARK



90



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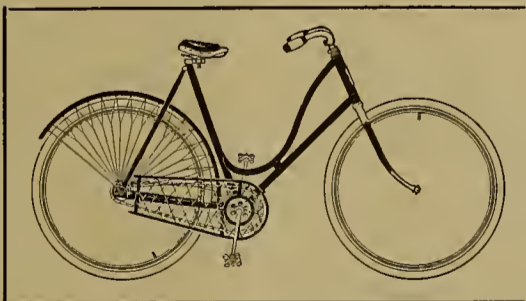
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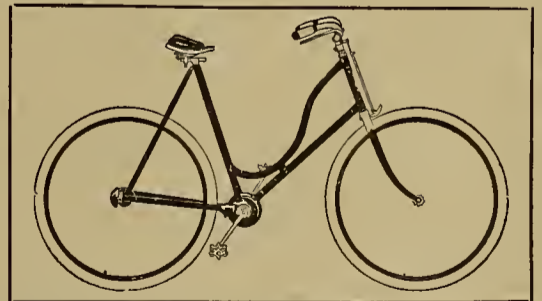
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• • • **Cleveland, Ohio** • • •

# To the Trade

**T**HE American Saddle Co. begs to announce that its organization has been completed, and that its general offices are located in the American Trust Building, Cleveland, Ohio.

The American Saddle Co. has acquired the properties and business of the following named companies:

THE GARFORD MFG. CO., Elyria, Ohio  
THE WHEELER SADDLE CO., Detroit, Mich.  
THE WHEELER SADDLE CO., Toronto, Ont.  
THE GILLIAM MFG. CO., Canton, Ohio.  
THE HUNT MFG. CO., Westboro, Mass.  
THE P. & F. MFG. CO., Reading, Pa.  
and a controlling stock interest in the  
BROWN SADDLE CO., Elyria, Ohio.

The primary purpose of the new organization is to arrest the calamitous conditions which have governed the saddle industry for the past two seasons, and which have deprived the makers of fair returns on their capital invested.

This it will strive to accomplish, not by the advancement in price of its product to the trade, but by the reduction of expenses and the cost of manufacture through concentrated management of its business and the employment in its several mills of the best special machinery and mechanical appliances known in the art of saddle building.

It will constantly endeavor to better the grade of its product, and by increased facilities extend better service than has heretofore been possible.

All communications should be addressed to the company at Cleveland, Ohio.

## The American Saddle Company

By A. L. GARFORD, President.

## LETTER FROM ENGLAND

### Common Misapprehensions in Regard to British Forms of Manufacture—Fine Work on Components

From force of habit and through constant repetition of rash statements in that part of the press which knows nothing of the condition of the bicycle industry in any country, it has become too broadly accepted that American bicycle manufacturers are far in the lead of all foreign competitors in everything that pertains to the art of bicycle production. That the assertion is true in a measure has prevented those who knew the exact conditions on both sides of the Atlantic from gainsaying it, for the public are impatient of fine distinctions and favor unmeasured expressions of opinion if they may be only half-way defended.

#### Reasonable Foreign Opinions of Value.

In many instances American manufacturers have not found out the real nature of the competition which they would meet in the export markets until they had entered them and been brought face to face with foreign productions. They did not, then, as a rule, find that the obstacles to successful trade were insurmountable but only that they would have been gainers if they had listened less to the colored reports which found their way into the majority of our press and more to the sober accounts given in *Cycle Referee* of London, and from time to time in *The Cycle Age*. Such views as are entertained by unbiased members of the English or German industry have seldom been presented, and the *Cycle Age* therefore takes pleasure in publishing a letter from such a source, accompanying it with illustrations of the two crank hanger constructions to which the writer refers, one being that of the Birmingham Small Arms Company shown with the rear fork construction in which it is incorporated, and the other that of another company which also manufactures component parts for the agents' trade:

#### A Young School of Mechanics.

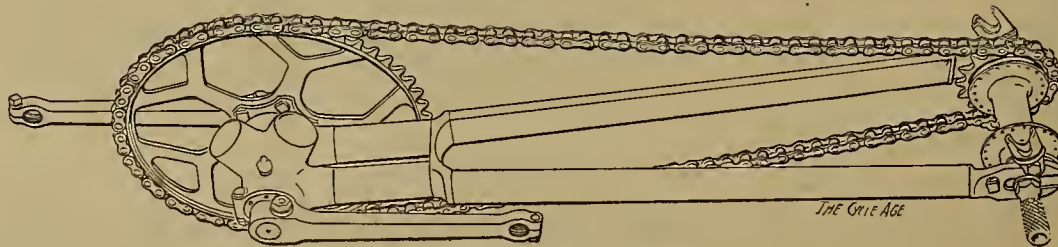
London, Jan. 30.—Taking a line from the usual expressions in American bicycle journals, it might be imagined that the impression in America is that manufacturers in this country are little removed from primeval savages, and that our output in bicycles and bicycle parts is of a nature both cumbersome and inartistic, as well as unmechanical.

It is willingly admitted that, speaking broadly, our manufacturing methods are very expensive, and that our shop economics are not as advanced as in America. The principal reason for this state of things is the absolute disregard which in the past has been shown towards men of technical and educational standing. Our elementary education has been crude, and not followed up by any technical instruction either in the matter of theoretic or applied mechanics. This state of things is fortunately being amended, and there is already a young school of mechanics who are very little behind American thought. Despite, however, the fact the general standard of education has been low, there has always existed a school of engineers capable of exercising a very wide influence upon manufactured products. This fact, combined with the free trade policy adopted in our markets, which brings competition from all parts of the world, has produced an output of a character that is far more advanced

than most Americans give us credit for. Put briefly, the prevailing sentiment in the mind of an English designer is a distinct fondness for true radii and true angles. This trait will be found in practically every branch of engineering construction. It will be conveyed most vividly by comparison of some of our locomotives with those of American type.

#### Light Weight English Bicycles.

I now wish to show you the effect which this tendency has produced in bicycle design. In the first place, I wish you to dis-illusion yourself of any idea that the English bicycle is necessarily a heavy machine. As a matter of fact, all of our factories produce light bicycles, which could always compete in point of weight against American products, even at the time when American houses were advertising road machines at from 18 to 25 pounds. The difficulty, however, is that English manufacturers have not yet learned to specialize products, and it is usual for many different models to be going through the factory at the same time. An English bicycle catalogue will usually contain a path racing machine, weighing



B. S. A. HANGER AND FORKS.

anywhere from 19 to 24 pounds, according to the idiosyncrasy of the designer. There will also be a road racing machine, which will be practically the same as the path racing machine excepting that there will be a wider range of adjustment to handle bars and seat pillar, and that the wheels and tires will be somewhat heavier. The weight of this machine will be approximately 23 to 25 pounds. The next model will be a light roadster. This machine is in every respect identical with the American full roadster, and will weigh from 24 to 28 pounds. The next model is a full roadster. This machine is believed to be peculiar to this country. It is built from entirely different requirements to those existing in your country. It is a machine which is intended to last many years, and is used by business men and tourists. I understand that a very large proportion of the year's output of American bicycles is bought by people who ride mainly in the parks and cities. It is quite the reverse in this country, where the full roadster bicycle to which I allude is used and bought by people who ride the length and breadth of the country over. It is provided with an entirely different equipment from that associated with American machines. The mud guards in themselves are light, usually beaded in order to give lateral rigidity. They are, however, attached to the machine in a vastly superior manner to that usually associated with your own fittings. The stays, bridges, etc., are usually machined fittings, and although they may be removed without interfering with the

usual adjustments of the machine, they possess sufficient solidity to render them a permanent adjunct to the bicycle. A gear case is usually provided, and the brake work is also of an efficient mechanical nature.

#### Bottom Brackets for Assemblers.

Having superficially referred to the conditions prevailing here, I will direct your attention to the samples which are now in your possession.

I will first consider the bottom bracket and accompanying fittings comprising the chain stay, chain, etc., manufactured by the B. S. A. Co., which I have sent. You will at once see, from even a cursory examination, that these fittings are made for the market entirely different from your own. So far as I can judge, most American parts makers, such as the Cleveland Machine Screw Co., Smiths of Milwaukee, Crosby & Mayer, Fauber and others, supply their products to factory manufacturers possessing a considerable output of complete machines. This is quite the reverse of the usual practice in this country. Here a bicycle factory is to all intents and purposes self-contained. The people who buy components are agent makers or "assemblers." They build in quantities anywhere from six machines to several hundred a year. Some of them possess considerable facilities; some of them work in a very crude manner. In the aggregate, they form a by no means unimportant section of the business, their gross output probably exceeding that of the factories. For these reasons, the component parts are far more finished than in the case of your

own fittings. The set sent, as in fact all the fittings, are a portion of the ordinary commercial output, just as bought by the country builder. You will see that the only work necessary is to strip the parts down, complete the frames, file up and then finish. In some cases the sets are sent, as to you, without forksides, but it is quite the usual practice for assemblers to buy the front forks built into the crowns.

#### Barrel Patterns Frowned Upon.

In the bottom bracket you will notice that the diameters of the bearing are very much smaller than with American fittings. This is one reason why we prefer machined brackets to sheet metal ones. Speaking personally, I must admit a decided preference for English bottom bracket construction. I have yet to hear a sound mechanical argument in favor of excessive diameters or anything approaching the 1 $\frac{3}{4}$ -inch inside measurement to be found on most American brackets. I take it that the diameter of your brackets is consequent upon the use of sheet metal fittings, which demand a considerable amount of skill in order to obtain the necessary metal with which to form the lugs. The use of the one piece crank hanger is, I presume, the result, rather than the cause of the large diameters. I see many American bicycles with bottom brackets possessing an outside measurement of 2 inches and more, with flush joint chain stays  $\frac{3}{4}$ -inches in diameter. The type of bearing used in the bottom bracket sent is to all intents and purposes universal on this side, so



THE POPULARITY OF  

# Barnes Bicycles

was never more evident than it is this season.

Riders know the BARNES to be the free running and lasting kind.

Agents know it is the BARNES line which brings them prosperity.

It is the general excellence of the BARNES which satisfies.

Is there a BARNES agency in your town? If not, write us.

.... WISE BUYERS BUY WHITE FLYERS ....

The Barnes Cycle Co., - Syracuse, N. Y.

*Thousands in use!*

*The Morrow Coaster & Brake!*

*It is not an Experiment.*

*In a 50 mile ride you pedal  
only 30! Centuries made Easy!*

*Double your sales and increase your profits  
by selling your wheels fitted with the Morrow  
write us for prices! Eclipse Bicycle Co. Elmira, N.Y.*

much so that quite 98 per cent of all bicycles built are made in this style. I myself believe it to be absolutely the best bearing for bottom brackets, being positively free from complications, easy to adjust, permanently locked, giving a full width between the balls, and oil retaining in a marked degree. I should like to see a couple of American refinements added in the form of ball retainers and dust excluding washers. The type of ball race usually adopted is a two point type with radial points of contact, 60 degrees to the axis. I would call your attention to the locking device in the B. S. A. bracket. If you loosen the nut at the bottom of the cup, and give the disc a turn, you will find that the cotter pin will free itself.

#### Plain Crank Shafts.

You will notice that solid axles are used in both of the bottom brackets sent you. These axles can be formed upon a full automatic screw machine, or for moderate outputs can be economically produced on hand capstans, although I am sorry to say many concerns are content to turn them with ordinary slide rest lathes. The B. S. A. Co. turns them on heavy lathes of a type peculiar to its own shops. An ordinary turning tool is used, but the lathe is entirely self-acting, although not automatic in its feed of material. In this instance, as in others, where turning tools are used, the axle is made of a steel forging. The axles are usually case hardened all over, but only ground on the ball races. In some shops the bar is cut into lengths, and a deep groove of the section suitable to form the ball races is turned at the two points of contact. The bar is then carbonized all over, after which the superfluous metal at the ends and in the center is turned off, thus leaving the grooves, now forming the ball races, carbonized, while the rest of the axle has a less cohesive nature. You will readily see that when this axle is hardened and tempered the only portion that will be file proof will be the wearing parts, the rest of the axle being comparatively soft. This is excellent practice, although for ordinary commercial output somewhat superfluous, as the number of axles which break is almost infinitesimal. The discs, or cups, to use the expression more readily understood, are always turned on automatic screw machines, excepting in the case of small outputs, when hand capstans are used. There is a slight tendency displayed at the present time which may possibly result in a movement of considerable importance, towards devising a cup adjusting bearing in which there will be no necessity for threading the outside of the cups. This will, of course, enable the cup to be ground all over. The consummation of this improvement would result in a refinement of considerable value.

You will probably be somewhat struck with the appearance of the square cranks of the sample sent. This is usually put down to the inherent conservatism of the English bicycle maker. As a matter of fact, it is in strict accordance with the demands of the English public, and the traditions of the English engineer. Round cranks were formerly furnished, but a distinct preference has always been shown for the square type.

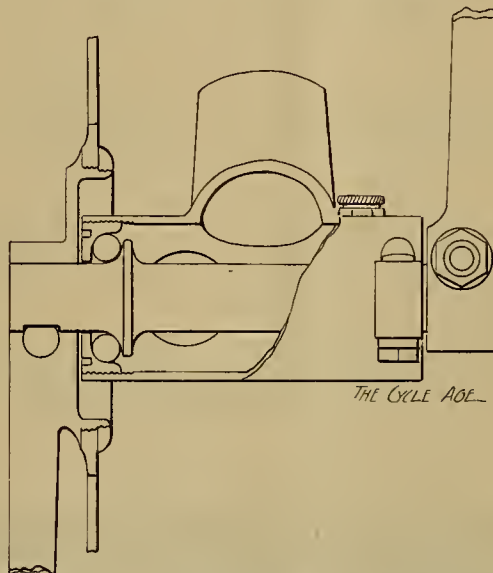
#### Split Crank Eyes Disappearing.

The cotter pin is still almost universal on this side, but I think it both unmechanical and expensive, although it gives practically no trouble when fitted in the manner evidenced in the fitting sent you. You will notice that the B. S. A. crank is split at the pedal. I am convinced that this is a mistake, and that the principle is being rapidly superseded by that adopted by American manufacturers.

The other bottom bracket which you have received is made in a plant which is to all intents and purposes an American factory. Like many other English shops so equipped, the nature of the tools is but poorly understood, consequently the quality of the output does not compare with that of the B. S. A., which shop is essentially a European shop. There are, however, some points of design I should like to call your attention to. In the first place you will note that the cranks are fitted very close to the bottom bracket face. This is undoubtedly good; one of the grave faults of the cup and cone bearing, which was once universal here, and is still common in America, is that a considerable amount of room is wasted between the crank and bottom bracket.

#### [Sprocket Wheels Always Detachable.

I would also call your attention to the banjo type of chain wheel attachment. This method is more usually found on factory bicycles than on component parts. In fact, the bracket in question is the only separate fitting which I could obtain to send you. It is, however, so large-



ly used by bicycle makers that it is worth your serious consideration. You will notice that the chain wheels with us are always detachable and interchangeable.

#### GERMAN FIRE CYCLE

Four-Wheel Hose Vehicle Driven By Two Men—Is Light and Speedy—Apparatus Carried.

While the bicycle has never been brought into more than experimental use in this country as an aid to fire department work, German fire apparatus builders have for several years given this line of improvement considerable attention. One of the most recent results of their labors is a fire department cycle which, though it may be imperfect in many details, is said to be very efficient in the accomplishment of its intended purposes.

It is a four-wheel truck, with a low, compact superstructure, is fully equipped as an engine and has a complete outfit of life-saving apparatus. The wheels have solid rubber tires, it is operated by two firemen, sitting tandem, and runs rapidly on good roads, while its handling and maneuvering is extremely simple. The firemen having the one in charge at Gruenewald, a suburb of Berlin, recently covered a mile, made the hydrant attachment and were at work in something less than five minutes.

The bicycle engine carries the following tools and implements, stowed snugly away, and each held securely in place: One life-saving sack, four water gauges, one heavy woolen cloth or blanket; one pickaxe, one hydraulic key, one standpipe or nozzle, one spraypipe or nozzle, one spade, one adjustable rope and hooked

ladder, one life line, one leather pouch with life-saving gun and line, one medicine chest, with bandages and drugs; one smoke mask, with vinegar and ammonia in bottles and leather pouch; one bell, one lantern and sixty feet of hose, one tool chest and one torch. The weight of the machine itself and all it carries is 377 pounds, and the price of the entire outfit is \$275.

#### DROP FRAMES IN THE SOUTH

Their Common Use by All Members of the Family Explains a Mystery.

"In central Florida everyone rides the drop frame woman's pattern of bicycle. The machine is a piece of property common to the household, like the dining table and the dog. It belongs to no one in particular and all use it," says a cyclist who recently returned from a sojourn in the flowery peninsula. "This custom is not confined strictly to the 'crackers,' for some of the more prosperous of the farming classes and villagers follow it. The cycle there is more a vehicle of utility than in the North, speaking in a general way. It is employed for visiting and shopping much more faithfully than in the cities. The riding is over shell and clay road and is very fair; some of the roads, in fact, are ideal, because the clay packs as hard and smooth as cement.

"This is all true in other parts of the South besides Florida, from what I can gather, and it explains the wonderful increase in the production and sale of women's bicycles which has puzzled makers of and dealers in these machines for two or three years.

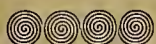
"In 1897 and 1898 the sales of women's drop frame machines increased greatly. There was, sure enough, a big increase in the number of women riders, but it was not sufficient to account for the disproportion of the sales in the two kinds of machines. You have no doubt seen, as I have, men who go riding on Sundays only and use a drop frame—the machines they bought for their wives, who use them on week days, and it is not an uncommon circumstance, either. Still, there is not enough of that sort of thing done in the North to make any appreciable difference in the proportion of sales, which must therefore be attributed to the very general use of the drop frame in the South."

#### Working Overtime.

The most important element on the financial side of the question of overtime work is that of wages, says the Iron Age. This is the only item, too, which is known with absolute certainty; all the others which go to make up a cost sheet are subject more or less to judgment. The lighting and heating of the shop for night work and the cost of the lessened production, hour by hour, as compared with day work, can only be ascertained approximately. Another uncertain and yet essential item is the cost of correcting blunders made during night work. The lighting, heating and power accounts are not subject to much variation. Most shops pay larger wages for overtime work. If the men receive a time and a half for night work, then the labor expense is increased 50 per cent, and as this is the most important single item, its effect upon the total cost is significant.

Toronto's cycling population last year was estimated at 25,000, and it is thought the reduction in prices of bicycles and improvement of streets will increase the number by half the coming season.

Midnight cycle rides are becoming popular in Australia.



"WAS EVER THE LIKE BEFORE?"



# THE EVER VICTORIOUS ELDREDGE

SCORES STILL ANOTHER GREAT VICTORY

At San Francisco Six Day Race  
February 12-18, 1899,  
in which event THREE RIDERS of

## Eldredge Bicycles fitted with Eldredge Tires

TOTALLY ECLIPSED ALL FORMER RECORDS

Chas. W. Miller, Long Distance Champion  
"Teddy" Hale, European Champion  
Louis Gimm, 24-Hour Champion

New World's Record and First Place by Miller, 2,192<sup>1</sup>/<sub>4</sub> Miles; supposedly impossible feat made easy by riding the ever unfailing Eldredge.

Look at this list of  
uninterrupted  
Eldredge Victories:

- Six Day Race, New York, 1897, First Place and World's Record
- Three Day Race, Paris, France, 1898, First Place and World's Record
- Six Day Race, New York, 1898, First Place and World's Record
- 24 Hour Race, New York, 1898, First Place . . . . .
- Six Day Race, San Francisco, 1899, First Place and World's Record

Would a poor  
Bicycle do it?

## NATIONAL SEWING MACHINE CO.

FACTORY AND PRINCIPAL OFFICE:

**BELVIDERE, - ILLINOIS**

EASTERN OFFICE:

898 Broadway, cor. 20th Street, New York City.

CHICAGO OFFICE:

49-51 Jackson Boulevard, bet. State and Wabash.



"WE MAKE WHEELS, TOO."



## COMMERCE IN FOREIGN MARKETS

### CYCLE SALESMEN IN SOUTH AMERICA

Since a few of our cycle makers have traveling salesmen in South America, and they are meeting with success, it is a matter of considerable interest to know the general methods by which they have reached that success. One who has traveled all over South America says that a knowledge of Portuguese is indispensable in Brazil. Spanish will do in every other place.

The combination of requirements valuable to the foreign salesman is the possession of a refined, gentlemanly bearing, habitual politeness, and the patience to endure with complacency all kinds of delays and postponements. A gentlemanly bearing and suave manners are two strong inherited characteristics of the Latin-American, and it is by these traits that foreigners are usually judged. Politeness costs nothing and brings fair returns in any country, but in no portion of the world are the returns greater than in South America. It is not only the means of saving many dollars in the course of a trip, but the exercise of this virtue invariably secures attentions and valuable services which money cannot buy.

South Americans also give dress greater prominence in the make-up of the man than we do. They are prone to judge a man more by his clothes than we do, and it is therefore well worth while catering to these ideas. Flashy clothes of loud patterns, and in fact light colored clothing of any description, are considered bad taste. South American gentlemen dress in very subdued shades, black being the favorite color. The long frock coat and silk hat are, by the way, two indispensable articles of a South American merchant's wardrobe and are worn at any time during the day. This is a point to be remembered by every salesman who expects to travel there. To be dressed beyond the criticism of your customer is a point to your advantage.

The bluff, boisterous mannerisms of a fair proportion of our commercial travelers are not understood much farther south than the Rio Grande. In Latin-America it is falsely interpreted as an evidence of a limited education and a lack of refinement. This is also a fact worth remembering. But by far the most trying phase of commercial traveling in South America to the American character is the slowness with which the results are accomplished and the excessive delays one has to put up with on every hand.

### DEVELOPMENT OF RUSSIAN MANUFACTORIES

The Russian machine works are not yet able to fully supply the wants of the country, but no doubt within a short period Russia will be almost independent of foreign aid in this respect, as every year large and well-equipped works, supplied with an abundance of capital, are erected in that country, mostly by English, German, Belgian and French capitalists or stock concerns. The success of these works is guaranteed just now by the large government orders for supplies for the Siberian and other roads, and also by the great demand for machinery of all kinds throughout the country. The high import duty affords protection to all such undertakings. So far, Russia has not been able to export any machinery or products of technical industry, but this industry is progressing rapidly. There is still a decided lack of skilled labor,

while there are plenty of able and well-educated engineers.

The government aids the erection of industrial establishments in all parts of the country, with the view of making Russia independent of foreign countries, decreasing the importation of foreign goods and sustaining home industry.

The present policy differs from the one pursued in former years in that most of the large stock concerns for manufacturing machines, railroad supplies, etc., which have come into existence during the last four or five years are controlled by foreigners who formerly were almost prohibited from investing their money in this manner.

### CYCLE TRADE IN SOUTH AMERICA

A Chicago wheelman, who has spent several years traveling about the world on his bicycle, states that the trade in bicycles in South American countries has been much exaggerated in the American press. Buenos Ayres struck him as the best field, as the roads are very fine, as a rule, and the use of bicycles is bound to become as prevalent as in this country. The climate, too, is very much like our own. While British and German machines have been having the call, the buyers have recently taken up American bicycles, which are driving the others out of the field.

In Colombia and Venezuela very few bicycles are used, and in Ecuador hardly any. In Peru they have some sale in the cities as luxuries, but in none of these countries will the use of bicycles become at all general, he thinks, as there are no roads, and owing to the revolutionary tendencies of the people.

In British Guiana the gold fields are producing great wealth, particularly those near Demerara, and the prosperous residents of that town ride bicycles, even on the comparatively poor roads, which are now being improved. In the Barbados there are a great many riders, and the number is rapidly increasing in Jamaica.

### CHAIN WHEEL SHROUDS ABROAD

A dead set seems to have been made in some quarters in England against the shroud on chain wheels, and the elimination of this long standing feature in cycle construction would certainly be accompanied by some great advantages. At the same time it would be futile to throw it out on the grounds of its faults alone, and it may easily be seen that it has many great advantages, while its competitor for favor, the unshrouded wheel, has also many disadvantages. These advantages and disadvantages have, we believe, been rather neglected, and a rush has been made for the unshrouded wheel without taking into proper consideration the relative merits of the two systems. It is a question upon which opinion is very greatly divided, and capable men in the cycle trade are at present holding very different views of the question.

At the South African industrial and art exhibition which opened December 15 in Grahamstown, the exhibit of bicycles is large and consists principally of English manufactures, the only American machine being curiously examined. The United States stands second in the imports of bicycles into this country.

In Brussels the police have an exhibition of stolen bicycles.

### CYCLE PATENTS IN JAPAN

A decision recently rendered by the Japanese patent bureau is of great importance to American cycle investors, as it decides that no foreign patent which has had prior registration in another country can be registered in Japan. This would seem to show that protection supposed to be enjoyed by foreign inventors under existing treaties does not exist, as the provisions of these treaties are wholly inapplicable to the patents already in existence, any of which can still be pirated in Japan.

A protest was filed on behalf of a British subject against the refusal by the patent examiners of his application for a patent on a bicycle improvement. The examiners had refused registration on the ground that the machine in question was identical with one which the applicant had patented in the British patent office in 1895. It was argued that although the invention was published in the British official patent reports on February 3, 1897, the applicant did not receive a copy of the report in question until April 6 in the same year, and the application for the patent in Japan was lodged on the following day (April 7). Thus there was not sufficient time for the said report to be circulated in Japan. It was, therefore, impossible to say that the invention in the application was already for public use in Japan before the application for the patent was made. After examining all the documents concerning the application the following judgment was given:

"The point in dispute in this case was whether an invention patented in a foreign country before the application had been made in Japan for a patent could or could not be patented in Japan. The applicant maintained that an invention patented in a foreign country and publicly known was not publicly known as intended in Clause 3 of Article II of the patent law, and that he was not precluded, therefore, from obtaining patent rights in Japan. But an invention which has been publicly made known before the date of the application, from whatsoever cause, excepting for the purpose of experiment, cannot be granted patent rights (in Japan). An invention which has been patented and publicly made known in a foreign country cannot be said to have been made known to the public through experiments. A patent in a foreign country, therefore, cannot be regarded as coming under Clause 3 of Article II of the patent law.

"The applicant further maintained that the term 'public use' applied only to the district under the laws which have force within the jurisdiction of the patent bureau granting the application. But an invention which has been publicly made known will naturally be known to the public generally, so that the district cannot be limited excepting where restrictions are specifically made by laws or treaties. The invention in this application was patented in the British patent bureau in 1895 and published in the British official patent reports issued on February 3, 1897. It was, therefore, evident that the invention was in 'public use,' within the meaning of the Japanese patent law, and the examiners were justified in refusing to grant a patent for the invention. For the reason above cited, the bureau upholds the decision of the examiners."

# CYCLE AGE

Vol. XXII. No. 17.

THE CYCLE AGE OFFICE.

February 23, 1899.

## MODERN BICYCLE REPAIRS

SPLENDID WORK NOW READY FOR PUBLICATION BY THE CYCLE AGE

It Will Embrace All the Practical Suggestions Which Practical Men Have Been Able to Furnish—Will Contain 100 Illustrations

It may be said with perfect truth that no repairer, be his shop great or small, can afford to miss the valuable matter contained in "Modern Bicycle Repairs."

It will be published by THE CYCLE AGE, and ready for delivery a week hence.

The book is illustrated in a workmanlike style. More than one hundred illustrations.

The following brief extract of its contents will furnish an idea of its character :

### CHAPTER 1—REPAIRS, OR REPLACEMENT

First equipment of the shop. A study of economical methods. Illustrations of good and bad methods. List and cost of tools and fittings. Use of assembling jacks.

### CHAPTER 2—WHEELS AND COMPONENT PARTS

Purchase of spokes, sizes to buy and how to keep them. Rims; tools for spacing and drilling. Inexpensive truing jigs. To repair broken spoke holes in hubs. Nipple grips. Replacing cups and cones. To braze a split cone.

### CHAPTER 3—FRAME AND FORKS, BRAZERS AND BRAZING

To braze without spoiling enamel. Three ways to repair broken tube. Broken lugs, fork ends and fork stems. Dangers of twisted forks. Truing a frame. Selection of a brazer.

### CHAPTER 4—REMODELING OF FRAMES

Computing the cost. Cutting down frames. Changes of all sorts in singles and tandems.

### CHAPTER 5—THE CRANK HANGER

Remodeling. Loose cranks. Buckled tandem sprockets. Two-piece construction.

### CHAPTER 6—THE STEERING HEAD

Broken crown cones. A question of solder. Fixing loose cones. Squeaking steering heads. Rust on nickel.

### CHAPTER 7—SEAT POSTS AND HANDLE BARS

Broken parts. Internal expanders. The flashing of tubing. Ways of bending bars.

### CHAPTER 8—HINTS ON THE ART OF ENAMELING

Necessary equipment. Keeping of enamels. Coating and baking. Two and three color work.

### CHAPTER 9—SADDLES AND PEDALS

Springs and clamps. Repairing pneumatic

saddles. Rattan lacing. To make pommel clip. Broken springs. Difficulties of pedal repairs and how to overcome them.

### CHAPTER 10—BUILDING FRAMES FROM COMPONENT PARTS

Should be undertaken by men of experience only. A variety of patterns. Correct angles. Dimensions. Cheap mandrels and their uses.

### CHAPTER 11—PURCHASING PARTS FOR SPECIAL WORK

Ingenuity of great value; examples. Meth-

"Cycle Ad-ages" has been selected as the most appropriate title for this page. It was suggested by Mr. George Wilcox, of 51-71 Taylor Street, Springfield, Mass., to whom a check has been mailed in accordance with last week's offer.

Other suggestions received were: Our Own Affairs, Something About Ourselves, Our Way of Thinking, We'll Tell You All About It, What We Do, Where We Come In, Open Court of Cycle Age, Cycle Age and Counsel, Forum and Council, Cycle Age Council Table, Cycle Age Forum, Among Ourselves, Between U and Us, Our Mutual Interest, Spark-ulets, Multum in Parvo, Our Horn, Cycle Age Pointers, Practical Pointers, Original Cycle Sayings, Cycle Adlets, Plain Talks, Our Little Corner, A Page to Ourselves, Our Benefit Your Benefit, Have You Read This, Always Interesting, The Puffery, Our Own Business, Oh! Listen To the Band.

—And they are still coming.

ods by which many parts may be made of unexpected value.

### CHAPTER 12—EXPERIMENTING WITH CONSTRUCTION

Repairmen best suited to devise practical improvements. Value of their ideas.

### CHAPTER 13—MECHANICAL POWER IN THE SHOP

Practical advantages. Cheapest forms of motors. Installation. Floor plan.

### CHAPTER 14—MISCELLANEOUS REPAIRS AND SUGGESTIONS.

### CHAPTER 15—TIRE REPAIRS

According to tire construction. Method for each kind described.

Price to CYCLE AGE Subscribers, One Dollar; to all others, Two Dollars. Order at once. First come, first served.

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### SATISFIED ADVERTISERS

You certainly have got the wires moving for us in this business, for we have been and are yet answering letters which say, "Saw it in The Cycle Age."

LONG BEAM LAMP CO.  
Hillsboro, Ohio.

### THE BUSINESS END WON

An Attempt to Prejudice Subscribers and What Came of It.

Some time ago a contemporary took advantage of a paragraph in a correspondent's letter and endeavored to show that THE CYCLE AGE was not interesting to agents.

The correspondent was an agent out in Oregon.

THE CYCLE AGE respects the opinion of every reader. It therefore placed before the one in question a few facts concerning the value of the paper.

Being a sensible man he saw the point. This is what he says:

"Trade developments and mechanical items interest me as they do, or ought to do, every agent. If you have not sent papers every week please send back numbers at once."

And here is another quotation from the same letter which speaks for itself:

"You may enter my subscription to The Cycle Age. I enclose \$2.00 to pay for same."

## PUBLIC'S THIRST FOR FACTS

### French Buyers of Motor Vehicles Demand Description of Vital Principles of Construction

That the fear of imitators which impels manufacturers to surround the construction of motor vehicles with as much secrecy as possible often brings about exactly the opposite result of that which was intended, is the contention of a French writer in the technical automobile press who often finds himself hampered by the mystery cult of motor vehicle constructors.

He reasons plausibly that full publicity in regard to every detail is the only means by which the public can be made to distinguish between originators and imitators, and that it always favors the former when the case is clear. He also holds that the public must ultimately learn to understand the whole mechanism of a commodity which is destined to become so common as motor vehicles and will not consent very long to purchase any vehicle whose construction is not laid bare.

#### Apache Tricks With Patents.

"It was formerly the fashion," he writes, "for a constructor to conceal as much as possible the real functions of his mechanical arrangements. Actuated by the idea, which is perfectly correct, that it is nearly always easy to circumvent a patent, and under the impression—which is less correct—that all competitors were watching his movement and were ready to copy his work, he resorted to all sorts of Apache tricks. To put the imitator on the wrong track he adopted a policy of mystification, gave false description of his mechanism in his patent, took out an insignificant patent in his own name and caused some obscure stool-pigeon to take out the real one which nobody would then take the trouble of investigating under the unknown name.

"For a long time the technical press was under these circumstances very meagerly fed with facts and was reduced to doing unsatisfactory work.

#### The Kind of Description Wanted.

"Lately a number of manufacturers have discovered their error and are willing to furnish diagrams showing the principal organs of their vehicles and complete explanations of their functions, and the result is that in these instances the press can do justice to their constructions by indicating clearly on what points each vehicle shows originality and differs from other vehicles in the market. To do more and describe each bolt and nut in a vehicle would be pedantic. No capable journal will consider it advisable to describe in forty columns those minor points which a twenty minutes personal examination would make much more clearly understood. Abundance of details on unimportant points is likely to obscure the real point at issue and give readers false impressions. Details are liable to be changed at any time and the most minute description of them cannot take the place of practical examination, while the practical examination easily takes the place of all detailed description. What the technical press wants is the principle of the mechanism apart from all minor details of execution.

#### Public is Growing Critical.

"The small number of vehicle constructors who still hesitate to furnish descriptions of this character should rea-

lize that the public attitude to motor construction is undergoing rapid transformation through the information which nobody can prevent them from obtaining when motor vehicles are sold in the open market. This public which formerly received with confidence the emphatic declarations which served for descriptions, now demand to know why and wherefore a new pattern of vehicle is 'new' and what claims it has on their patronage.

"Only the other day a constructor told the writer that a lay purchaser of a vehicle, who would not ordinarily have been considered a competent judge, made a criticism of his purchase which proved so eminently correct, that the change which was made to satisfy him was subsequently incorporated in all vehicles of the same pattern.

"When such things can happen it is painful to receive information about a new vehicle about as follows: 'We send you herewith photograph of our vehicle for publication. We don't wish to publish details. State only that the vehicle mounts eighteen percent gradients readily at a speed of ten miles per hour and costs only three cents to operate per mile.'

#### Most Described Vehicles Mostly Sold.

"It is readily understood that it is not always advisable to be in a great hurry about giving descriptions; but they should not be concealed indefinitely.

"Are not the most 'described' vehicles also those which are most readily sold? The public is invariably inclined to mete out justice to mere imitators and, rather than purchase from a house which copies the designs of others, applies to the originators who have the advantage of longer experience.

"In order to thwart infringers by secrecy it would be necessary not only to withhold descriptions but also to refuse to sell the vehicles."

#### The American Purchaser.

The writer of the above, the editor of La Locomotion Automobile, when speaking of the public desire for understanding the construction of motor vehicles before buying, has of course reference to the French public only and his remarks may not be directly applied to the United States where the public interest in motor vehicles has not yet crystallized into a general determination to purchase at the first favorable opportunity. But his observations foreshadow a condition which may prevail here before very long and which the foresighted manufacturer may see his way to anticipate with great profit to himself.

The main point at issue and on which opinions will be divided, is whether the American public will consent to become extensive patrons of the motor vehicle industry before they understand the essential principles of motor vehicle construction or will insist upon receiving this education, however hard it may be to acquire, before spending their money.

#### Extraordinary Automobile Speed.

A successful attempt to regain the motor vehicle records for one and two kilometers, lost to Count de Chasseloup-Loubat, was made on January 27 by M. Jenatzy with his road wagon near Paris.

He started slowly to avoid accident to the machinery and as a consequence failed to lower the record of 57 seconds held by the count for the standing start kilometer. Jenatzy covered the second kilometer, with flying start, however, in the astonishing time of 44 4-5 seconds, reducing the previous record by 6 2-5 seconds. The two kilometers (1¼ miles) were ridden in 1:41 4-5, as against the count's record of 1:47 3-5. The second kilometer was ridden at the rate of more than fifty miles an hour.

#### ALCOHOL MOTOR VEHICLES

First One Patented in 1895 in France—Revenue on Spirits Discourages Experiments Here.

The alcohol motor continues to engage the attention of vehicle manufacturers in France by reason of its comparative freedom from the objectionable odors which follow French gasoline engine vehicles. A civil engineer, G. Moysan, 44 bis, boulevard de Chateaudun, Saint Denis, states in La Locomotion Automobile that he obtained a patent for an alcohol motor in 1895 and found it possible to suppress all odor of alcohol from the exhaust with a vehicle constructed according to his invention. He still has the vehicle and desires to enter into negotiations with constructors who may desire to develop his idea further, his failing health having prevented him from doing so alone.

In United States the revenue laws which impose a considerable burden upon the production of alcohol, even for industrial purposes, have kept all thought of substituting alcohol for gasoline in the background, aside from the greater calorific value and expansive force of gasoline vapors, but this restriction may be only temporary and should hardly prevent American builders of motor vehicles from keeping abreast of the developments which may possibly be in store for alcohol vehicles.

In colonial countries where American vehicle builders will undoubtedly compete with Europeans for supplying the vehicle market, alcohol may in many instances be produced by local industry at a lower figure than gasoline, everything considered.

#### Motor Vehicle Lines for Madagascar.

The French Society of Colonial Transportation last October made a contract with the governor of Madagascar for the transportation of passengers, freight and mail in the island, to begin April 1, 1899. Choice of any kind of power is allowed, but the use of automobiles has been practically decided on by the company, which will very soon begin running such vehicles over the completed part of the road between Mahatsara and Tananarive. If the experiment proves successful it is expected that similar services will be organized in other French colonies.

#### Motor Vehicles for Drummers.

A French manufacturer, Dr. Claude Brothier at Villefagnan, Charente, France, has commenced the construction of light motor vehicles especially intended for commercial travelers and announces that his experiments warrant him in stating that the vehicles are of practical design, price and equipment. It seems that a demand for this class of wagons has sprung up suddenly in France and found the makers generally entirely unprepared.

From May 1 all cyclists in France are to carry a number plate. Foreigners staying less than three months in the country need not conform to the regulation.



# To Dealers..



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# THE PASTIME AND SPORT

## MILLER WINS BY MANY MILES

Chicagoan Adds 185 Miles to His World's Record—Aaronson Climbs Steadily to Second Place.

Score at the Finish.

M.	L.	M.	L.
Miller	2,192	Alberts	1,828
Aaronson	2,146	Barnaby	1,792
Fredericks	2,090	Pilkington	1,729
Hale	2,062	Lawson	1,635
Gimm	2,060	Julius	1,501
Nawn	2,012	Ashinger	1,500

San Francisco, Feb. 20.—The six-day-as-you-please on the eight-lap board track in Mechanics' Pavilion was brought to a close at 10:15 Sunday night by the management, who decided that, as there was no probability of the contestants making any change in their relative positions, they could as well be spared the agonies of the half hour remaining to round out the 144 hours since the start of the race.

No riders ever welcomed the end of a race more heartily than the even dozen men who remained in the contest to the finish. As the score plainly indicates, the struggle for supremacy had been the hardest ever fought, and human endurance was all but completely exhausted. Only the closeness of the finish and the cheers of the spectators kept the men to their task.

### Victor's Honors Well Merited.

Miller was 185½ miles ahead of the best previous indoor record of 2,007 miles 4 laps made by himself at Madison Square Garden last December. He deserves his victory and his record will probably stand for years to come. No previous contest has been so stubbornly contested from start to finish and no similar number of men have shown such wonderful pluck and endurance. Crowds that almost rivaled those in attendance at the closing hours of the New York contest last December remained in the big pavilion throughout Saturday night and Sunday.

It was a noisy, but sympathetic and impartial crowd, urging and encouraging each rider in turn. There was plenty of enthusiasm, too, when Miller, at the end of the 127th hour, rode his 2,000th mile in 2:25 3-5, unpaced.

### Riders Too Tired to Sprint.

During the last day the sprinting was infrequent, the pace earlier in the race having exhausted the vitality of the men, but Nawn and Barnaby were repeatedly stimulated with electric batteries and each time came out and indulged in sharp sprints until again exhausted.

The sensation the last day was the wonderful sprinting of Fredericks, the Swiss rider. Throughout the entire day he rode rings around Miller, Aaronson, and the entire bunch. In twenty-four hours he jumped from eighth place to third, and gave Aaronson the hardest kind of a race for second place.

Gimm dropped down the line rapidly Sunday, losing mile after mile to Aaronson and Fredericks, being unable to overcome his physical weakness.

Throughout the entire last day Hale imagined himself riding to San Jose, but his physical condition was good and he kept steadily at work.

### Miller's Remarkable Endurance.

Miller's endurance is marvelous, and his long lead of forty-six miles over

Aaronson demonstrates his superiority beyond controversy. He used his head with as much success as his muscles, for he was systematic throughout the event, taking short periods of rest at frequent intervals from the start instead of entirely exhausting himself by continuing as long as possible without rest in the first half of the contest. At regular times he would leave the track and put himself under his trainer's care for fifteen minutes to half an hour. His longest absence was thirty-eight minutes. Some unfavorable criticism has been elicited, however, by the champion saving himself at the expense of his opponents by taking all the pace he could get and refraining to set any. By this method he wore out Gimm, who was in the lead during the third and fourth days and who was looked upon until the fifth day, as being his most formidable rival and as a probable winner.

Stevens, who was No. 13, quit early in the race and declined to go on although he was in good condition and riding well and his trainer used every endeavor to make him go on. His dropping out left thirteen still in the contest.

### Julius Admired for Pluck.

Julius, on the contrary, won the admiration of everybody by pluckily continuing to ride after his trainer ran away with all his money and valuables, leaving his charge with no one to care for him and with nothing to purchase necessary food and attention with. But one of the other trainers volunteered his services and stuck to him throughout the rest of the race.

Miller took the lead in the fourteenth century from Gimm and kept it to the finish, constantly gaining on previous records. He suffered much from a sore ankle which he had bandaged during the last day.

Hale was delirious several times during the race, but his trainers dared not give him much rest for fear he would lose third position to Fredericks, which he nevertheless did in the closing hours.

Pierce, who had dropped to eighth position by Friday, dropped out altogether on Saturday.

### Aaronson Little Noticed.

Aaronson worked his way up steadily from tenth position the first day to second place at the finish without attracting much attention or comment. Although little notice was taken of him he apparently had a good chance for first place when Saturday dawned, but he could no longer stand the strain and began to lose to Miller.

In the short distance events that were run after the finish of the big race, Harry Elks defeated Jay Eaton easily in a five-mile match race in 9:52, and Downing and Cotter on a tandem won a mile match with Fournier on his motorcycle in 1:54 4-5.

Charles Turville won an Australian pursuit race from Chapman, Waller and Stevens in 4:19 4-5, covering 2 miles 7 laps.

Michael rode a mile exhibition in 1:51 2-5, Gibson went two miles in 4:10 and Bald did a half in :55, all paced by the Frenchman's "infernal machine."

Tom Cooper is authority for the statement that himself and Bald, Kiser and Gardiner will race together this year as a team, racing at all distances but of course preferring the sprints.

## ECONOMY OF THE NEW METHOD

Pacemaking By Motorcycle Will Increase Middle Distance Racing—Benefit to Racing Men.

Interest in motor pacing has been developing rapidly since Fournier landed in New York early in the winter with his petroleum pacing tricycle. Although his only attempt to demonstrate the superiority of mechanical pacing over human pacing failed at Madison Square Garden through the slipping of a driving belt, it seems to be the generally accepted belief that before the close of the coming racing season motor pacing will have become a common form of assistance in middle and long distance racing.

It was the introduction of middle distance racing and the growth in popularity of twenty-four-hour and six-day contests that make possible the importation of this innovation, for up to the present time no motor driven machine has been designed, even in France, where motorcycle construction had its birth and has been most highly developed, that could surpass human pacing in short races, up to, say, ten miles. The intricate but perfect machinery of man's anatomy can be brought into complete effectiveness much more quickly than any petroleum or electric motor that has yet been applied to any bicycle or tricycle, so that for short distances a cycle driven by men can outrun a motorcycle; but the mechanical cycle is tireless and in the longer distance has the advantage of not having to be relieved.

### Immense Saving of Expense.

The advantages of motor pacing are manifold, but the greatest of them, from the standpoint of the manufacturer or the track association which is retaining the rider, is its comparative cheapness. The costliness of maintaining an aggregation of human pacemakers has been frequently estimated and published. For a match race of one hour's duration about thirty men are needed. To get these men into proper condition several weeks of training are required, at an expense for salaries, quarters and track facilities. Eight or ten multiples, costing from \$50 to perhaps \$200 or \$300 to manufacture, must be furnished by the maker or secured by the manager, and other incidental expenses make this kind of pacing rather a luxury for any bicycle maker or racing association.

On the other hand, a motor driven tandem or tricycle which can be bought in Paris at a cost of \$500 and upwards would need but one or two riders to manage it, and could be used throughout every contest in which a given man competed, and the one or two men required to manage it would not need to be relieved except in races of six hours' duration or longer, and then one, or at most two other crews, would be sufficient for the entire race. These men would not need to indulge in long weeks of training for speed and endurance, and the expense would be reduced accordingly.

### Will Create Lower Records.

Further than this, mechanical pacing is superior from the racing man's side of the question, because when following the multiplet the rider is not under the necessity of constantly watching for the pickups which, even at the best, cause the loss of some time and incidentally





fret the principal in the race, and the speed can be regulated to the exact ability of the rider without the variation of a second to the mile. Thus the worry and exhaustion caused by alternate sprinting and slowing down is obviated.

The superiority and advantages of motor pacing are so manifest that American pacemakers dread to see any of these machines tried in this country, and even threatened a boycott at Madison Square Garden if Fournier and his machine were employed. The Frenchman was so alive to this jealousy that he had his tricycle constantly guarded for fear some injury would be done to it. If the trials prove satisfactory the pacemakers believe that a complete change in pacing methods will quickly take place and that the majority of them will inevitably lose their means of livelihood.

#### Pacemakers Take Narrow View.

This is undoubtedly a very shortsighted view to take of the matter. As a matter of fact, the success of motor pacing in this country would mean the promotion of many more match races and middle-distance contests than are now or ever have been run, because of the lessened cost. The twenty-four-hour events could then be paced and the demand for riders capable of operating the petroleum or electric machines would quickly exceed the supply. Interest of the race meet goers in this style of pacing would certainly be keen, at least until it had become common, and operatives capable of managing the machines could command better prices than even expert pacemakers on ordinary multiplers. Instead of opposing the introduction of this style of pacing, therefore, it would seem to be to the advantage of our racing men to make every effort to become familiar with such machines, and for some of our manufacturers to undertake the manufacture of them seriously.

#### Results Depend on Pacemakers.

In Europe these auto-motive two and three-wheelers have aroused a great deal of enthusiastic interest, and motor pacing has been brought to a high degree of efficiency. Both track and road races are thus paced in France, where a number of race meets have been run of late with contests between motorcycles as the principal events.

It is commonly admitted that the result of a paced contest depends as much on the pacemakers as on the principals, and that with the latter almost evenly matched, the contest resolves itself into a fight between the pacing teams. The recognition of this has led to a desire for more perfect pacing methods which shall eliminate faulty pickups and give each principal the benefit of all the pacing he can stand. Only in this way can a perfectly fair comparison of the ability and speed endurance of two or more riders be arrived at.

#### Mobile Interested in Racing.

The Mobile Cycle Racing Association was organized a fortnight ago at Mobile, Ala., with J. M. Hamner, president and general manager and T. T. Wentworth, secretary. The purpose of the association is to give races and advance the sport in general. A piece of ground has been leased near Frascati, fronting on the bay shellroad, and an eight-lap track will be constructed at once, which is expected to be ready by March 1. Efforts will be made to secure all the noted riders in competition.

#### Preliminaries of Chicago Road Race.

At the annual meeting of the delegates of the Associated Cycling Clubs of Chicago, held Monday night, W. C. Malley, of the Woodlawn C. C., was unanimously

elected to succeed R. G. Fisher as president of the organization. As soon as he took the chair the old question of consolidating with the Cook County Cyclists' Association and the Northwest Cycle Racing Association of the city in the running of the Decoration Day road race, over which the wrangle occurred last year, was brought up. A committee was appointed to conduct negotiations. It was reported that three lawyers are working on the draft of a good roads bill to be introduced into the state legislature.

#### GIMM SERIOUSLY ILL

Lies in a Semi-Conscious State With Raging Fever  
—Belief That He Was Drugged.

San Francisco, Feb. 21.—As a result of the terrible strain of the six-day continuous race, Louis Gimm lay all day yesterday in a half conscious condition with his blood at a temperature of 104 in a raging fever. He collapsed at 8 o'clock Sunday night and could not appear at the finish two hours later to receive his meed of applause and admiration for the good showing he had made. Gimm's trainer and some of his friends openly assert that he must have been drugged, as his collapse was too sudden to be due to natural causes, he having throughout appeared to be one of the freshest of the contestants.

Up to the end of the third day he was riding very strongly, when suddenly he went all to pieces, and afterward rode around like one in a trance. He seemed dazed, and acted very strangely for a rider who was in such splendid condition.

Trainer John West, who looked after the feeding of Miller, Gimm, and Aaronson, strongly substantiates the charges made by Gimm's trainer, Leonert. "It would have been a simple matter for some one to drop a morphine tablet or something of that sort in one of Gimm's feeding cups," said West, "and especially as they have allowed so many outsiders to gather around the feeding stands. Gimm has certainly puzzled me during the past three days, and that he has been drugged I am positive. He was in better trim than Aaronson at the start, and has been fed upon the same things that have been given to both Miller and Aaronson, so I can attribute his sudden decline into this stupor to nothing else than that he has been tampered with."

In view of the fact that a great deal of money was wagered that Gimm would win, it is believed some one interested in the betting administered the dose to the unfortunate rider.

LATER.—Gimm is improving slowly and the doctors say that his collapse is the natural result of his chronic malady. Rumors of foul play are persistent, however, and the physicians will thoroughly examine their patient for evidences of the administration of poisonous drugs.

#### The Chairmanship Situation.

The many enthusiasts who have been speculating anxiously for many weeks regarding the identity of the chairman of the League racing board to be soon appointed by President Keenan, were last week "struck of a heap" by the published announcement that C. W. Mears of Cleveland would not accept that office if it were tendered him, the reason given being that press of other duties would make it impossible to devote the necessary time to wielding Gideon's bloody axe and filling his shoes satisfactorily.

The early work done in the west for Keenan's cause by Mears as the "original Keenan man" warranted the common belief that he would soon chivalrously relieve the present incumbent-by-proxy of

that office of the load of perplexities. Therefore the announcement is abundantly mystifying.

To further add to rife speculation, Arthur Augustus Zimmerman has just announced in Troy, N. Y., that he would have no serious objections to doing the heroic and assuming further responsibilities as chairman of the board.

#### All Racing Men Antagonized.

Philadelphia, Feb. 20.—The League members in this city seem to be well satisfied with all but one feature of the work of the recent National Assembly—the imposition of a \$2 registration fee upon the amateur racing men. It is argued that the present is hardly the time for an innovation of this radical character; the League should just now make every effort to retain the allegiance of all racing men—professionals and amateurs alike—rather than frame laws calculated to arouse everything antagonistic and pugnacious in the make-up of those young men. That such action should have been taken in the face of the announcement of the establishment of an amateur class by the A. C. R. U. savors of shortsightedness. Says a returned delegate: "It got through during one of the few silly moments in an otherwise remarkable convention."

#### To Continue on Old Lines.

President Keenan's attitude toward racing matters is evidenced in his statement in Pittsburg Tuesday outlining the policy of the new administration, which he said "will take the proper steps to control track racing in the future, as in the past, in the interest of the public and to protect the purity of the sport. The fact that the L. A. W. has no selfish interest in controlling racing is an effective argument," he said, "against any hostile movement which has only mercenary motives behind it. On the other hand, those who have made legitimate investments in racing-track property will plainly perceive that their best interests are served by the maintenance of public confidence in the integrity of the sport."

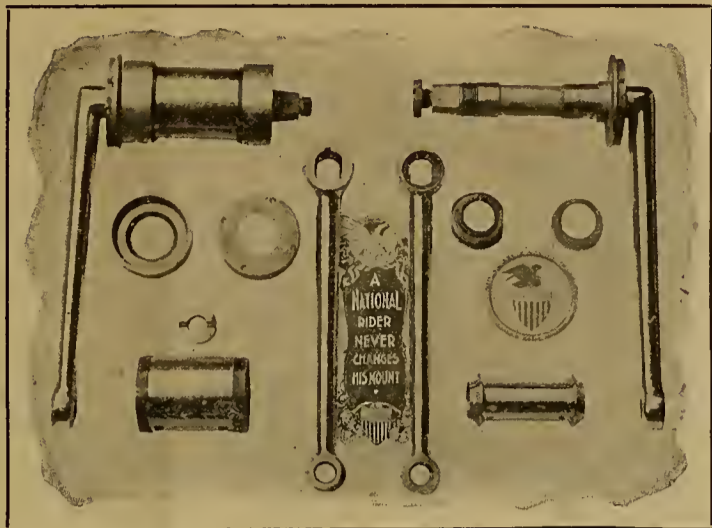
#### France's President Patronized Racing.

Felix Faure, the late president of France who died last week, was a great lover of all kinds of sport and especially favored cycle racing. Upon several occasions he attended the great prize races in Paris attended by a large suite, watching the events with keen delight and close attention. He received the winners in his box with as much graciousness as if they had been diplomats, and made it a custom to always offer a personal prize, usually in the form of a *Serves* vase.

King Leopold of Belgium is also a great admirer of bicycle races and assists almost every year at the races given during the national fete, for which he offers a handsome prize, usually of silver. This is put up for an event called "the king's prize race."

#### Winter Circuit Meet in Rome.

The European winter circuit now in Italy, where, on Sunday, February 5, the riders ran the qualifying heats for the great prize of Rome, the final of which was to be run the following Sunday. The distance was 2,000 meters. Tommaselli ran second to Ramella in the first heat, Grogna ran third to Ferrari and Maffi in the second, Singrossi won the third heat and Banker finished second to Gonelli in the last heat. The 3,000-meter tandem race was very exciting, the four teams finishing almost abreast and separated by inches only. By the decision of the judges Banker and Tom-



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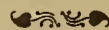
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INDIANAPOLIS, IND.

maselli were given fourth place, Dei and Singrossi winning the event in 5:01 3-5.

#### Boston and Montreal to Co-Operate.

The World's Meet Club having in charge the international championship races is about to meet a committee from Boston to arrange for a circuit to precede or succeed the international event, to attract the foreign riders. The League meet in Boston and the I. C. A. meet in Montreal will furnish two weeks of sport and there are a number of cities in Canada which will be willing to put on races after the championships. It is said the Boston committee will arrange one race for \$1,000, and the Canadians hope to do the same in Montreal.

#### NEWS IN BRIEF.

Earl Peabody is now in the railroad business in Macon, Ga.

Morin, the French rider, who is now doing military service, is seriously ill.

The bill for the protection of bicycle paths in Minnesota passed the state legislature by a vote of 85 to 23.

Patchogue, L. I., is endeavoring to obtain the spring meet of the New York State division of the L. A. W.

A winter racing circuit, principally for local riders, has been arranged for northern Africa, embracing Algiers, Tunis and Egypt.

Racing promoter James Kennedy is reported as having signified a desire to take a large aggregation of crack racing men to Cuba the coming season.

The C. R. C. mileage record in Illinois for 1898 has been officially awarded to W. G. Howe, of the Chicago Cycling Club, who covered 20,556 miles during the year.

The Atlantic Athletic Association of New York city, with J. A. Blaurock at its head, is arranging to conduct a series of race meets at the Manhattan Beach track, whose managers recently signified willingness to

join hands with the National Cycling Association. The opening meet will be held on June 17.

The Chicago A. C. C. is discussing the advisability of promoting a series of local track races for the coming season to stimulate interest in the sport among the clubs.

Harry Elkes has become a prize favorite in San Francisco because of his speed and splendid style in riding. He is credited with having broken a record every time he rode.

Gougoltz was the king pin of a small race meet run in Hyeres, southern France, February 5, where he won the twenty-five kilometer paced race and the "international" open contest.

Night races are to be made a feature at Ambrose Park track next summer, for which a complete electric illuminating plant will be installed. Meets will be run twice a week in warm weather.

Many of the long distance riders now on the coast have announced that they will sail from New York in April for France in order to compete in the 96-hour continuous race to be held at the Roubaix track, near Paris, May 7.

The Roubaix, France, long distance international race in which Miller and several other riders now in California expect to compete next May, has been changed from a 96-hour event to a consecutive 100-hour race, to begin May 8.

The Brentwood Cycle Club, of Brentwood, L. I., has made a bid for the contract to keep the roads in repair in its district for the coming year. By the gratuitous services of its officers more money will be made available for use on the roads.

Al Weing asserts that all talk of Michael meeting Elkes, Gibson or Macfarland in a match race on the coast is mere speculation, as the little Welshman is in California solely to ride exhibitions. He denies that his charge is under the management of Kennedy.

At the recent annual meeting of the Philadelphia Associated Cycling Clubs, the nominations for office developed the fact that for the first time in the association's existence there will not be a single contest for any of the elective offices. There was just exactly one peg for each hole. An

appropriation was made to thoroughly sign-board the Atlantic City route. The treasurer's report showed a balance off \$1,766.39.

The Riders' Syndicate of France has decided to send a delegation to the racing committee of the U. W. F. to discuss the question of securing licenses for the French riders disqualified by the L. A. W. for riding at the unsanctioned races in Madison Square Garden.

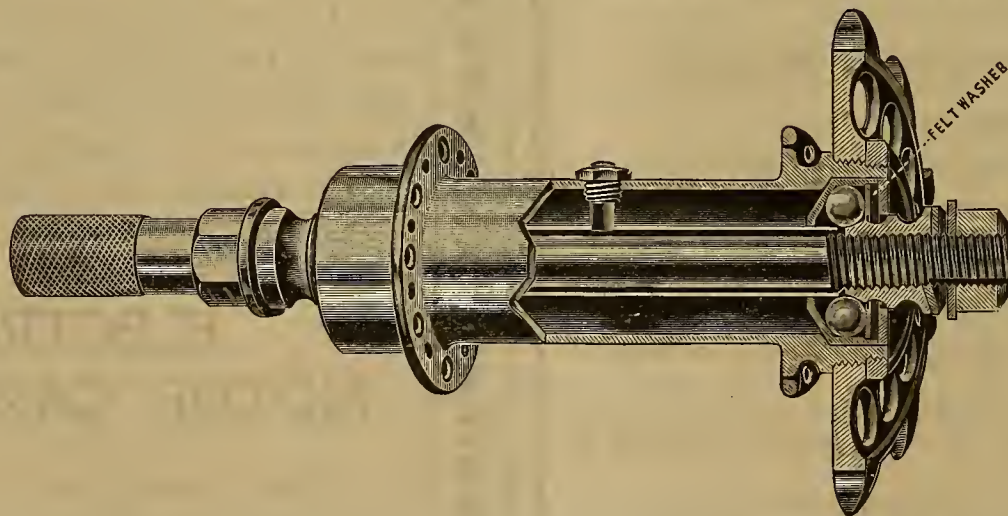
The presence of the racing men on the coast was too much for Otto Ziegler, who got the fever again and hurriedly sold his interest in a meat market and decided to go on the path again. He may go to Europe this summer. He has just recovered from the frightful fall he had in his last race about a year ago.

The first important clash between the L. A. W. and the National Cycling Association over the control of racing will come, it is thought, during the military tournament to be given at Madison Square Garden next month, in which tempting prizes will be offered for which the suspended riders belonging to the N. C. A. will want to compete.

The Union Velocipedique de France, in accordance with its agreement with the L. A. W. and the International Cyclists' Association, gave notice at its last meeting that a fine of \$50 was imposed, with suspension until paid, on all riders who took part in the last six-day race at Madison Square Garden. Among the French riders who are included in the list of those so fined are Stephane, Frederick and Joyeux, who have gone back home much disgusted with the entire affair, it is said.

With the retirement of Clinton R. Coulter from the racing field, the last of the quartet of unpaced riders which has held all the records for some years is gone from the field. Walter Sanger is manufacturing adjustable handle-bars at Milwaukee, Hamilton is running a coal yard at Denver, Fred Titus is on the stage, and Coulter is in the window glass business. Titus was known as the unpaced king, and held the records above the mile and up to ten. Coulter still claims the mile record with 1:59 1-3, claiming to have proof that Hamilton was paced to the tape. Sanger claims the record with 2:00 1-5, averring proofs that Coulter never made his record time of 1:59 1-5, and Titus holds a broad claim over all of competitive champion at unpaced work.

# Smith 1899 Hub!



With this Hub in your wheel you will discover what "easy running" really means.

## C. J. SMITH & SONS CO.

R. B. McMULLEN & CO., Chicago and New York, U. S. Sales Agents.

MILWAUKEE, WIS.

# Goodwill!

## Important Accession by the Excelsior Supply Company.

Last week the entire warehouse and other premises heretofore occupied by the

## Manufacturers & Merchants Warehouse Company....

were totally destroyed by fire. The destruction was so complete, including the loss of books and every particle of stock, that the company has concluded to go out of business.

## The Goodwill of One of the Oldest Houses

in the trade has therefore been secured by the Excelsior Supply Co., 88-90 Lake Street, Chicago, which will carry on all of the business formerly transacted by the old company.

## The Services of the Staff

of the M. & M. W. Co. have been secured so that there may be no interruption in the conduct of the business. The Excelsior Supply Co. thus largely increases its unequalled facilities for the supply of

## “Everything for Bicycle Builders and Dealers”

### EXCELSIOR SUPPLY CO.

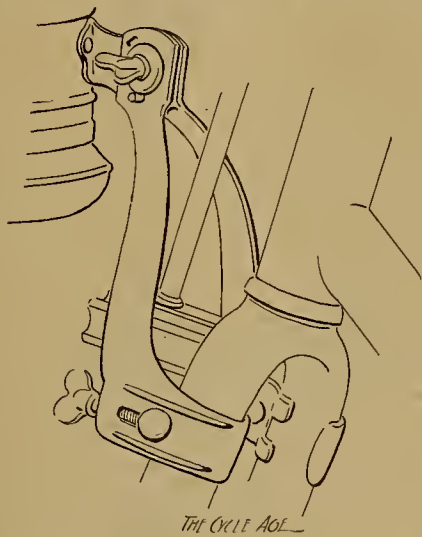
ESTABLISHED 1876...

 88 and 90 Lake St., CHICAGO

# INFORMATION FOR BUYERS

## BRIDGEPORT WISHBONE LAMP BRACKET.

The accompanying illustration shows the new wishbone lamp bracket made by the Bridgeport Brass Co. of New York city, manufacturer of the Searchlight oil and acetylene gas lamps. The bracket attaches to both fork blades near the crown and holds the lamp centrally above the front wheel. In this way the advantages of both the fork side and the steering head lamp bracket are obtained, for the lamp turns with the front wheel and is at the same

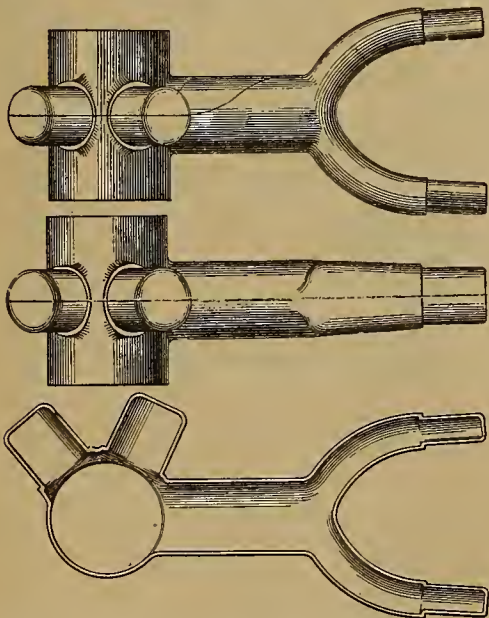


THE CYCLE AGE

time directly in front of the rider. It leaves room at the same time for the attachment of a lever brake and cannot slip down the fork side and become entangled in the spokes of the wheel, causing a fall.

## FAUBER BRACKET FOR 3-CROWN FRAMES.

The illustration herewith shows the construction of the hanger bracket and attached rear fork crown on which a patent was last week granted to W. H. Fauber of Chicago. The crown is for use in three-crown frames and is made of two stamped sections which are welded together by the electrical welding process. In order that there may be but a central division between the two parts and that the stamping operations may be simple, the half tubular sections which form the rear crown and the branch which attaches it to the bracket are made in a plane at right angles to that in which they properly belong. This brings the crown after the two sections are welded together in a vertical instead of a horizontal position. The branch is then clamped in a cylindrical die and the fork side lugs of the crown clamped in suitable forms



which hold them at their proper distance to each other and the branch is then twisted one-quarter turn, bringing the crown into its correct position.

## M. & M. W. CO.'S GOODWILL BOUGHT.

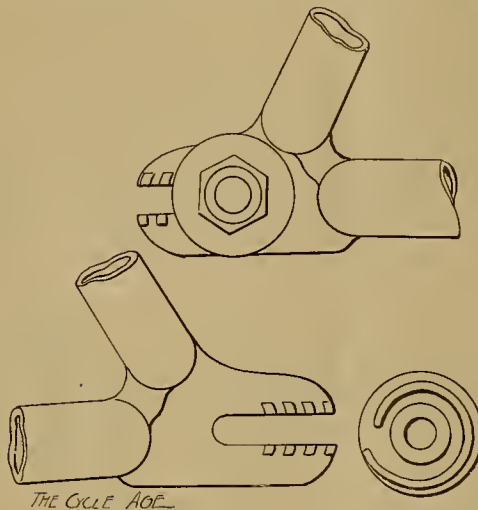
The faculty of ready appreciation of one's opportunities is a faculty possessed by comparatively few people. One of the few, however, is found in the person of Mr. George Robie, manager of the Excelsior

Supply Co. As chronicled in the Cycle Age the warehouse of the Manufacturers' & Merchants' Warehouse Co. burned last week. So disastrous was the fire that every particle of stock was destroyed, while books and other valuables are buried deep in masses of masonry. Small wonder, then, that the company concluded to go out of business. The goodwill of so old a house was, of course, of great value—a fact quickly recognized by the Excelsior people, who promptly opened negotiations for the same. A straight, business-like proposition was made and accepted within 48 hours and on Monday the goodwill of the old business became the property of the Excelsior Supply Co.

Perhaps one of the most satisfactory details of the arrangement is the fact that many of the employes of the defunct concern are to be retained under the new deal. Their knowledge of the affairs of the business will add largely to the effectiveness of a working force already one of the best in the trade. The Excelsior company secures, in addition, a number of business connections with manufacturers.

## THE NATIONAL CHAIN ADJUSTER.

The National Cycle Mfg. Co. of Bay City, Mich., is proud of the simplicity of its chain adjuster shown in the illustration. When on the bicycle it resembles in external appearance an ordinary rear fork end and washer. The action is nicely gauged so that it is impossible to throw the wheel out of line. The operation consists in turning the washer which has a raised scroll on its inner face, this scroll engaging notches in the side of the fork end fitting and mov-



THE CYCLE AGE

ing along the slot as it turns, much after the action of a worm and rack. When tightened by the axle nuts it is impossible for the adjustment to slip.

## NEW CHAIN AND CHAINLESS WARWICKS.

The newly organized Warwick Cycle Co. which has bought out the machinery and stock of the old Warwick company in Springfield, Mass., announces its intention of continuing the manufacture of only first-class bicycles to list at \$50. The New Warwick will be strictly up-to-date and the finest that skilled artisans can produce for the standard price, and the equipment the best and most expensive, it being the company's belief that nothing ordinary or commonplace should be fitted to machines of the first quality. Every little detail, in fact, is to receive that attention which strictly first class goods must have in order to take a prominent position, and the company feels confident that such attention will be appreciated by that portion of the public which is fastidious enough to want the best.

Chainless bicycles will be made a feature of the production. They will be driven by bevel gear mechanism, which has been adopted after crucial tests of various other kinds of transmitting devices. They will have one-piece cranks and shaft—the only one yet used commercially in bevel gear bicycles—but will be exactly the same in appearance as the chain driven machines except in the driving mechanism, and will combine style, character and beauty with strength and easy running qualities.

The president of the old company, George A. Russel, is president of the new firm, and A. O. Very, the former treasurer and mechanical expert, will have charge of the finances of the new concern and give his personal supervision to the construction of

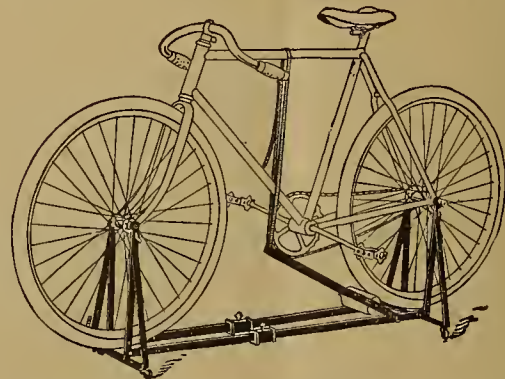
the machines. The fact that these experienced men are directing affairs and will be intimately identified with the product, is sufficient guarantee of its character.

Owners of Warwicks purchased in the past can secure parts for repairs from the new concern.

The new output will all be marketed from the New York office at 34 Union Square, East, where all communications regarding bicycles, parts, etc., should be sent.

## BANKER HOME EXERCISER.

The accompanying illustration shows the No. 4 cycle stand made by the Banker Bros. Cycle Co. of Pittsburg, Pa. It is a



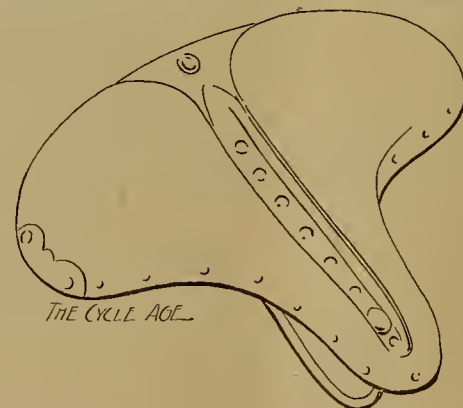
combined floor stand and home trainer and has proven a good winter sideline in cycle stores. Various tensions of resistance against the rotation of the rear wheel may be obtained by means of the strap which supports the forward end of the frame carrying the friction roller. On a ladies' machine the strap is fastened to the handle bar instead of to the top frame rail as shown in the illustration. The stand rests on castors and can be placed in any desired position without lifting. It is finished in aluminum bronze. Both wheels of the bicycle it supports are held in the stand so that the rear end is not tipped upward.

## KIRKPATRICK SADDLES IN DEMAND.

The Kirkpatrick Saddle Co. of Springfield, O., states that it is well pleased with its trade so far this season, as it is doing more business than was anticipated. It finds, with gratification, that there is little objection on the part of buyers to paying a fair price for an article of real merit. The Kirkpatrick saddles can now be secured from the following distributing agents: F. A. Hastings & Co., 159 Lake street, Chicago; C. M. Rice Co., 105 Chambers street, New York city; George D. Boles, 75 Hawley street Boston, Mass., and McMaster Eldredge & Maugle, 635 Arch street, Philadelphia.

## HOLLENBECK HYGIENIC SADDLE AND CLAMP.

The hygienic pattern saddle here illustrated continues to be a leading feature of the line of saddles made by the Hollenbeck



THE CYCLE AGE

Saddle Co. of Syracuse, N. Y. This seat is made in two sizes for either men or women, style No. 5 being 9 inches wide and style No. 6, 10½ inches wide. This saddle is of ornamental and attractive appearance, and light and durable at the same time. It is of simple and strong construction and has been pronounced by riders and physicians to be perfect of its kind. It places the weight directly upon the pelvic bones, removing all injurious pressure from other parts and insuring ease and comfort. It is thoroughly ventilated and smooth and easy riding is insured, as the improved spring

# Let us Have a Rest

## About Meyercord Decalcomania Transfers

NO! NOT UNTIL THE WHOLE WORLD USES THEM.

### A REST:

Well, there is very little work in using our **Double Paper** kind, the latest advancement in the art—the **Meyercord Guaranteed Double Paper Decalcomania Transfers**. The greatest trouble is to read the long name; otherwise our Double Paper Transfers are:

### —Trouble=less Transfers

Enamellers, Cycle Retail Dealers and Jobbers, write us for full information, samples, trial designs, directions for use, electros, etc.

N. B.—Remember stock designs in lots of fifty, especially intended for cycle agents.

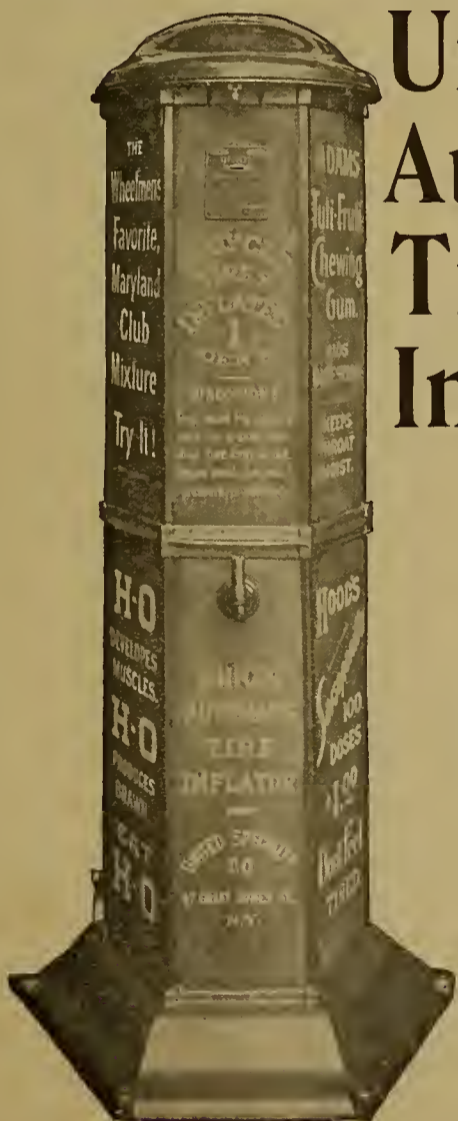
## The Meyercord Company, Inc.

American Manufacturers Guaranteed Decalcomania Transfers,

NEW YORK OFFICE:  
805 St. James Building.

MAIN OFFICE: CHAMBER OF COMMERCE BUILDING, CHICAGO, ILL.

ST. LOUIS OFFICE:  
621 Holland Building



## Union Automatic Tire Inflator...

The only perfect slot machine for automatically inflating bicycle tires.

**Enormous Profits Already Demonstrated**

Application for state rights must be accompanied by highest references.



**UNITED SPECIALTY CO.,**

47 Great Jones Street,

NEW YORK, N. Y.

FOR A COMBINATION OF

**LIGHTNESS, COMFORT**  
**DURABILITY AND PRICE**

Weights  
12 Ounces

Price,  
\$2.00



—THE—

## Hollenbeck Rawhide Saddle

CANNOT BE EXCELLED.

The strength of the material, in connection with the Hollenbeck process of treatment, makes it possible to produce a saddle, without the usual hardwood or steel base, hence lightness and flexibility are secured. The reputation of this famous saddle for these essential qualities is based upon practical tests. It has made for itself a reputation second to none. Its first introduction was a flattering success, that merit alone can win.

**COOL & COMFORTABLE & INDESTRUCTIBLE**

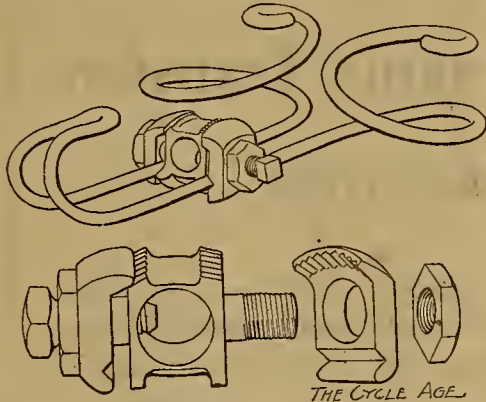
Mr. Dealer—You want it in stock.

Makers, **HOLLENBECK SADDLE CO.,** Syracuse, N. Y.

Chicago Representative: C. K. Anderson, Room 59, 164 La Salle St.; 'Phone, 3841 Main.

takes up all shocks caused by roughness of the road.

Another good feature of this saddle is the Hollenbeck Lock Tilting clamp, which is so constructed that it can be tilted to any position and there locked. This, in conjunction with the Hollenbeck spring, gives a 4-inch range of adjustment from front to rear, without disturbing the position of the



THE CYCLE AGE.

saddle. The Hollenbeck company will sell this clamp separately to anyone who desires it, as it will fit any round wire spring on any of the prominent makes of saddles. With this clamp the rider can obtain a low position of his saddle on the frame.

#### WAVERLEY AND IVANHOE BICYCLES.

The catalogue of the Indiana Bicycle Co. of Indianapolis is designed and printed in a most novel manner and as an advertising medium is sure to bring returns. The inside pages are in the form of a folder and are inclosed in a decorated cover which forms the mailing envelope. The cover, being handsomely scrolled and lettered in gold and dark red on a sage green background, is certain to attract favorable attention from every mail clerk who handles it while en route to its destination, and whoever received it would be lacking in ordinary interest if he did not open it to scan the contents.

The two regular patterns of Waverley bicycles are shown within the folder. These machines list at \$40 each and in their construction and design show signs of work tending toward general refinement rather than toward radical changes. The company's cheaper machines, the Ivanhoe and Ivanhoe Special, which sell at \$25 and \$35 each respectively, are listed in a separate circular. The Ivanhoe machines are not Waverley bicycles, either in character of material, construction or finish, and are not made in connection with the Waverley but in a separate plant which was equipped for the manufacture of medium grade cycles last year. The Ivanhoes are offered simply as honest, reliable bicycles at moderate prices, and the company claims as much merit for them as is possible to be given machines selling at the prices asked for them.

#### ANDRAE SUNDRIES CATALOGUE READY.

During the past few years the Julius Andrae & Sons Co., of Milwaukee, Wis., has been doing an extensive business in jobbing bicycle sundries. The company issues a complete sundries catalogue each year. The 1899 catalogue has just been completed and will be mailed to any agent desiring a copy.

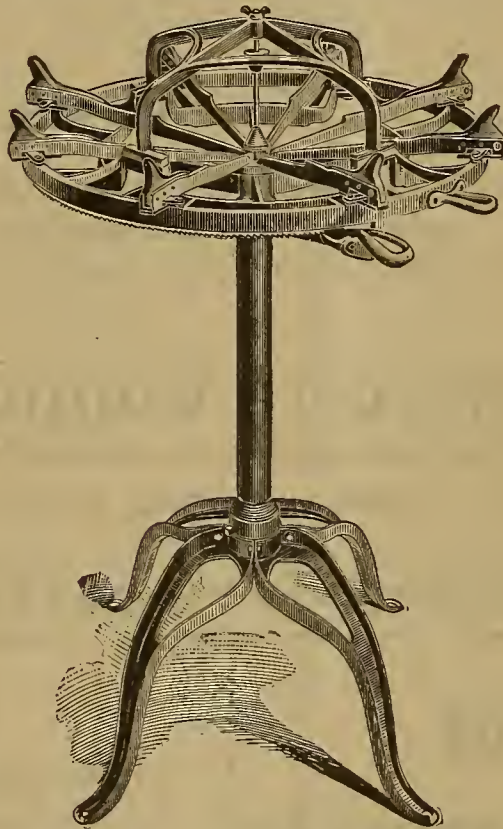
#### INSTRUCTIONS FOR BEVEL GEAR CYCLES.

Believing that intelligent care of bevel gear bicycles by riders will be stimulated by correct advice on the subject, and with the intention of saving owners of Stearns

chainless machines from expensive experience when a few well directed words might make haphazard tinkering unnecessary, E. C. Stearns & Co. of Syracuse have issued a little pamphlet containing full directions for the care and adjustment of the Stearns chainless bicycles. The pamphlet is illustrated and tells in straightforward language intelligible to anyone how to adjust the ball bearings on the connecting shaft, the hanger bearings and those in the rear hub; how to adjust the gears so that they will mesh properly; how to lubricate the various bearings and gears; how to remove the forward driving gear and the ball cup on the right side of the hanger, and how to remove and replace the rear hub dust cap.

#### KEENE WHEEL ASSEMBLING JIG.

Herewith is illustrated the Keene wheel assembling jig, one of the devices which recently attracted much attention at the New York cycle show. The new feature of this chuck is the adjustable jaws which render it equally well suited for assembling 26, 28 or 30-inch wheels. The adjusting mechanism is exceedingly simple, and only



two or three minutes' time is required to change from one size to another. The large bed casting is accurately machined in a lathe in four operations. The several operations of milling and drilling are done in accurate jigs. The construction throughout is very rigid, to resist the severe warping and diametrical strains.

As to the efficiency of this machine, it was shown repeatedly at the New York cycle show that a wheel can be completely assembled inside of eight minutes.

The price of this machine is placed very low to enable every repairer to have one. It is manufactured by the New England Cycle Supply Co., Keene, N. H.

#### THROUGH A LAPSE OF ATTENTION.

Since everybody in the bicycle trade knows with his eyes shut that the Keating

Wheel Co. is located in Middletown, Conn., it is almost superfluous to state that it was through one of those inexplicable temporary aberrations of mind that the address of this old, reliable and familiar firm was last week given in an advertisement in this paper as Middletown, O.

#### CLEVELAND HOUSE FOR STEARNS CYCLES.

The Rice Bicycle Co., with its principal office at Syracuse, N. Y., has been incorporated at Albany for the purpose of conducting a bicycle business at Cleveland, O. This firm has been organized especially for the purpose of representing Stearns bicycles in Cleveland. It has secured an excellent location at 232 Euclid avenue and has hastened to complete the fitting up of its place of business to be ready for the general opening of bicycle houses which began Monday. The company has a neatly appointed store, and under the management of John W. Rice, former agent for E. C. Stearns & Co. at Painesville, O., expects to do a good business in the Cleveland field.

H. R. Gilbert and Frank C. Riggs, for several years connected with E. C. Stearns & Co., are interested in the enterprise, but remain in their present positions at Syracuse.

#### BESLY'S OIL AND OIL CUPS.

Charles H. Besly & Co., 12 North Canal street, Chicago, report numerous large orders for their celebrated Helmet oil and Perfection and Bonanza oil cups. Among others, shipments have been made to the J. I. Case Threshing Machine Co., Pullman's Palace Car Co., Charles Parker Co., Crane Elevator Co., Brown Hoisting & Conveying Machine Co., a Cleveland automatic bicycle machinery company, and two of the oldest cycle making firms in America. The last two concerns use this oil for assembling wheels and coating steel balls, ball bearings and other wearing parts. One firm has adopted this oil for use on its bevel gear chainless bicycles.

The McCormick Harvesting Machine Co., Otis Elevator Co. and American Steel & Wire Co. are ordering Bonanza oil cups for use on their machinery.

#### OLD RELIABLE TIRE MAKERS.

The New Brunswick Rubber Co. of New Brunswick, N. J., is doing a very large business in its various grades of tires. From the present outlook it will this season double the business that it did last year. The New Brunswick Co. is managed by conservative business men of many years' successful experience, who, though they have been making bicycle tires for only four or five years, had been in the rubber manufacturing field for many years before they took up tires. In fact, the New Brunswick Rubber Co. is one of the oldest rubber manufacturing companies in the world. It was founded in 1839 and incorporated ten years later. It has had sixty years of successful existence.

#### ANDRAE CYCLES AT THE SHOWS.

The entire line of Andrae cycles is being exhibited this week at the Philadelphia show and will also be shown at Pittsburg and Washington. The exhibit at the Pittsburg show will be in charge of the Justice Cycle Co., assisted by John C. Schmidbauer, the company's representative. The Andrae exhibit at Washington will be in charge of the West End Cycle Co.

A patent was granted this week to George A. Burwell of Toledo on the Burwell mechanically fastened detachable tire which is a well known feature of Cleveland bicycles.

## WHALEY BICYCLE STIRRUPS!!

"The Best Toe Clips. The Best Selling Toe Clips."

Patent Dec. 29, 1896.  
Patent Sept. 14, 1897.  
Further patent allowed.



SOLD BY ALL  
LEADING JOBBERS

**CAUTION** See that the name "WHALEY" **BEWARE** of misleading circulars and advertisements.  
is on every stirrup.

**WHALEY-DWYER CO., Makers**  
ST. PAUL, MINN., U. S. A.

HARTLEY & GRAHAM, NEW YORK, SOLE EXPORT AGENTS

... IN THE ...

## Crawford Bicycle...

for 1899 the highest efficiency has been reached by a combination of all desirable points in the most perfect form, no one part being abnormally developed to the detriment of another. The result is a bicycle of the highest quality possible for skill and experience, combined with capital and with a plant capable of production on a scale large enough to allow selling at a popular price.

We call special attention to our model tandems at \$75.00. We also offer with entire confidence our \$50.00, \$35.00 and \$25.00 models as unequaled at those prices; and our Juveniles at \$30.00, \$25.00 and \$20.00, together with our Chainless make the line of Crawford Bicycles harmonious and complete.

WE ARE MAINTAINING A HIGH STANDARD FOR WORKMANSHIP.  
**THE CRAWFORD MFG. CO., - Hagerstown, Md.**

Chicago Branch, 86 Wabash Avenue.

Send for Catalogue.



# THE CYCLE AGE

VOL. XXII—No 18.

CHICAGO, MARCH 2, 1899.

NEW SERIES No. 67.

## AGENTS TEMPT EARLY BUYERS

**Competition Among Buffalo Dealers Leads to Some Very Lively Bidding for Patronage.**

Buffalo dealers are considerably excited on account of the fact that two of their number are extensively advertising machines for sale at \$1 down and \$1 a week. It is well understood, however, that this offer will not last long. Another concern is offering machines for \$1 down and giving a credit of \$3 when the first payment is made—an offer which is advertised as the most liberal ever made in Buffalo. This latter firm claims to have sold 1,200 machines last year by means of the "pass-book" system. It is now offering "cash" bicycles for \$5 down and \$1.50 per week.

### Cautious Dealers Apprehend Danger.

On the other hand, more conservative dealers are endeavoring to offset the effect of these announcements by declaring that, while they have no such alluring offers to make, still they have goods for sale which in the end will prove better bargains. It is the general opinion that the sale of machines on terms of \$1 down and \$1 a week will unsettle trade conditions. Dealers are apprehensive lest buyers, seeing these announcements, may be led to imagine that such offers are only put out through necessity.

These appeals to buyers who may be short of cash, or careful in its distribution, has been tried before this in other cities, but never so early. Invariably wherever they have been tried they have resulted in severe loss.

Every year witnesses a shortening of the period during which agents carry customers who buy on the installment plan. Having this in mind it is natural for the dealers in Buffalo to deplore the fact that some of their number should be so greedy for patronage, or so hard pressed in competition, that they want only and for a long time in advance of the actual riding season endeavor to spoil the market.

### Small Dealers in Disrepute.

The annual crop of cheap bicycle makers is sprouting. Last year many of these concerns were subjected to such screaming abuse by the public, on account of defective workmanship, that the impression was prevalent that the city would not be troubled with their appearance this season, or, if they did appear, that their numbers would be fewer. Such, however, is not the case. For every shop which dropped out of sight last winter two are now to be found in its place and Buffalo is threatened with a repetition of the troubles experienced last year through the breaking of front forks.

The attitude of the Buffalo public toward small builders is not to be doubted, though it has not yet been tested this year. The bitter experience of last sea-

son on the part of many riders, who were persuaded that anyone could construct machines with safety, has not yet been forgotten. So many riders were seriously and painfully injured through the breaking of fork crowns made of malleable iron and imperfectly brazed frame joints that the daily papers, taking notice of the complaints, made the city too hot for these builders.

### Daily Papers Issue Warning.

"There is no excuse," said a writer in one of the newspapers last fall, "for a manufacturer who will deliberately place a poor and dangerous piece of work on the market and represent it as high-grade article, which is being done in this city every day. The people who buy wheels are certainly entitled to some protection, for they unknowingly run the risk of serious injury, or, worse yet, loss of life, by riding wheels that break without giving the least warning to the rider. It is the next thing to murder and all because the makers are too grasping to spend ten or fifteen cents to strengthen their fork stems."

This is a sample of the manner in which the press and public handle the matter.

"If you go into a bicycle store today," a local paper said last week, commenting upon the outlook for the coming season, "the salesman will almost invariably expatiate on the strength of the front fork of the machine he wants to sell you. The fatal accidents last year in Buffalo have driven manufacturers to all kinds of re-inforcements and strengthening devices. If you buy a '99 wheel of any reputable make you needn't bother about the front forks. They are all right."

### Big Swindler Arrested.

James Ferro, or a man calling himself by that name, has been arrested in New York city for obtaining goods under false pretenses from bicycle houses. There are twenty-two complaints against him and he is alleged to have swindled makers of bicycle goods out of \$10,000 worth of material and sundries. He used letterheads bearing the name "J. Ferro & Co," which is a reputable exporting house on Broadway. He was held in \$5,000 bail.

## CHICAGO JOBBERS ORGANIZE

**They Aim at Bettered Relations With Manufacturers and More Efficient Handling of Credits.**

The Chicago Cycle Supply Jobbers' Association is the title of the organization just completed by fifteen of Chicago's leading jobbers in cycle parts and sundries and which has immediately started to work to further in various ways the interests of its members. At the last meeting Paul Armstrong, of Armstrong Bros. Tool Co., was elected president and Robert Malcom, of the Excelsior Supply Co., secretary and treasurer. The vice-president has not yet been elected. The directors of the association are: B. E. Harris, of B. E. Harris & Co.; F. S. Waters, Jr., of the Chicago Tube Co., and W. J. Beckley, of the Beckley-Ralston Co. The president and secretary also serve as members ex-officio of the board of directors.

### Membership As At Present Composed.

The firms now holding membership in the association are as follows:

Hibbard, Spencer, Bartlett & Co.  
Excelsior Supply Co.  
Independent Supply Co.  
Beckley-Ralston Co.  
Eugene Arnstein.  
F. S. Waters & Co.  
Chicago Tube Co.  
Walker & Ehrman Mfg. Co.  
Armstrong Bros. Tool Co.  
Bicycle Repairers' Tool Co.  
J. P. Doig,  
B. E. Harris & Co.  
F. A. Hastings.  
J. E. Plew.

Several other jobbers, including A. G. Spalding & Bros., have signified their willingness to join the association later on.

### Protection Against Manufacturers.

The association has two important primary objects, besides that of bringing the jobbers of Chicago into closer and more harmonious relations with each other. The first is to protect the jobbers against the common practice of many manufacturers of parts in selling to small buyers at prices so little higher than the large lot prices that the jobber's business is materially injured. It is stated that some of the local makers of such parts as handle bars, seat posts, pedals, etc., will sell their parts in single or dozen lots to repairers and other small buyers at prices but little above that asked the jobbers who buy the parts by the thousand.

As a first step toward the improvement of such conditions the Chicago Cycle Supply Jobbers' Association has taken issue with the handle bar makers of Chicago and requested that a scale of prices be established which by gradually raising the prices as the size of the selling lots diminishes would force the many small local consumers of these parts to buy at the supply stores instead of at the fac-

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tories. The secretary of the association reports that several of the handle bar makers are favorably inclined toward the proposition and that it is expected the move will be successful without any ill feeling.

#### Credit Bureau to Be Established.

The second important object of the association is to be of value to the credit departments of the firms represented in the membership. Systematic work, it is expected, will enable the association shortly to be in a position to handle the local credits, at least, with comparative safety and to shut off on credits granted indiscriminately to responsible and irresponsible local dealers and repairers.

#### Plan a National Movement.

That the general work of the credit bureau and of the association in every other line may be made as valuable as possible the secretary has written to numerous large jobbers in different cities throughout the country asking their cooperation in the enterprise. The object of sounding the out of town jobbers is not with a view to broadening the association into a national organization, but to induce as many jobbers as possible to organize local associations which, working together, would have the power of a national association. Such a plan, if successful, would not merely permit of interchange of information valuable to the credit departments, but would make a stronger trade factor of the jobbing element and enable each local association to profit by points learned in other cities as well as by its own individual experience.

Secretary Malcom has also opened correspondence with the recently organized Cycle Dealers' Protective Association of Boston and hopes to bring that association into harmonious and mutually advantageous co-operation with the Chicago association, so that the two may unite their facilities and thus form a sort of nucleus around which the national co-operative body of jobbers' associations may be formed.

The Chicago Cycle Supply Jobbers' Association invites correspondence upon all subjects of interest to supply jobbers from dealers and jobbers in other cities. The secretary's address is 88-90 Lake street, Chicago.

#### Exports of Bicycles and Materials.

Exports of bicycles and bicycle materials from the port of New York for the week ending February 21 are recorded as follows:

	Bicycles.	Material.
Holland .....	\$ 37,015	\$ 2,034
Germany .....	30,566	8,416
Denmark .....	11,800	4,750
France .....	5,939	1,976
England .....	2,609	4,599
Australia .....	5,845	2,594
British East Indies .....	5,428	223
British Africa .....	4,991	61
Belgium .....	1,508	2,685
Russia .....	2,485	1,500
British West Indies .....	1,119	312
Japan .....	1,390	18
China .....	323	810
Brazil .....	917	41
Hong Kong .....	938	.....
Dutch East Indies .....	778	.....
Italy .....	436	316
Siam .....	715	.....
British Guiana .....	502	191
Cuba .....	470	.....
Dutch Guiana .....	254	34
Peru .....	200	.....
U. S. of Colombia .....	158	.....
Other South America .....	140	.....
Egypt .....	105	.....
Turkey .....	50	.....
Totals .....	\$116,681	\$30,560

A \$150,000 fire which destroyed the Lind building in Chicago last week burned out the Standard Bicycle Works, the American Nickel Plating Works, and Tugwell Bros., machinists.

## AUSTRALIAN AUCTION STOPPED

### ENGLISH CYCLES SELL CHEAPLY

#### The Austral Cycle Agency's Auction a Failure - American Machines Successful on the Path.

Sydney, Jan. 28.—The Austral Cycle Agency's much boomed and well advertised auction sale of eighty new and twenty second-hand machines here was a failure. The machines were all English and comprised among others the following well known makes: Beeston Humber, Triumph, Raleigh and Singer model de luxe. Notwithstanding the fact that the sale was well advertised and placed in the hands of the best auctioneer in Sydney, exceptionally low prices ruled, and after forty out of the one hundred had been disposed of the auctioneer was instructed to stop the sale.

#### Sold for Less Than Cost.

Some of the machines were actually sold for less than cost price, landed here. Raleighs, one of the very best English makes, were knocked down for \$40, and it cost the Austral Cycle Agency \$55 apiece to land them in Sydney. Beeston Humber went for \$70, and the cost of landing them here is \$90 apiece. The Singer model de luxe is one of the dearest English machines on the market. Some of the drop frame models of this mount were sold for \$35.50, while the Triumph, which cost the Austral Cycle Agency something like \$75 to import, was sold for \$40.50. This auction is regarded as absolutely the worst yet held in Australia. The Austral Cycle Agency have certainly dropped money over it, as they spent a lot of money in advertising it, and they can ill afford to lose money at present as they are in very straitened circumstances. The rest of the trade in New South Wales are extremely pleased that the auction was "a frost," as it will probably prevent any more being held for some considerable time.

#### American Machines Win on the Path.

American machines seem to have a mortgage over the A. N. A. race, which is run annually in Melbourne. This is the greatest handicap race in the world and carries larger prizes than the Austral race. The prizes for this year's event were \$1,250 first, \$625 second and \$225 third, while \$100 was divided among heat winners. When Matthews won this classic event on an American machine. The entries for the race numbered 258. Matthews was fourth in the Austral on the same machine. The A. N. A. race has now been won three times in succession on an American machine.

## ANOTHER BIG AUTOMOBILE CO.

#### Formed in the East and Alleged to Be in Opposition to the Croker-Leiter Concern.

Articles of incorporation have been filed at Trenton by the New York Electric Vehicle Transportation Company, with an authorized capital of \$25,000,000. The company is empowered to acquire, manufacture and sell vehicles of all kinds to be operated by electricity, compressed air, gas, oil, or other means of motive power; also to acquire franchises for the operating of these vehicles to carry passengers and freight of all descriptions.

Inquiries develop the fact that in the New York Electric Vehicle Company Croker's autotruck company is to have a formidable rival. The persons named in the articles of incorporation are merely figureheads, but behind them is

Isaac L. Rice, president of the Electric Storage Battery company, and president also of the Electric Vehicle company, the concern which is now operating the automobile cabs.

It appears that the new company is chartered to operate not only in the city but also in the state of New York, and will run vehicles for passenger and freight traffic in the city on the storage battery system. Just when the company will push its plans into operation cannot be ascertained, but it is definitely stated that autotrucks and delivery wagons will be included in the scope of the company's operations.

Croker's autotruck company has announced that it will sell no vehicles of any kind, but will operate them itself exclusively. The new company is out to sell vehicles of all kinds, equipped with electric motors.

## GIVES UP THE FIGHT

#### Lozier Secures Advice Against Opposing Georgia Tax—Makers Pay Tardily—Dealers Benefit.

The bill which was passed by the last Georgia legislature providing that each manufacturer of bicycles selling within the state, either directly or through agents, shall pay an annual tax of \$5 for each agent, will not be fought at the present by bicycle manufacturers. H. A. Lozier, Sr., who has shown much interest in the matter for several months, spending time and money looking into the case, and who, at the solicitation of several other prominent bicycle manufacturers, undertook to carry the matter before the supreme court of Georgia, has secured the opinion of Hon. Hoke Smith of Atlanta, who states that it would be inadvisable to fight the tax. This, together with the fact that the Georgia supreme court in 1897 rendered an adverse decision in a similar case—that of the Singer Mfg. Co. versus Wright, page 114, 1897 Georgia reports—has led H. A. Lozier & Co. to let the matter drop for the time being and to pay the tax.

Up to the present time only twenty companies doing business in the state have complied with the statute, and the ordinaries of the various counties are being notified to send in the names of the delinquents at once. It is understood that more than seventy-five different bicycle manufacturers throughout the country are represented by agents in Georgia.

The comptroller announces that he will in the near future begin to issue executions against those firms that have not complied with the letter of the law.

Before doing business under this act all manufacturers, their dealers and agents, are required to register their names with the ordinaries of the counties in which they propose to operate and exhibit the license obtained from the office of the comptroller general of the state.

Mayor Myer of Savannah has expressed himself very forcibly in opposition to the special act of the Georgia legislature, which, while it imposes a \$100 license on bicycle makers, exempts all dealers handling the machines in cities from municipal taxation.

The city of Savannah taxes bicycle dealers \$30 per year, but those dealers whose makers have paid the \$100 tax, have refused outright to pay the city. The comptroller general says the position of the dealers is correct.

Mayor Myers stated Friday that this was but one of many instances that showed him that the farming interest of the state control all legislation. He thinks there was a good deal of lobbying done by somebody in the legislature to get such a special measure through the house and he is anxious to know who profited thereby.

**HILSENDEGEN CHOPS PRICES****IS ANGRY AT TRIBUNE MAKERS**

**Because Territorial Control is Taken Away from Him He Makes Sharp Reprisals.**

Detroit, Mich., Feb. 28.—The principal topic of conversation among the dealers in this city and throughout the state of Michigan, has for its central figures George Hilsendegen and the Black Mfg. Co. Hilsendegen is out with large advertisements in the daily papers offering Tribune bicycles at reduced prices. The \$40 Tribune models he offers for \$30 and the \$50 models for \$40. In his announcement Hilsendegen makes this statement:

**Hilsendegen's Announcement.**

After mature consideration we have adopted for the year 1899 the policy of selling Tribune bicycles direct to riders, thus saving them the agent's profit—a policy we believe that will be fully appreciated by the riding public.

As we will thus have no Tribune agents in the state of Michigan, we will fill all orders direct to customers. Former agents and dealers need not apply for discounts; we have but the one price, as given above.

We will fill orders direct, shipping the wheels on approval, free of all expense, and pay expense of returning if not satisfactory. Address all orders to

The Tribune makers assert that Hilsendegen is resorting to unfair tactics to injure the sale of their machines. Hilsendegen has been the Tribune agent for the state of Michigan, part of Indiana and Ohio from 1894 to 1898. He contends that this year at a late date the Black company withdrew their agency from him and proceeded to sell direct to all agents in the territory above named. Then he cut the price of such Tribune machines as he was able to procure, and now announces his intention to continue this policy as long as the supply of goods holds out.

**Detroit Agency Given to Another.**

The Black company, for reasons best known to themselves, did not give Hilsendegen territory this year. They placed the Detroit agency in the hands of W. C. Rands. They state that Hilsendegen succeeded in obtaining a few machines from their Council Bluffs agent. The supply from this source has been stopped.

W. C. Rands naturally takes a hand in the fight. He is advertising a warning to all Tribune buyers to see that the serial numbers are found on the machines, as otherwise they will not be guaranteed except when purchased from regularly appointed agents.

**Looks Like Spite Work.**

Hilsendegen's attitude must, to say the least, be characterized as spiteful. His past services in the interest of the Black company were well requited, or else he would have abandoned the wholesale agency long ago; and remembering this fact, and the further fact that he is selling only Tribune bicycles direct to riders at a cost price, it is out of the question to admire the ethics of his side of the quarrel. Besides, it is manifestly absurd that he should affect to have a policy for the sale of machines for which he is not appointed agent. If there were logic in his attempt to sell machines he experiences the utmost difficulty in securing, the agency system would collapse and pirating would take the place of accepted business methods.

Hilsendegen's defiant position is, in short, characteristic of that class which violently insists upon making the sale of bicycles yield three profits before the goods reach the rider, and in this respect is inimical to the highest interests of the maker and agent. Before this wholesalers have spent their money in pushing the sale of bicycles, and when

through force of circumstances they have lost territorial control of the machines have not, as in this case, recklessly proceeded to spoil future sales by disaffecting buyers. In refraining from making an outcry, or seeking to retaliate for the loss, they have been philosophic enough to understand the true nature of the causes which worked their elimination.

**SOUTHERN SEASON OPENS**

**First Warm Weather Starts Sales With a Rush—Large Increase of Riders Expected.**

New Orleans, Feb. 28.—All the dealers in this city report heavy sales since the warm weather began. Despite the fact that the streets are being badly torn up, all agents predict a prosperous season. The indications are that the increase in riders this season will be 50 per cent. One of the best posted dealers in the city, speaking of the prospects, says:

"The price of high grade bicycles has been so materially reduced that a majority of riders feel like buying new mounts even though their present machines are still of service. As a result, my sales of new patterns have been very largely increased. I did a heavy business last week and expect to continue busy in the sales department for some time to come."

The bicycle jobbers, who are exceedingly active just now, state that while a good number of orders are from the country the bulk of business has been done in the city in the last week or so. They, too, anticipate a heavy increase in the number of cyclists.

**New Dunlop Company in Canada.**

The American Dunlop Tire Company has been formed in Canada to take over the Canadian business of the American Dunlop Tire Company. Its capital stock is \$1,000,000, of which \$300,000 is 7 per cent preference stock and the remainder common. The business done by the Canadian branch of the American Dunlop Tire Company in Canada has grown rapidly. In 1897 the net profits were \$35,000, and for the year ending with August 31, 1898, the net profits amounted to \$50,000. The shipments from the Canadian factory so far this year are almost 100 per cent greater than for the corresponding period of last year.

The directorate includes some of the best known business men in Canada. The president is Warren Y. Soper, of Ahearn & Soper, of Ottawa. On the board are Hon. George A. Cox, Edward Gurney, E. B. Ryckman and Richard Garland.

**No Road Toll on Bicycles.**

Buffalo, Feb. 27.—In the appellate division of the New York supreme court the case of the Rochester & Charlotte Turnpike Road Company against Phineas C. Joel came up for argument. This action was brought by the turnpike company to recover from the defendant the penalty of \$10 for each of five offenses which consisted in riding his bicycle past the toll gate without paying the two cents each time demanded of him. The question at issue was the right of the turnpike company to collect tolls for bicycles. It was contended by the defendant that that right was taken away by chapter 151 of the laws of 1898, and that all the acts complained of were committed since the passage of the act and constituted no offense against existing law. Judgment was ordered for the defendant, without costs.

An account stated can be opened only for correction on the ground of fraud, mistake, accident or undue advantage, and the burden of the proof rests upon the party seeking to open the account.

**VERY LOW TRADING-IN PRICES****CAUTIOUS COLUMBUS DEALERS**

**From \$5 to \$15 Will be Allowed for the General Run of Old Machines—Better Goods Wanted.**

Columbus, O., Feb. 28.—The trading in of second-hand machines has always resulted in some loss to the dealers of this city. By this is meant that a dealer who last season traded in, say, fifty second-hand machines at an average price of \$15 apiece was not able to sell these fifty machines so as to realize \$750. With one or two exceptions, the dealers here last season were strongly inclined to be quite conservative in making exchanges. It is yet too early to prophesy what will be done this year, but the general opinion, so far as it can be ascertained at the present hour, is that from \$5 to \$15 will be all that will be allowed for second-hand machines of the general run, with \$20 as the extreme allowance. This is probably an average of from \$10 to \$15 less than was allowed last year.

**Agents Look for Heavy Sales.**

The prospects for the retailers in this city and vicinity are exceedingly bright. In spite of the bad weather, many machines have been sold and many people are interested in cycling. It is the expectation that the reduced prices will lead to greater sales. One dealer speaking on this subject says:

"Many people who hitherto have refrained from purchasing a bicycle have done so owing to the high prices. These will now purchase because it is possible to obtain a good machine at a moderate sum. Others who have been riding a cheap bicycle, or one of old pattern, will, if in the least dissatisfied, now buy standard goods because they are marked low in price. Former prices have been prohibitory in so many cases that it is fair to assume, the usefulness of the bicycle not being in the least destroyed, that many converts will be made this season."

Thus far nearly all inquiry seems to be for higher priced goods of standard manufacture, a fact which is very encouraging to the dealers. The purchasing capacity of the public at large in Columbus is much larger than it was a year ago, and this state of affairs is not without its peculiar effect upon the bicycle business. Many cash sales are being made—more in fact than last season. When machines are sold on time, it is always possible to secure larger first payments and larger payments each month. These are significant features of the opening of this year's trade.

**Curbstone Agents Not Active.**

If there are curb-stone agents in Columbus they have not yet been so active as to interfere with the business of regularly established agents. The demand for 30-inch models is light—exceedingly light in comparison with the demand for chainless models, concerning which latter form of manufacture there is considerable inquiry.

During the past two years the demand for tandems has gradually faded away until just now no trade in these models is looked for by dealers. Nor are many of the double seaters made by repairmen. The fact is that tandems have not been reduced in price in proportion to the list valuation of single machines. In many cases two single machines can be bought for less than one tandem. This being the case, the majority of people prefer to buy two machines, as they can be used separately.

During the past year 4,700 bicycles were stolen in Berlin.

# Bicycle Economy

The money you pay for a new wheel is sometimes only part of the price. The bicycle-mender gets the rest. But if you buy a . . . .

# Crescent

to begin with you need have only a bowing acquaintance with the wheel-tinker. . . . .

CATALOGUE No. 2 FREE

...Chicago—WESTERN WHEEL WORKS—New York

NEW TESTIMONIALS EACH WEEK.

# MILWAUKEE TIRES

PUNCTURE PROOF

Pneumatic

Resilient



Single Tube

Easy Riding

PRESENTING TESTIMONIALS.

GUS KITZINGER,  
Lumber By Cargo and Commission, Manistee, Mich.  
June 8, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., Milwaukee, Wis.  
Gentlemen:—Yours of third inst. at hand and contents noted. In reply, will say, that when I received your Milwaukee Patent Puncture-Proof tires about two months ago I had them placed on my wheel and have ridden them ever since, and I can conscientiously say they are all and more than you claim them to be. I have ridden quite a number of different makes of tires for the past four years, but never have I experienced such a pleasure in riding a bicycle as I have during the last two months, and all due to a tire unequaled in both quality and resiliency, and I can honestly say this is the liveliest tire I have ever ridden. The most pleasure in riding a bicycle is experienced when you know you are safe, and how can a person feel so when

he knows that he might at any moment be thrown from his mount by a punctured tire, and mayhap seriously injured? Yours very respectfully,  
(Signed) GUS KITZINGER.

J. A. HOLT & CO., Bicycles and Sundries, Milwaukee, Wis.  
Dec. 20, 1898.  
MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., Milwaukee, Wis.  
Gentlemen:—We have handled your tire all of the past season and can conscientiously say that in our opinion they are the BEST TIRES on the market to-day. We have sold several dozen pairs of the tires and all our customers who are using the tires are more than pleased with them. They are everything you claim for them, being resilient, easy riding and absolutely puncture-proof for all actual service. Yours respectfully,  
(Signed) J. A. HOLT & Co.

Representatives Wanted. Write for Prices and Other Information.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.

# THE CYCLE AGE

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

Published every Thursday at 324 Dearborn Street, Chicago.  
Eastern Offices, American Tract Building, New York City.

Subscription price in the United States, Canada and Mexico, \$2.00 per year; in foreign countries \$6.00 per year.

ALL remittances should be made to THE CYCLE AGE COMPANY.

## MAKERS LOOKING FOR SIDE LINES

If there were forthcoming the assurance that a continuation of the existing rivalry would not inevitably carry with it further reductions in list prices—and this is the prayer of all in the trade—it would be an easy matter, with shop economies practiced with a finer hand and a genuine attempt at harmonizing competitive methods, to rest content, for there are many conditions reigning within and without the trade which in normal times are regarded as the complements to commercial safety. There is a general air of robust cheerfulness over the prospects for the coming season, which is not affected for more than a moment because as a result of the recent severe weather factory orders were abruptly stopped and retail sales were put in cold storage. And if by some lucky accident of fortune this temporary satisfaction could be lengthened till it assumed the proportions of what in the bicycle business might be called permanency—say two or three years—both makers and agents would be able to put a safe estimate upon the value of skill in a game which all now admit is largely a matter of hazard.

But this assurance cannot be given. The hair trigger fraternity will not permit it; and hence the uneasiness and the incurable longing to pierce the future.

Uncertain hopes beget uncertain methods and variously affect different classes of makers. Just now high priced machines are experiencing a boom, and already their makers are gambling in futures. In a few months there may be a violent change and new values may have to be figured. In either event there will be disappointed losers. Amid all this uncertainty makers glow with enthusiasm over the motor vehicle. But motor vehicle manufacture only enthralls those who have never known its difficulties. It is said of one of the largest makers of such vehicles that last year he only managed to turn out fifty-five machines, while the capital invested in their manufacture must be expressed in six figures.

## REVIEW OF FOREIGN TRADE

Since it has been shown by government returns that, so far as the money volume of our cycle exports is concerned, foreign trade is slightly improved, it is of interest to analyze our relations with the various countries. Trade with England is still large, though the increasing re-exports of our goods from that country shows to what an extent the value of that market may be misunderstood by concerns which have no deep knowledge of it. Large as England's purchases of American cycles, parts, sundries and materials are, however, the total of our business dealings with the country during the past twelve months decreased 25 per cent.

For three years France has doubled its trade with us and last year took \$500,000 worth of our goods. It is one of the satisfactory markets in Europe, though least is heard of it. Germany's purchases show an increase of 20 per cent, with heavy sales in material, parts and sundries. Germany, however, is not a very desirable market for American manufacturers on account of the fact that the demand in cycles is for cheap grades. It is, in fact, notwithstanding its large volume of business, one of the most difficult European markets. In the other European countries the trade for the year shows a 20 per cent increase, with Russia as the most inviting market. The countries of Northern Europe are tolerably strong competitors of the United States in cheap bicycles, but are strong buyers of our materials and parts.

Our trade with Canada decreased 20 per cent in the twelve-month, the loss being principally borne by bicycle makers. Makers of materials and parts, however, as well as concerns manufacturing cheap bicycles, have gained a temporary advantage.

British India is just reckoned one of the best of our foreign markets. Last year the volume of cycle imports was five times as great as in 1897. Parts and sundries sell readily in that country. The South African market is steady at \$180,000 in the year. There is a strong and increasing demand for parts and material.

The wretched showing of Australia is ascribable to causes with which only those who have ventured so far away from home are familiar. The business is overdone. The island is under-populated, according to American views, for so vast an area. The effects of the rinderpest and drought, have extended to all branches of trade, and the result of all these afflictions has been to the American cycle exporting trade a falling off of upwards of 50 per cent.

## ENFORCED BICYCLE GUARANTEE

Whether Gallagher is at work for his constituents or for bicycle manufacturers is not as plain as it might be. Possibly he does not know, himself. He is a legislator and is attempting to make the state of Connecticut enact a law to the effect that new bicycles sold in that state shall hereafter be accompanied by a written or printed guarantee stating that "if any imperfections or defects in workmanship or material develop within two months from the date of sale, the same shall be made good to the buyer at the expense of the maker or sales agent."

Now, if Gallagher had added the provision that the purchaser of a bicycle in return for this guarantee should sign a statement absolving the manufacturer or agent from all further responsibility than that specified in the guarantee, the intentions of Gallagher would have been clear.

The provision would be impossible of enforcement and ridiculous, but it would mean something.

In Gallagher's diction the bill runs foul of common law which accords the purchaser the right for an indefinite period not only to have defects "made good" but to have every claim attended to that may arise from the unfitness of the purchased bicycle for its intended purpose. Yet the maker's guarantee does not at all abridge these rights. The maker cannot limit his own responsibility by declaration, even if his declaration is compulsory. A court with jurisdiction to assess damages would care nothing for a declaratory guarantee or for a law legalizing it.

If the legislator has the idea of furnishing the public with means for obtaining redress without litigation, he has missed his aim, for the manufacturer may always deny that any discovered shortcoming of the bicycle is due to original defects and may throw the burden of proof on the purchaser, and if, on the other hand, Gallagher means to give the general public the impression that they should not expect good service from a bicycle for more than two months he is giving the bicycle trade a black eye.

If, finally, he means to convey the idea that a bicycle which is good for two months should be considered so good that there is established a presumption that defects discovered later are due to the rider's abuse of his machine, he is working in favor of the sale of bicycles in which the factor of safety through poor material, construction or workmanship or by extraordinary lightness has been reduced to such a low point that the stresses of ordinary usage will reduce it further.

Being a legislator Gallagher, of course, does not know that steel structures deteriorate rapidly if they are subject to stresses that exceed one-half of their strength, so that they finally collapse under usage which did not seem to affect them at first. Good manufacturers know this, however, and build accordingly, although the temptation to reduce weight and cost of material is always great. Gallagher's bill would increase this temptation if passed.

Something may be needed to define the rights of the public and to forestall, in the interest of manufacturers, a possible epidemic of the blackmailing kind of damage suits, but the Gallagher bill is not the instrument by which this may be done.

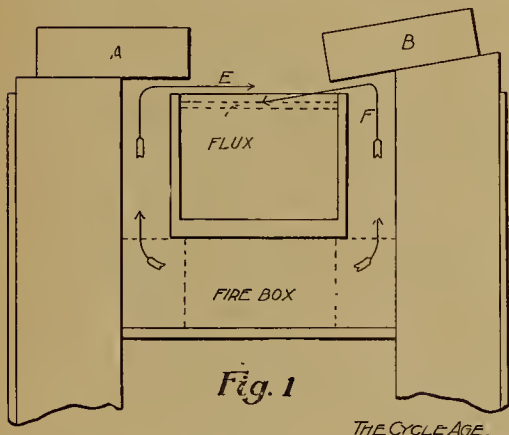
## BRAZING BY IMMERSION

### Efficiency Gained by Use of Inclined Cover Tiles—Flangeless Crucible Proves Successful

Many factory superintendents who have installed standard brazing furnaces and operated them successfully have grasped the vital points of the immersion process so thoroughly that they are now able to experiment on minor points in furnace construction and to bring out ideas tending toward economy. These men are not making radical changes, but are suggesting small alterations which aim at higher efficiency without violating the main principles of accepted furnace design. A notable example is that which comes almost simultaneously from two factories, each using furnaces of the Fulton type, and which relates to the disposition of the cover tiles.

#### Furnaces With Inclined Cover Tiles.

It is granted by every successful user of immersion brazing that the heat and flame rising from the firebox must be projected to cover the top of the metal in the crucible in order that the brass may be kept at the same temperature in all parts of the crucible. Previously this has been accomplished by leaving heat spaces at both sides of the crucible and by placing horizontal cover tiles over the open tops of these spaces and about an inch above the upper edges of the



crucible, thus turning the direction of the rising heat and flame from vertical to horizontal. In the factories of the Geneva Cycle Co., of Geneva, O., and the Fay Mfg. Co., of Elyria, O., the utility of the cover tiles has been enhanced by inclining them laterally so that the inner side of each tile is lower than the outer.

The value of this change, which by the way can be made without in any way altering the construction of the furnace itself, will be readily gathered from Fig. 1, which is a combination sectional view of a furnace showing a regular horizontal tile on the left side and an inclined tile on the right. The arrows mark the approximate direction of the flames rising from the fire box. The flame indicated by the arrow E, when it strikes the bottom of the horizontal cover tile A, will be projected laterally across the crucible in an approximately horizontal direction to the point where the mechanical draft effect causes it to rise toward the hood of the furnace. The heating effect of this flame is due to two causes, that of radiation and that of the hot air cover which the horizontal flames maintain above the brass, thus shutting out cold drafts.

#### Flames Projected Directly Upon Metal.

If, however, the cover tile be inclined inwardly about ten degrees as indicated at B, the flame marked by the arrow F

will strike the cover and then be projected as shown in a direction approximately corresponding to the inclination of the tile, and will strike directly upon the flux floating over the spelter in the crucible and thus heat the contents of the

obviated. He uses in his furnace a crucible the general shape of which corresponds to that of the side flanged crucible but which is much smaller and lighter and with thinner side walls having no flanges whatever. The crucible has end flanges that it may be supported in the usual manner. With this combination of small, thin walled, flangeless crucible and inclined cover tiles it is stated that brazing heat can be attained in about thirty minutes' less time than was required when the standard form of flanged crucible and the horizontal cover tiles were used, and that the maintenance of the heat requires but three-quarters as much fuel.



FIG 2—CRUCIBLE WITHOUT SIDE FLANGES.

crucible by direct contact as well as by forming a heat cover to exclude cold air.

Though the inclined cover tile is adaptable to furnaces using the regular trough crucible with side flanges, Mr. Geo. Worthington, superintendent of the Fay Mfg. Co., has demonstrated that by their use the necessity of side flanges, if such necessity ever existed, is entirely

One of these crucibles which has seen eleven days' constant service is shown in Fig. 2, and it will be noticed that while the action of the flux upon the side walls has reduced one of the upper edges to about half its normal thickness, the crucible is not yet entirely useless. To be on the safe side, however, it was deemed best to replace it with a new crucible.

The cost of crucibles of this form being but \$3 each, it does not pay to take risks by working the crucibles to the extreme limit. Eleven days' use from a three dollar crucible means a crucible expense of less than 30 cents per day.

Fig. 3 shows the exact exterior appearance of a furnace in which the cover



FIG. 3—FURNACE WITH INCLINED TILES.

tiles are inclined for the purpose described. The furnace is in the factory of the Geneva Cycle Co.

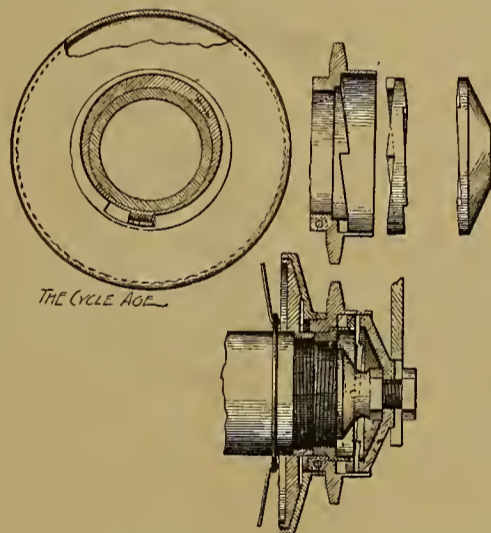
### BACK PEDALING BRAKE

Rear Sprocket Clutch Combined With Brake Shoe—Eccentric Used in Place of Ratchet.

L. Conwell of Chicago has been granted a patent on the automatic rear sprocket clutch and brake illustrated. Differing from most brakes of this sort the loosely mounted sprocket does not engage in a driving manner with the rear wheel hub through the medium of a clutch or a ratchet, but by the friction of the same brake shoe and disk with which the machine is retarded by back pedaling. The device is designed so that it can be attached to an ordinary hub which is threaded right and left on the right end of the barrel for the reception of the usual sprocket and lock nut. On the threading next the spoke flange is screwed the hub of a vertical flange which has an over-turned edge forming an annular flange around its circumference. Locking this disk by screwing onto the outer left-threaded portion of the hub barrel is a sleeve having two external diameters, the inner and smaller of which is equal to that of the hub of the vertical flange so that the union of the two furnishes a flush surface on which the sprocket may rotate. The hole in the sprocket is counterbored from its outer edge so that the sprocket rests partly on the surface mentioned and partly on the enlarged portion of the locking sleeve. The brake shoe is mounted around the inwardly projecting sprocket hub, which latter is slightly eccentric to the axis of the hub and sprocket. Thus when the sprocket is revolved in a forward direction the eccentricity of the parts causes them to bind and makes the hub revolve with the sprocket. In order that the same effect may not be obtained by back pedaling or by discontinuance of pedaling a segmental slot is cut in the periphery of the eccentric hole in the brake shoe and a stud projected from the eccentric surface of the sprocket hub so that the action of the eccentric device is limited. The

back pedaling brake part of the mechanism comprises face ratchet teeth upon the outer side of the sprocket which engage similar teeth in a loose ring mounted upon the outer extremity of the locking ring attached to the hub barrel. The loose ring also has a series of ratchet teeth upon its outer side which engage

corresponding teeth on the inner face of a disk rigidly attached to the rear fork end or to the axle of the bicycle. The directions of action of the two sets of ratchets are opposite and so disposed that when the sprocket is revolved backwardly, as in back pedaling, it pushes outwardly the loose ratchet ring because of the inclination of the long sloping sides of the ratchet teeth until it engages and is held by the teeth of the rigid disk. Further back pedaling then moves the sprocket inwardly along the hub barrel till it pushes the brake shoe over against



the peripheral disk secured to the hub, thus braking the rear wheel of the bicycle.

Both in the action of the driving clutch and in that of the braking ratchets the inventor has relied upon the direction of rotation of the rear sprocket to return the parts to their normal positions.

### Paterson Dealers Veto a Show.

There has been some talk of a bicycle show in Paterson, N. J. It was the intention to get the members of the local cycle board of trade, which includes every bicycle dealer in the city with one or two exceptions, into the scheme. But the latter refused. Now those who have the matter in hand are trying to induce out-of-town dealers and makers to exhibit. What success they will have remains to

be seen. H. M. Quick, president of the cycle board of trade, says that under no circumstances would the members of the board go into the deal. The board was organized to promote bicycling and the interests of the dealers, not to make money. It has been the intention of the members to give a bicycle show in this city, but not this year, as they are not ready. Mr. Quick says the local dealers are not at all alarmed at the idea of other dealers exhibiting.

### PROSPECTS IN NEW YORK

Dealers Are Booking Heavy Orders for Early Delivery and Expect to Do a Big Business.

New York City, Feb. 28.—It is the prevailing opinion in this city that the retail business for the coming season will rival, if it does not considerably exceed, the banner season of 1896. More orders are being taken for immediate delivery than ever in the history of the trade at this season of the year.

One of the leading dealers who has taken space at the dealers' exhibition which will be held in this city in the last week of this month, remarks in connection with the approaching show:

"I believe the first annual cycle dealers' exhibition will prove a satisfactory success, and that many of the exhibitors will do business enough in immediate sales to pay all their expenses and more. I was, with an exception or two, I believe, the only dealer who had the temerity to exhibit in the show in January at the Madison Square Garden, and although the buying season has already opened, am more than satisfied with results. I am glad that I was undeterred by the fact that some of my friends in the ranks of the retailers smiled at my announcement that I would appear among the manufacturers."

### Forthcoming Exhibitions.

Cycle dealers in Boston are now planning a local show and have secured an option on the Mechanics' building for the week of March 23 to April 1. The show will be for the benefit of the '99 L. A. W. meet and will be managed by Charles Ducker, manager of Charles River Park track, and S. J. Byrne.

The Triangle Bicycle Club of Davenport, Ia., proposes to hold a small bicycle show about the middle of March, charging exhibitors a nominal fee for floor space.

Dubuque, Ia., will have a local show under the auspices of the Y. M. C. A. on March 9 and 10. A number of dealers have agreed to exhibit their goods and assist in making the show a success.

A general opening of the retail stores of Lynn, Mass., occurred on February 23, Washington's birthday.

### Gold-Bricking the Country Editor.

And now doth the foxy bicycle dealer take his pen in hand and write to his friend in the country—the editor—offering him a twenty-dollar wheel for only thirty dollars in cash and forty in advertising.—Goodland (Ind.) Herald.

At a meeting of the cycle board of trade of France held February 9 in Paris it was announced that the Paris cycle show realized \$8,000, allowing 68 cents per square meter to each exhibitor and the return of the guarantee capital with 40 per cent profit.

The measure of damages for a breach of warranty is the difference between the contract price, paid or to be paid, and the market value at the time and place when delivered.

# Current Cycle Manufacture

In the following table, which will be continued in subsequent numbers of THE CYCLE AGE, will be found an amplification of that class of information which is customarily given in catalogues issued by makers of bicycles, saddles, bells, lamps, chains, rims, cyclometers, etc. It will serve as a handy reference for dealers.

Firm Name	Model	List Price	Weight (all on)	Depths of Frame	Width of Tread	Form of Joints	Form of Front Crown	Drop of Hanger	Rear Fork Tubing	Rear Stay Tubing	Lugs at Bottom Bracket	Lugs at Seat-Post Cluster	Crank Hanger Form	
SYRACUSE CYCLE CO.....	Pacer	\$50	25 lbs.	21, 23, 25	4 in.	Flush	Special	2 3/4 in.	Round	Oval	4	4	Three Piece	
	Thelma	50	26 lbs.	21, 23,	4 3/8 in.	Flush	Special	2 3/4 in.	Round	Oval	4	4	Three Piece	
	Racer	65	21 lbs.	21, 23,	4 in.	Flush	Special	3 1/4 in.	Round	Oval	4	4	Three Piece	
	Spec'l 30-In. Wh'ls	65		21, 23, 25	4 in.	Flush	Special	3 3/4 in.	Round	Oval	4	4	Three Piece	
	Tandem Chainless	75		24, 21, 23,	5 & 4 in.	Flush	Special	2 in.	Round	Round	4	4	Three Piece	
SHERMAN CYCLE CO.....	Elite	30	25 lbs.	22, 24	4 7/8 in.	Flush	Oval	2 1/2 in.	D Tap'r	D sh'pe	4	4	One Piece	
	Premier	35	25 lbs.	21, 24	4 7/8 in.	Flush	Oval	2 1/2 in.	D Tap'r	D sh'pe	4	4	One Piece	
	Sherman	40	25 lbs.	22, 24	4 7/8 in.	Flush	Oval	2 1/2 in.	D Tap'r	D sh'pe	4	4	One Piece	
	Sherman Special	50	26 lbs.	23	4 7/8 in.	Flush	Oval	4 in.	D Tap'r	D sh'pe	3	3	One Piece	
ACME MFG. CO.....	Stormer 25	40	24 lbs.	20, 22, 24	4 7/8 in.	Flush	Flat	2 3/4 in.	Taper Oval	Taper Oval	4	3	One Piece	
	Stormer 26	40	26 lbs.	20, 22, 24	4 7/8 in.	Flush	Flat	2 3/4 in.	Taper Oval	Taper Oval	4	3	One Piece	
	Pennant 21	35	25 1/2 "	22, 24, 26	4 7/8 in.	Flush	Oval	2 1/2 in.	TaperD	Round	4	3	One Piece	
	Pennant 22	35	26 1/2 "	20, 22, 24	4 7/8 in.	Flush	Oval	2 1/2 in.	TaperD	Round	4	3	One Piece	
	Mars Men	25	26 lbs.	21, 23,	4 7/8 in.	Flush	Oval	2 1/2 in.	Taper Oval	Taper Oval	4	3	Two Piece	
	Mars Women	25	27 lbs.	21, 23,	4 7/8 in.	Flush	Oval	2 1/2 in.	Taper Oval	Taper Oval	4	3	Two Piece	
PACKER CYCLE CO.....	Model 33	50	23 1/2 lbs	22	4 7/8 in.	Flush	Special	2 1/2 in.	D	D	3	3	Single Piece	
	Model 34	50	24 1/2 "	22	4 7/8 in.	Flush	Special	2 1/2 in.	D	D	3	3	Single Piece	
	Model 35 Racer	55	21 lbs.	22	4 7/8 in.	Flush	Special	3 in.	D	D	3	3	Single Piece	
	Model 36, 30 in. wh'ls.	60	26 1/2 "	24	4 7/8 in.	Flush	Special	3 1/2 in.	D	D	3	3	Single Piece	
	D. D. Tandem	75	38 lbs.	22	4 7/8 in.	Flush	Special	2 3/4 in.	D	D	3	3	Single Piece	
	Comb. Tandem	80	42 lbs.	22, 21	4 7/8 in.	Flush	Special	2 3/4 in.	D	D	3	3	Single Piece	
	Model 39, Chainless	75	25 lbs.	22	5 1/4 in.	Flush	Special	2 1/2 in.	D	D	4	4	Two Piece	
	Model 40, Chainless	75	25 1/2 "	22	5 1/4 in.	Flush	Special	2 1/2 in.	D	D	4	4	Two Piece	
	Model 41	40	23 1/2 "	22	5 in.	Flush	Oval	2 1/2 in.	D	Round	3	4	Two Piece	
	Model 42	40	24 1/2 "	22	5 in.	Flush	Oval	2 1/2 in.	D	Round	3	4	Two Piece	
AMERICAN MACHINE CO.....	Standard	50	25 lbs.	22, 24, 26	4 7/8 in.	Flush	Arch	4 in.	D sh'pe	D sh'pe			Fauber	
	Special	40	24 lbs.	22, 24, 26	4 7/8 in.	Flush	Arch	3 in.	D sh'pe	D sh'pe			Fauber	
	Diamond	35	24 lbs.	22, 24, 26	4 7/8 in.	Flush	Arch	2 1/2 in.	D sh'pe	D sh'pe			Two Piece	
	Banner	25	24 lbs.	22, 24, 26	4 7/8 in.	Lap	Arch	2 1/2 in.	D sh'pe	D sh'pe			Two Piece	
BEAN-CHAMBERLAIN MFG. CO....	Model 30	60	26 lbs.	22, 24,	4 15-16	Flush	Oval	3 1/2 in.	Oval	Oval	3	3	One Piece	
	Model 40	50	25 lbs.	22, 24, 26	4 15-16	Flush	Oval	2 1/2 in.	Oval	Oval	3	3	One Piece	
	Model 41	50	25 1/2 "	20, 22,	4 15-16	Flush	Oval	2 1/2 in.	Oval	Oval	3	3	One Piece	
	Model 28	45	25 lbs.	22, 24, 26	4 15-16	Flush	Oval	2 1/2 in.	Oval	Oval	3	3	One Piece	
	Model 29	45	25 1/2 "	20, 22,	4 15-16	Flush	Oval	2 1/2 in.	Oval	Oval	3	3	One Piece	
	Model 32	45	23 lbs.	22, 24,	4 15-16	Flush	Oval	2 1/2 in.	Comb.	Comb.	4	4	One Piece	
	Model 34	45	25 lbs.	22, 24, 26	4 15-16	Flush	Oval	3 1/2 in.	Comb.	Comb.	4	4	One Piece	
	Model 24	40	24 lbs.	22, 24, 26	4 15-16	Flush	Oval	2 1/2 in.	Comb.	Comb.	4	4	One Piece	
	Model 25	40	24 1/2 "	20, 22,	4 15-16	Flush	Oval	2 1/2 in.	Comb.	Comb.	4	4	Two Piece	
	Noxall Men	Net	24 1/2 "	22, 24, 26	5 in.	Flush	Oval	2 1/2 in.	Comb.	Comb.	4	4	Two Piece	
	Noxall Women	Net	25 lbs.	20, 22,	5 in.	Flush	Oval	2 1/2 in.	Comb.	Comb.	4	4	Two Piece	
	OTIS BICYCLE CO.....	Men Special	50	25 lbs.	22, 23 1/2	4 1/2 in.	Flush	Oval	4 1/2 in.	D sh'pe	D sh'pe	3	4	One Piece
		Women Special	50	25 lbs.	22,	4 1/2 in.	Flush	Oval	4 1/2 in.	D sh'pe	D sh'pe	3	4	One Piece
		Men A	35	23 lbs.	21, 24,	4 3/4 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe	4	4	Two Piece
Women A		35	24 lbs.	20, 22,	4 3/4 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe	4	4	Two Piece	
Men Leader		27.50	23 lbs.	20, 24,	4 3/4 in.	Outside	Oval	2 1/4 in.	Round	Round	4	4	Two Piece	
Women Leader		27.50	24 lbs.	20, 22,	4 3/4 in.	Outside	Oval	2 1/4 in.	Round	Round	4	4	Two Piece	
JULIUS ANDRAE & SONS CO.....	Racer	60	20 1/2 lbs	22	4 7/8 in.	Flush	Double	3 in.	Oval	D			One Piece	
	Road Racer	60	22 1/2 lbs	22	4 7/8 in.	Flush	Double	3 in.	Oval	D			One Piece	
	Light Roadster	50	23 1/2 lbs	22	4 7/8 in.	Flush	Arch	2 1/2 in.	Oval	D			One Piece	
	Women, 41	50	23 1/2 lbs	22	4 7/8 in.	Flush	Arch	2 3/4 in.	Oval	D			One Piece	
	Roadster	40	25 lbs.	22	4 7/8 in.	Flush	Arch	2 1/2 in.	Oval	D			Two Piece	
	Women, 47	40	25 lbs.	22	4 7/8 in.	Flush	Arch	2 3/4 in.	Oval	D			Two Piece	
	Men's Sunbeam	30	25 lbs.	22	5 in.	Outside	Arch	2 in.	D	D			Two Piece	
	Women's Sunbeam	30	25 lbs.	22	5 in.	Outside	Arch	2 in.	D	D			Two Piece	
	Chainless	75	25 lbs.	22	5 in.	Flush	Arch	2 1/2 in.	Round	D			Two Piece	
ARIEL CYCLE MFG. CO.....	Model 50	65	27 lbs.	22,	4 7/8 in.	Flush	Square	2 1/2 in.	Comb.	Comb.			Two Piece	
	" 51	60	20 lbs.	22,	4 7/8 in.	Flush	Square	3 in.	Comb.	Comb.			Two Piece	
	" 52	50	23 lbs.	22, 24,	4 7/8 in.	Flush	Square	2 1/2 in.	Comb.	Comb.			Two Piece	
	" 53	50	25 lbs.	21, 23,	4 7/8 in.	Flush	Square	2 1/2 in.	Comb.	Comb.			Two Piece	
	" 54	40	24 lbs.	22, 24,	4 7/8 in.	Flush	Oval	2 1/2 in.	Comb.	Comb.			Two Piece	
	" 55	40	25 lbs.	20, 22,	4 7/8 in.	Flush	Oval	2 1/2 in.	Comb.	Comb.			Two Piece	
	" 56	75	45 lbs.	22,	4 3/8 in.	Flush	Square	2 in.	Comb.	Comb.			Two Piece	
	" 57	85	48 lbs.	22,	4 7/8 in.	Flush	Square	2 in.	Comb.	Comb.			Two Piece	
	" 58	75	30 lbs.	22, 24,	5 1/4 in.	Flush	Square	2 1/2 in.	Comb.	Comb.			Two Piece	
	" 59	75	32 lbs.	21, 23,	5 1/4 in.	Flush	Square	2 1/2 in.	Comb.	Comb.			Two Piece	
FANNING CYCLE MFG. CO.....	N Special	50	24 lbs.	22, 24, 26	4 7/8 in.	Flush	Oval	3 in.	D sh'pe	Comb.	4	4	Two Piece	
	L Men	40	24 lbs.	22, 24, 26	4 7/8 in.	Flush	Oval	3 in.	D sh'pe	Comb.	4	4	Two Piece	
	M Women	40	24 lbs.	20, 22,	4 7/8 in.	Flush	Oval	3 in.	D sh'pe	Comb.	4	4	Two Piece	
	J Men	35	24 lbs.	22, 24, 26	4 7/8 in.	Flush	Oval	2 1/2 in.	D sh'pe	Comb.	4	4	Two Piece	
	K Women	35	24 lbs.	20, 22,	4 7/8 in.	Flush	Oval	2 1/2 in.	D sh'pe	Comb.	4	4	Two Piece	
	H Men	30	24 lbs.	22, 24, 26	4 7/8 in.	Flush	Oval	2 1/2 in.	D sh'pe	Comb.	4	4	Two Piece	
	I Women	30	24 lbs.	20, 22,	4 7/8 in.	Flush	Oval	2 1/2 in.	D sh'pe	Comb.	4	4	Two Piece	



# and Regular Equipment.

EQUIPMENT.

Handle Bar Fast'g	Seat Post Fast'g	Chain Adjust-ment	Form of Crank	Chain-less Gear	Crank Len'ths	Chain	Pedals	Rims	Saddles	Tires	Frame Colors	Front Sprock- et	Rear Sprock- et	
Internal	Internal	Oblique	Square	Bevel	7 in.						Crimson	23 to 30	8, 9, 10,	
Internal	Internal	Oblique	Square		6 1/2 in.						Black	23 to 26	8, 9, 10,	
Internal	Internal	Oblique	Square		6 1/2 in.						Crimson	23 to 30	8, 9, 10,	
Internal	Internal	Oblique	Square		7 in.						Crimson	24,	8, 9, 10,	
Internal	Internal	Oblique	Square		7-6 1/2 in.						Crimson	28 to 30	9, 10	
Expand'r	Clamp	Oblique	Round		6 1/2-7 in.	Peacock	Kensington			Oxford		24, 26	8, 9, 10	
Expand'r	Expand'r	Oblique	Round		6 1/2-7 in.	Peacock	Kensington			Defender		24, 26, 28	8, 9, 10,	
Expand'r	Expand'r	Oblique	Diamond		6 1/2-7 in.	Baldwin	Baldwin			Defender		26, 28, 30	8, 9, 10,	
Expand'r	Expand'r	Oblique	Diamond		6 1/2-7 in.	Baldwin	Baldwin			Defender		26, 28, 30	8, 9, 10,	
Internal	Internal	Oblique	Diamond		7 in.					Hartford	Black	24, 25, 26	7, 8, 9, 10,	
Internal	Internal	Oblique	Diamond		6 1/2 in.					Hartford	Black	20, 21, 22	7, 8, 9, 10,	
Internal	Internal	Oblique	Diamond		6 3/4 in.					Hartford	Black	24, 26	7, 8, 9, 10,	
Internal	Internal	Oblique	Diamond		6 1/4 in.					Hartford	Black	19, 20, 21	7, 8, 9, 10,	
Internal	Internal	Oblique	Diamond		7 in.					M. & W.	Black	23, 25	7, 8, 9, 10,	
Clamp	Clamp	Oblique	Diamond		6 1/2 in.					M. & W.	Black	19, 20, 21	7, 8, 9, 10,	
Internal	Internal	Oblique	Diamond	Sager	6 1/2-7 in.	Indianap'ls	Curtis	One Piece	Packer	Goodrich	Black	26, 28, 30	8, 9, 10,	
Internal	Internal	Oblique	Diamond		6 1/2-7 in.	Indianap'ls	Curtis	One Piece	Packer	Goodrich	Black	20,	8, 9, 10,	
Internal	Internal	Oblique	Diamond		6 1/2-7 in.	Indianap'ls	Velox	One Piece	Packer	Palmer	Red	26, 28, 30	8, 9, 10,	
Internal	Internal	Oblique	Diamond		6 1/2-7 in.	Indianap'ls	Curtis	One Piece	Packer	Goodrich	Black	26, 28, 30	8, 9, 10,	
Internal	Internal	Oblique	Diamond		6 1/2-7 in.	Indianap'ls	Curtis	One Piece	Packer	Goodrich	Red	32	8, 9, 10,	
Internal	Internal	Oblique	Diamond		6 1/2-7 in.	Indianap'ls	Curtis	One Piece	Packer	Goodrich	Black	32	8, 9, 10, 11	
Internal	Internal	Oblique	Oval		6 1/2-7 in.		Curtis	One Piece	Packer	Goodrich	Black			
Internal	Internal	Oblique	Oval		6 1/2-7 in.		Curtis	One Piece	Packer	Goodrich	Black			
Internal	Internal	Oblique	Round		6 1/2-7 in.	Chantrell	Bennett	One Piece	Packer	Goodrich	Black			
Internal	Internal	Oblique	Round		6 1/2 in.	Chantrell	Bennett	One Piece	P & F		Red	24, 25, 26	8, 9, 10,	
Internal	Internal	Oblique	Round		6 1/2 in.	Chantrell	Bennett	One Piece	P & F		Black	20	8, 9, 10,	
Internal	Internal	Oblique	Round		6 1/2-7 in.	Indianap'ls	Rover	One Piece	Wheeler	M. & W.	Black	22, 24, 26	7, 8, 9, 10,	
External	External	Oblique	Round	6 1/2-7 in.	Indianap'ls	Banner	One Piece	Sager	M. & W.	Black	22, 24, 26	7, 8, 9, 10,		
External	External	Eccentric	Oval	6 1/2 in.	Indianap'ls	Banner	One Piece	P. & F.	Standard	Black	20, 22, 24, 26	7, 8, 9, 10,		
External	External	Eccentric	Oval	6 1/2 in.	Indianap'ls	Hercules	One Piece	Mesinger	Clipper	Black	20, 22, 24, 26	7, 8, 9, 10,		
Internal	Internal	Horizontal	Oval		6 1/2-7 in.	Indianap'ls	Queen	Wheeler	Dunlop	Scarlet	22, 24, 26	8, 9, 10		
Internal	Internal	Horizontal	Oval		6 1/2-7 in.	Indianap'ls	Queen	Wheeler	Wheeler	Dunlop	Black	22, 24, 26	8, 9, 10	
Internal	Internal	Horizontal	Oval		6 & 6 1/2	Indianap'ls	Queen	Wheeler	Hartford	Hartford	Black	20, 22	8, 9, 10	
Clamp	Internal	Horizontal	Oval		6 1/2-7 in.	Indianap'ls	Rover	Sager	M. & W.	Black	22, 24, 26	8, 9, 10		
Clamp	Internal	Horizontal	Oval		6 & 6 1/2	Indianap'ls	Rover	Sager	Hartford	Black	20, 22,	8, 9, 10		
Clamp	Clamp	Horizontal	Oval		6 1/2-7 in.	Indianap'ls	Rover	Lanz. Owen	M. & W.	Scarlet	22, 24, 26	8, 9, 10		
Clamp	Clamp	Horizontal	Oval		6 1/2-7 in.	Indianap'ls	Rover	Cutting	M. & W.	Carmine	22, 24, 26	8, 9, 10		
Clamp	Clamp	Horizontal	Oval		6 1/2-7 in.	Indianap'ls	Rover	Gilliam	Defender	Green	22, 24,	8, 9, 10		
Clamp	Clamp	Horizontal	Oval		6 & 6 1/2	Indianap'ls	Rover	Gilliam	Defender	Green	20, 22,	8, 9, 10		
Clamp	Clamp	Horizontal	Oval		6 1/2 in.			Brown Pat.	Oxford	Black	20, 22,	8, 9, 10		
Clamp	Clamp	Horizontal	Oval		6 1/2 in.			Brown Pat.	Oxford	Green	20, 22,	8, 9, 10		
Internal	Internal	Eccentric	Diamond			7 in.	Baldwin	Stockton and Bridgeport	Drake	Gordon and P. & F.	Maive	35	7 to 14	
Internal	Internal	Eccentric	Diamond			6 1/2 in.	Baldwin	Stockton and Bridgeport	Drake	Gordon and P. & F.	Maive	28, 30	7 to 14	
Internal	Internal	Oblique	Diamond			7 in.	Crown	Stockton and Bridgeport	Beebe	Gordon and P. & F.	M. & W. and India	28, 30	7 to 10	
Internal	Internal	Oblique	Diamond		6 1/2 in.	Crown	Stockton and Bridgeport	Beebe	Gordon and P. & F.	M. & W. and India	28, 30	7 to 10		
Clamp	Clamp	Oblique	Diamond		7 in.	Indianap'ls	Stockton and Bridgeport	Beebe	Gordon and P. & F.	India and Diamond	26	7 to 10		
Clamp	Clamp	Oblique	Diamond		6 1/2 in.	Indianap'ls	Stockton and Bridgeport	Beebe	Gordon and P. & F.	India and Diamond	22	7 to 10		
Expand'r	External	Special	Diamond	Sager	6 1/2 in.	Baldwin	Record	Kundtz	Andrae	Hartford	Grass Green	22 to 32	7 to 10	
Expand'r	External	Special	Diamond		7 in.	Baldwin	Record	Kundtz	Andrae	Hartford	Grass Green	22 to 32	7 to 10	
Expand'r	External	Special	Diamond		6 1/2 in.	Indianap'ls	Andrae	Lobdell	Andrae	Hartford	Grass Green	22 to 32	7 to 10	
Expand'r	External	Special	Diamond		7 in.	Indianap'ls	Andrae	Winona	Andrae	Hartford	Black	22 to 26	7 to 10	
Expand'r	External	Special	Diamond		6 1/2 in.	Indianap'ls	Andrae	Winona	Andrae	Hartford	Grass Green	22 to 26	7 to 10	
Expand'r	External	Special	Diamond		7 in.	Indianap'ls	Andrae	Winona	Andrae	Hartford	Black	22 to 26	7 to 10	
Clamp	Clamp	Special	Diamond		7 in.	Indianap'ls	Hercules	Winona	Andrae	Clipper	Blue	22 to 26	7 to 10	
Clamp	Clamp	Special	Diamond		6 1/2 in.	Indianap'ls	Hercules	Winona	Andrae	Clipper	Black	22 to 26	7 to 10	
Expand'r	Expand'r	Special	Round		7 in.	Indianap'ls	Record	Kundtz	Andrae	Hartford	Black	22 to 26	7 to 10	
Internal	Internal	Oblique	Oval			6 1/2 & 7	Lefever	Record	Lobdell	Ariel & Wheeler	Optional	Green, Maroon	21 to 28	7 to 10
Internal	Internal	Oblique	Oval			6 1/2 & 7	Lefever	Record	Lobdell	Ariel & Wheeler	Optional	Green, Maroon	21 to 28	7 to 10
Internal	Internal	Oblique	Oval			6 1/2 & 7	Lefever	Record	Lobdell	Ariel & Wheeler	Optional	Green, Maroon	21 to 28	7 to 10
Internal	Internal	Oblique	Oval		6 1/2 & 7	Lefever	Record	Lobdell	Ariel & Wheeler	Optional	Green, Maroon	21 to 28	7 to 10	
Internal	Internal	Oblique	Oval		6 1/2 & 7	Lefever	Record	Lobdell	Ariel & Wheeler	Optional	Green, Maroon	21 to 28	7 to 10	
Internal	Internal	Oblique	Oval		6 1/2 & 7	Lefever	Record	Lobdell	Ariel & Wheeler	Optional	Green, Maroon	21 to 28	7 to 10	
Internal	Internal	Oblique	Oval		6 1/2 & 7	Lefever	Record	Lobdell	Ariel & Wheeler	Optional	Green, Maroon	21 to 28	7 to 10	
Internal	Internal	Oblique	Oval		6 1/2 & 7	Lefever	Record	Lobdell	Ariel & Wheeler	Optional	Green, Maroon	21 to 28	7 to 10	
Internal	Internal	Oblique	Oval		6 1/2 & 7	Lefever	Record	Lobdell	Ariel & Wheeler	Optional	Green, Maroon	21 to 28	7 to 10	
Internal	Internal	Oblique	Oval		6 1/2 & 7	Lefever	Record	Lobdell	Ariel & Wheeler	Optional	Green, Maroon	21 to 28	7 to 10	
Internal	Internal	Oblique	Oval		6 1/2 & 7	Lefever	Record	Lobdell	Ariel & Wheeler	Optional	Green, Maroon	21 to 28	7 to 10	
Internal	Internal	Horizontal	Diamond		6 1/2 in.	Indianap'ls	Bridgeport	Tucker	Gilliam	M. & W. and Kokomo	Gr'n, Cardn'l, Bl'k.	24 to 28	8 to 10	
Internal	Internal	Horizontal	Diamond		6 1/2 in.	Indianap'ls	Bridgeport	Tucker	Gilliam	M. & W. and Kokomo	" " "	24 to 28	8 to 10	
Internal	Internal	Horizontal	Diamond		6 1/2 in.	Indianap'ls	Bridgeport	Tucker	Gilliam	M. & W. and Kokomo	" " "	24 to 28	8 to 10	
Internal	Internal	Horizontal	Diamond		6 1/2 in.	Indianap'ls	Star	Bent Wood Co.	Gilliam	M. & W. and Kokomo	" " "	24 to 28	8 to 10	
Internal	Internal	Horizontal	Diamond		6 1/2 in.	Indianap'ls	Star	Bent Wood Co.	Gilliam	M. & W. and Kokomo	" " "	24 to 28	8 to 10	
Internal	Internal	Horizontal	Diamond		6 1/2 in.	Indianap'ls	Star	Bent Wood Co.	Gilliam	M. & W. and Kokomo	" " "	24 to 28	8 to 10	
Internal	Internal	Horizontal	Diamond		6 1/2 in.	Indianap'ls	Star	Bent Wood Co.	Gilliam	M. & W. and Kokomo	" " "	24 to 28	8 to 10	

## DEALERS' SPRING DISPLAYS

### Washington Cycle Show Opens—Successful Denver Exposition—Opening Day in Boston

Washington, Feb. 27.—Pleasant weather marked the opening of the cycle show here tonight. The show is being held under the auspices of the Bicycle Show Co., composed of the leading bicycle dealers of this city, and is the largest affair of the kind ever undertaken by the local trade. The attendance on the opening night was remarkable, the immense hall being packed, and from the interest evinced the show will undoubtedly have a very beneficial effect upon the local trade. Special features have been provided for the entertainment of the visitors, among them being an address on the hygiene of the bicycle by Dr. Mary Walker, the noted reformer and advocate of man's apparel for women.

At no previous show held here has there been such a representative showing of bicycle lamps. Those of the acetylene gas variety are attracting a great deal of attention and judging from the numerous inquiries the sale of these lamps will be large here during the coming season.

#### Exhibitors and Displays.

Following is a list of the exhibitors:

- West End Cycle Co., Washington—Andrae and Keating bicycles.
- Clowes Mfg. Co., Waterbury, Conn.—Calcium King lamps.
- Henry Boyd, Washington—Collins pneumatic hub bicycles.
- Jones & Fellows, Washington—Olive, Envoy and Fleetwing bicycles.
- W. D. Hadger, Washington—Orient bicycles.
- J. D. Lasley, Washington—Eclipse and Corona bicycles.
- John Woerner, Washington—Quaker bicycles and sundries.
- Miller Bros., Washington—Wolff-American, Warwick and Relay bicycles.
- The Cycle Syndicate, New York—Cycle specialties, Rusch saddles and Excelsior lubricant.
- P. Von Boeckman, Washington—Viking bicycles and sundries.
- Taylor Mfg. Co., Washington—Kankakee bicycles.
- R. M. Dobbins Co., Washington—Monarch and Barnes bicycles.
- Pope Mfg. Co.—Columbia and Hartford bicycles.
- W. B. Morgan & Co.—Victor bicycles.
- Gormully & Jeffery Mfg. Co.—Rambler bicycles.
- Western Wheel Works—Crescent bicycles.
- Saks & Co., Washington—Spalding and Saks Flyer bicycles.
- Carpenter Cycle Co., Washington—Sterling and Featherstone bicycles, Morse chains, Veeder cyclometers, Solar lamps.
- Cleveland Cycle Co., Washington—Cleveland bicycles.
- D. N. Walford, Washington—Stearns and Stormer bicycles.
- Washington Cycle Supply Co.—Tribune and Lyndhurst bicycles; Brown, Hunt and Garford saddles.

- Rose Mfg. Co., Philadelphia—Neverout lamps.
- W. E. Baum & Co., Washington—Hoffman and Clipper bicycles.
- Hartford Rubber Works—Hartford tires
- Higham & Co., Washington—Tiger bicycles.
- LeFevre Mfg. Co., Philadelphia—Bicycle specialties.
- Automatic Seat Post Co., New York—Seat posts.
- Stee Leech Saddle Co., New York—Ball bearing bicycle saddles.
- J. Karr, Washington—Calcite lamps.
- Bundy Lamp Co., Elmira, N. Y.—Bundy acetylene lamps.
- United Specialty Co., New York—Automatic tire inflators.
- F. G. Smith, Washington—Remington bicycles.

#### VISITORS IN EARNEST

General Opening in the Hub Marked By Absence of Old "Hurrah Boys" Spirit.

Boston, Feb. 27.—A saunter up Columbus avenue last Friday would have disproved to the satisfaction of almost any pessimist that interest in cycling is waning. It was general opening day among the cycle dealers, among whom it was the unanimous opinion after the day was over, that riders and prospective customers are more enthusiastic and more anxious to learn details of construction than ever before.

There were more actual buyers than on February 22 last year, which is a sure indication that the trade this year will be substantial. In many cases, dealers in bicycles who took no orders on opening day last season booked many Friday. It is an axiom in the business that, as goes February 22, so goes the year, and none but rejoiced at the spirit of interest shown by the thousands of visitors.

Boston is unique among cycling cities in that opening day is always religiously observed by the wheelmen by a pilgrimage to the cycle stores. There was a conspicuous and agreeable absence this year of the exuberant display of club spirit.

Said one manager of a leading store: "The crowd this year is different. They really want to know about our line. There is an absence of the hurrah boys style of visiting, and the people ask sensible questions. They are searching for the best machine for the money, and when they find it they will buy it. Last year we did not get a single order. Today at 2 o'clock we had a dozen."

The same opinion was expressed all

along the line. Each dealer reported a vastly increased practical interest and a greater willingness to buy. The dealers, too, had their work better in hand. At every store it was possible for the visitor to learn something new about bicycles.

A great deal of interest and curiosity was manifested with regard to the chainless machines wherever they were to be found and of whatever type. Racing men perambulated in crowds along the avenue and drifted into stores not on the "row." The crowd visited downtown stores in large numbers and did not slight the tire and sundries houses.

Altogether, opening day for '99 was a decided success from all points of view and dealers are well pleased.

#### THE DENVER SHOW

Unique Offer of Free Space Secures Complete Representation of Local Dealers.

The Denver bicycle and automobile show promoted and managed by G. A. Wahlgreen, of the Cycling West, was eminently successful from all points of view, despite the unusual and adverse weather conditions that prevailed. The offer of free space made by the promoter in the interest of the local tradesmen was unusual enough to secure the cordial support of trade and public alike. The exhibits and exhibitors comprised every dealer in that section and every cycle, cycle sundry, accessory and apurtenance ever introduced in the western market. The attendance was surprisingly large considering the abnormally vile weather and the pecuniary returns far surpassed the most sanguine expectations of the managers, who now claim the distinction of having held the first and only successful cycle show at which absolutely no charge was made to exhibitors.

All the factors of success were involved: merit in the quality and quantity of exhibitors and exhibits; satisfactory results to patrons and the public; and success, artistic, commercial, diversional and pecuniary to all concerned. The exhibits were high grade, the booths artistic and beautiful, and everything was harmonious and pleasant. There was rivalry, spirited and aggressive, but all of the kindest and most generous nature. It was the wholesome kind that always characterizes clean, honorable business methods and honest competition.

The automobiles proved a big drawing card. It is safe to say that no one other locomotive device since the days of the old high wheeled machine has aroused so much interest and curiosity as have the horseless carriages shown at the Denver exhibit.

That Denver is on the eve of a business boom is conceded by all practical observers. In the cycle business is this espe-

#### AMERICAN CYCLE EXPORTS FROM JANUARY 1 TO DECEMBER 31, 1897.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL.
United Kingdom.....	\$135,020	\$228,651	\$327,332	\$408,932	\$258,915	\$292,712	\$118,227	\$70,177	\$68,914	\$58,630	\$73,681	\$87,300	\$2,128,491
France.....	11,370	17,452	61,275	43,655	45,396	30,502	18,526	7,493	3,974	7,400	12,181	24,686	283,910
Germany.....	68,050	76,354	171,927	177,829	156,619	203,136	163,667	52,769	49,497	27,928	52,189	178,643	1,378,558
Other Europe.....	141,088	75,364	176,762	191,975	119,926	194,333	45,250	35,875	20,196	31,134	35,089	47,773	1,114,825
British North America.....	42,852	73,136	114,376	188,952	140,000	61,752	24,269	22,473	16,001	9,716	23,681	23,406	740,614
Central America.....	4,772	5,014	2,496	1,319	2,112	907	880	732	466	50	1,810	727	21,285
Mexico.....	5,955	5,739	5,200	7,687	6,170	6,165	8,276	6,272	4,648	3,748	4,081	5,450	69,391
Santo Domingo.....	189	557	834	1,006	90	598	275	71	102	58	135	24	3,939
Cuba.....	49	219	152	586	1,351	610	1,197	2,202	593	517	786	574	8,836
Puerto Rico.....	939	33	239	446	150	325	170	280	522	451	413	317	4,285
Other West Indies.....	14,109	12,853	11,243	17,586	13,582	13,005	7,441	7,771	5,600	7,143	7,924	8,771	126,528
Argentina.....	678	1,110	10,245	3,823	2,262	3,768	2,893	5,031	6,314	5,134	4,940	6,046	52,244
Brazil.....	838	1,986	1,768	4,177	3,873	3,978	.....	6,833	7,056	14,502	9,071	54,082	.....
Colombia.....	1,523	923	1,254	1,205	2,235	2,671	1,536	2,595	1,788	2,141	2,089	2,131	22,091
Other South America.....	4,707	10,800	5,133	7,163	6,096	4,860	2,533	1,033	4,334	5,339	4,618	4,687	61,303
China.....	517	655	981	466	5,495	1,471	2,047	1,923	2,863	5,763	3,240	874	26,300
East Indies (British).....	988	1,527	800	1,442	.....	4,891	1,633	4,038	5,860	4,123	2,403	3,873	31,583
Japan.....	2,382	3,062	3,265	382	1,549	11,229	11,996	7,600	8,912	7,100	6,903	8,450	72,830
Australia (British).....	35,868	34,816	54,224	34,415	46,770	33,478	31,185	76,814	24,510	24,538	27,870	21,091	445,529
Asia and Oceania.....	4,503	5,020	5,985	16,384	12,457	5,391	5,593	4,490	6,418	6,510	5,181	2,629	80,561
Africa.....	4,593	10,972	21,723	8,394	13,667	7,035	10,840	14,056	15,915	24,835	21,552	21,146	174,730
Other Countries.....	.....	.....	.....	.....	110	107	135	195	60	155	.....	.....	762
<b>TOTAL.....</b>	<b>\$480,992</b>	<b>\$565,743</b>	<b>\$977,214</b>	<b>\$1,117,824</b>	<b>\$838,835</b>	<b>\$882,984</b>	<b>\$458,519</b>	<b>\$323,890</b>	<b>\$254,325</b>	<b>\$239,469</b>	<b>\$305,218</b>	<b>\$457,674</b>	<b>\$6,902,677</b>

cially apparent. Local dealers are stocking up heavily in anticipation of a lively demand and nothing but optimism is encountered in making the rounds. That the eastern manufacturers are cognizant of and appreciate these conditions is shown by the fact that they are eager to enter this field and a number of them have made initial connections in accordance. Dozens of makers who heretofore have disregarded the West in this respect have now secured representation there and are consigning largely in anticipation of the good times ahead.

The exhibiting firms and what they displayed are given in the following list:

- E. B. Brandt—Hartford tires.
- Felker Cycle Co.—Cleveland and Sterling bicycles and Goodrich and Palmer tires.
- Daniels & Fisher—Stearns, Andrae and Crawford bicycles.
- Gougar & Todd—Wolff-American, Deere, Fawn and Moline bicycles.
- Geo. J. Charpiot—Clipper and Charpiot bicycles.
- N. R. Blatherwick—Outing bicycles and Picard valves.
- Alpha Lamp Co.—Acetylene lamps.
- Snell Cycle Mfg. Co.—Snell bicycles.
- C. W. Fowler—Pueblo bicycles.
- Hart Bros. Sewing Machine Co.—Crescent, Phoenix and Silver Serpent bicycles.
- Fawkes & Co.—Dayton and Silver Serpent bicycles.
- Geo. Mayer Hardware Co.—Imperial bicycles.
- Denver Dry Goods Co.—Orient, Luthy, Denver and Earl bicycles.
- Joslyn Dry Goods Co.—Monarch, Olive, Defiance, King and Queen bicycles.
- Schultz & Co.—Samples of enameling.
- Colorado Cycle Supply Co.—Cycle fittings and accessories and photographic supplies.
- Relay Wheel Co.—Manson, World, Hamilton and Lee bicycles.
- E. R. Cumbe—Rambler and Ideal bicycles and G. & J. tires.
- C. G. Fisher & Co.—Racycle, Pierce, Envoy and Fleetwing bicycles.
- A. G. Spalding & Bros.—Spalding and Nyack bicycles and Christy saddles.
- E. T. Welant—Victor and Elfin bicycles, Kokomo tires and cycle sundries and supplies.
- Gano Cycle Co.—Columbia, Hartford and Vette bicycles.
- Silver State Cycle Co.—Silver State bicycles, India tires, Gordon saddles, Velox pedals, etc.
- Trinity Cycle Mfg. Co.—Trinity bicycles.
- A. T. Wilson—Featherstone, Viking, Remington, Union, Eldredge and Patee bicycles.
- Mrs. F. W. Baxter—Ladies' cycling costumes.
- Geo. E. Hannan—Crescent bicycles and Dunlop tires.
- Boston Woven Hose & Rubber Co.—Vim tires.
- Black Mfg. Co.—Tribune bicycles.
- American Electric Vehicle Co.—Motor vehicles.

**Cleveland Opening a Success.**

The general opening of the cycle stores in Cleveland under the auspices of the cycle board of trade closed last Saturday. It was the most successful and generally satisfactory display of goods and public reception ever offered by the dealers. All day Saturday throngs of visitors crowded the different stores and could hardly be accommodated, notwithstanding the special preparations that had been made. There was music all day. Many out-of-

town dealers and buyers were present all the week and Cleveland dealers are unanimous in declaring that they have done more business and entertained larger crowds at a smaller expense this year than ever before.

**STIMULATING EARLY TRADE**

New England Dealers Interest Buyers by Joint Exhibitions—Co-operation of Y. M. C. A.

Springfield, Mass., Feb. 27.—Agents in many of the larger towns in New England have held, or will hold, local shows to stimulate spring trade. Shows which are run primarily to put a few dollars in the pockets of some enterprising dealer, who collects sufficient rentals from spaces to pay all expenses, and then salts down the gate receipts, have not been well supported in New England since the first craze over cycle shows subsided. The most successful shows have been those in which the exhibitors shared the expense jointly. In several cities the Young Men's Christian Associations have given the use of their halls free and allotted spaces to bicycle agents, who were under no expense other than the cost of setting up their exhibits and providing attendants. Catalogues, buttons and inexpensive souvenirs are given away. The general public has been quick to recognize that such shows are as much for the benefit of the purchaser who is undecided as to his mount as for the agents. The shows also afford the dealers opportunity to become better acquainted with one another, thus opening the way to the adoption of business methods which are of mutual advantage to members of the trade.

Agents in Springfield, Worcester, Hartford and other retail centers report a larger inquiry concerning bicycles than a year ago. The larger houses have as a rule already sold bicycles in small numbers for delivery as soon as riding is practicable. The chainless is in greater favor than a year ago. General business conditions in New England are the best since 1894 and the cycle trade is correspondingly cheerful.

**PHILADELPHIA AGENTS PLEASSED**

At Their Show Many Orders Were Booked—Automobiles Absent on Account of Weather.

Philadelphia, Feb. 28.—The local cycle show terminated brilliantly last Saturday night with the banner crowd of the week, estimated at upwards of 7,000. The smallest attendance was recorded for the opening night, the turnstile registering but little over 1,600. But notwithstanding this inauspicious beginning the show was a huge success in every respect, the total admissions being within a couple of

thousands of those of the '97 and '98 shows, when there was a rake-off for the stockholders of upwards of 300 percent, besides which about \$2,000 went into the local cycle board's treasury.

From a business standpoint this year's show was even more successful than others, almost every exhibitor reporting numerous sales, in many instances the resulting profits more than making up for the outlay.

The one feature that marred the show from the promoters' viewpoint was the inability to secure the automobile exhibits, thus compelling them in a measure to break faith with the public. On Thursday night, however, a solitary electric automobile put in an appearance and remained on exhibition for the remainder of the week. In this connection it is related that when it became apparent that the automobile end of the show was to be a failure President Brewster telegraphed the Orient people for permission to exhibit the automobile which formed part of Wanamaker's bicycle exhibit. The necessary permission was given, but Wanamaker's manager refused to let the machine go. The next day the last-named gentleman asked for permission to exhibit Major Taylor and his world's record machine. But Brewster declined.

Gus. Tubeman, a relic of the first cycle show ever held in this country, made throughout of Shelby steel tubing of various sizes worked up into the shape of a man, reappeared. He was stolen after the first show by the Century Wheelmen, of this city, in whose possession he still remains. Many vain attempts have been made by the Shelby company to recover possession of "Gus." In his journey from the Century club house to the show building last week he was stolen by two different gangs of marauders, and was "safely" hidden away by each in turn. But the show managers got a clue to his whereabouts somehow, and he made a triumphal entry into the building on Thursday night escorted by a brass band, his equipage being a "horseless sleigh," an old sleigh shod with roller skates and drawn by a pair of rules.

**Retail Trade Transfer.**

Edward C. Rehfield of Horicon, Wis., has bought out the bicycle stock of Louis Dietz of the same place, and also his father's sewing machine and hardware business and will open a cycle store and repair shop. Dietz will devote his time to his hardware business.

The exports of bicycles and parts from Belgium during the past three years are reported as follows: 1896, \$334,722; 1897, \$484,195; 1898, \$517,061. The imports in 1896 were \$637,307, while in 1898 they were only \$379,101.

**AMERICAN CYCLE EXPORTS FROM JANUARY 1 TO DECEMBER 31, 1898.**

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL.
United Kingdom.....	\$181,505	\$210,661	\$273,330	\$293,516	\$204,600	\$211,625	\$92,550	\$43,513	\$36,533	\$49,507	\$33,874	\$67,913	\$1,699,127
France.....	47,360	71,168	85,239	76,037	65,205	63,411	24,877	21,952	4,638	3,648	15,701	37,947	517,183
Germany.....	226,593	184,048	257,918	190,309	179,850	161,043	68,869	48,693	64,180	30,458	62,316	161,930	1,636,207
Other Europe.....	99,544	143,770	176,556	118,440	119,171	76,704	34,452	48,276	35,262	39,918	292,512	177,594	1,362,199
British North America.....	24,244	44,395	76,921	152,870	133,845	62,133	31,370	15,896	11,837	8,293	18,677	27,709	608,190
Central America.....	945	328	569	445	381	934	115	1,252	585	981	152	404	7,091
Mexico.....	5,017	5,619	4,630	5,825	6,410	8,046	6,352	3,317	5,735	2,032	1,835	3,129	57,947
Santo Domingo.....	15	47	211	196	.....	37	71	21	.....	.....	.....	33	631
Cuba.....	763	883	1,395	304	.....	.....	.....	.....	61	524	566	790	5,286
Puerto Rico.....	157	14	322	713	.....	.....	.....	24	124	997	210	70	2,631
Other West Indies.....	6,268	5,145	4,458	5,606	6,795	11,471	4,896	9,209	2,849	3,736	5,120	6,941	72,494
Argentina.....	8,290	9,704	15,342	8,769	8,166	9,600	8,708	1,873	8,579	22,481	11,514	18,598	131,624
Brazil.....	10,973	13,107	9,344	9,351	8,612	9,633	7,421	7,720	5,879	6,661	5,037	5,494	99,232
Colombia.....	1,021	464	486	440	340	653	2,254	732	503	470	.....	614	7,977
Other South America.....	8,021	4,604	4,080	2,996	4,129	2,592	2,497	3,457	2,142	8,229	4,441	6,916	54,104
China.....	1,869	1,233	3,196	1,593	2,478	365	1,984	3,082	3,510	5,237	5,600	1,608	31,755
East Indies (British).....	6,307	6,449	11,959	22,075	13,964	7,699	14,181	11,216	11,988	14,489	22,077	12,831	155,265
Japan.....	5,433	4,603	4,252	6,979	8,790	7,887	21,227	34,414	12,918	8,391	10,731	3,127	128,752
Australia (British).....	21,691	19,773	10,703	9,182	22,418	19,281	25,095	25,110	22,011	9,886	35,557	26,439	247,146
Asia and Oceanica.....	5,629	11,354	5,436	10,442	6,875	10,607	3,974	5,479	6,937	4,588	3,257	10,051	84,629
Africa.....	12,472	17,107	12,382	10,903	5,024	31,133	12,411	16,015	16,967	11,966	18,391	16,238	181,009
Other Countries.....	.....	.....	.....	75	605	485	457	77	.....	.....	.....	40	1,739
<b>TOTAL.....</b>	<b>\$674,117</b>	<b>\$754,476</b>	<b>\$958,729</b>	<b>\$927,066</b>	<b>\$797,658</b>	<b>\$695,339</b>	<b>\$363,761</b>	<b>\$301,358</b>	<b>\$253,233</b>	<b>\$232,492</b>	<b>\$547,568</b>	<b>\$586,416</b>	<b>\$7,092,218</b>

## SUBJECTS OF GENERAL INTEREST

### PHILOSOPHER DOOLEY'S DILEMMA

"I know what I'd do if I was Mack," said Mr. Hennessy. "I'd hist a flag over th' Ph'lippeens, an' I'd take in th' whole

lot iv thim."

"An' yet," said Mr. Dooley, "'tis not more thin two months since ye larned whether they were islands or canned goods. I've been r-readin' about th' counthry, full iv goold an' precious stones, where th' people can pick dinner off th' trees, an' ar-re starvin' because they have no step-ladders. Th' inhabitants is mostly naygurs an' Chinny-men, peaceful, industhrus an' law-abidin', but savage an' bloodthirsty in their methods. They wear no clothes except what they have on, an' each woman has five husbands an' each man has five wives. Th' r-rest goes into th' discard, th' same as here. Th' islands has been ownded by Spain since before th' fire; an' she's threated thim so well they're now up in ar-rms again her, except a majority iv thim which is thurly loyal.

"Th' natives seldom fight among themselves, but whin they get mad at one another they r-run-a-muck. Whin a man r-runs-a-muck, sometimes they hang him an' sometimes they discharge him an' hire a new motorman. Th' women ar-re beautiful, with languishin' black eyes, an' they smoke see-gars, but ar-re hurried an' incomplete in their dhress. I see a pitcher iv wan th' other day with nawthin' on her but a basket of cocoanuts an' a hoopskirt. They're no prudes. We import juke, hemp, cigar wrappers, sugar an' fairy tales fr'm th' Ph'lippeens, an' export six-inch shells an' th' like. I learned all this fr'm th' papers, an' I know 'tis sthraight. An' yet, Hinnissy, I dinnaw what to do about th' Ph'lippeens. An' I'm all alone in th' wuruld. Ivrybody else has made up his mind."

### POSSIBILITIES OF HOUSE COOLING

Nowhere in the world has so much thought and energy been applied to the perfecting of methods of heating dwelling houses

as in the United States, and the people here are probably the best warmed people of any in a similar latitude on the face of the globe. For relief from the extremes of hot weather, however, says the Metal Worker, very little has been done here, and, in fact, it is by no means certain that there is a feasible method of cooling small houses.

The matter has been given somewhat more attention abroad, and an interesting paper was presented at a recent meeting of the Heating and Ventilating Congress in Munich by Dr. Bruckner, who explained that the most feasible means of cooling were through ammonia or carbonic acid, which took up heat as they expanded. He likened ammonia to a sponge, which, expanding in a warm atmosphere, took up the heat, which could be thus carried away and squeezed out of the ammonia by compression outside. The same thing is true of carbonic acid, though ammonia was preferred as being cheaper to work and also in case of leakage being instantly detected. In operation the ammonia gas is compressed in a machine and cooled, and thus brought into liquid form. On being allowed to expand it falls to a very low temperature, and may then be used either direct as a cooling agent or through the medium of

salt water. For ordinary house cooling ribbed pipes through which the cold liquid is passed are used. Machinery is required, of course, to accomplish these several ends of compression and distribution, and this is an almost insuperable objection to the employment of such a method in a private residence, except in those palatial ones which include power plants for elevator service and lighting.

Dr. Bruckner described, however, one house in Germany which had a regular system of cooling operated by a three horse-power electric motor. The house was in Frankfort, and the system has been working for five years, salt water being cooled and carried through pipes in the ceilings of the dwelling rooms, the ceilings being perforated with narrow slits through which the air as it was cooled fell into the room. Being an electric motor it was easily handled, and, in fact, the only attention given to it was by the woman cook. The whole apparatus cost about \$5,000, and the power for running it was estimated at about \$75 a year. The smaller charges incidental to the machinery were not included.

### GERMANY'S UNFAIR REMONSTRANCE

A good deal of unnecessary anxiety is exhibited both in Germany and in the United States over the trade relations between the two countries. The supposition that American trade in Germany, or German trade in America, is being disturbed or depressed by existing conditions seems to be unfounded. Certainly the United States is giving to Germany a larger percentage of her import trade than ever before, and is selling to Germany a larger percent of her exports than ever before. American exports to Germany increased over 11 per cent in the past six months compared with the corresponding six months of the preceding year, which of themselves were phenomenally large. And the imports from Germany into the United States in the past six months were nearly 25 per cent greater than those of the corresponding six months of last year.

The share of our import trade given to Germany has steadily increased during the past decade, as has also the share which she takes of our exports. A decade ago 10 per cent of our imports was taken from Germany, while now 13 per cent comes from that country; a decade ago 8 per cent of our exports went to Germany, now over 13 per cent goes to that country.

### MOTOR CARAVAN FOR TOURING

Since the days of Diogenes and his tub, our world has seen many changes. We call these changes progress—civilization—and yet there are those among us whose tastes bend backwards and aim at simplicity of life. In the matter of housing, this is particularly noticeable. One of the English nobility, owning several palatial dwellings, finds his greatest pleasure in touring about the country in an ordinary gipsy caravan. That this is a healthy life we may take it as proved by the fact that a well-known medical writer has for years taken extended tours in a vehicle of similar if somewhat improved type. This latter instance can hardly, perhaps, be quoted as an example of simplicity, inasmuch as the doctor carries with him a coach-

man, a valet, a tricycle, a tent, and a very large dog.

The introduction of the motor car has led to the construction of what may be called an up-to-date caravan, or motor-caravan. One of these vehicles is in use by a Russian prince, and another has just left the builder's works and can be purchased for the sum of \$6,000. This moving house consists of two bedrooms, convertible into one living room by day, bath-room, and lavatory, and kitchen; the larder is under the floor, and on the roof are the water tank and coal "cellar," for the motive force is steam in this case. The tractor, which is to drag this somewhat elaborate house, develops thirty horse-power.

### GLASS USED FOR STREET PAVING

In a French town glass, in devitrified form, is used for street paving. For four months it has stood as hard usage as any pavement could be subjected to and is still in an admirable state of preservation. The glass, or ceramic stone, pavement is laid in the form of blocks, 8 inches square, each block containing sixteen parts in the form of checkers. These blocks are so closely fitted together that water can not pass between them, and the whole pavement looks like one large checkerboard. Like all thoroughfares in France, the roadbed slopes gently to the walk on each side. Some of the edges of the checkers have been slightly chipped, during their service, on the edges, but this does not argue against the value of the material as a pavement, or that any kind of stone would not have suffered just as much or more in the same time.

The advantages attributed to this ceramo-crystal by the manufacturers are: As a pavement, it has greater resistance than stone; it is a poor conductor of cold, and ice will not form upon it readily; dirt will not accumulate upon it as easily as upon stone, and it will not retain microbes; it is more durable than stone and just as cheap.

On careful examination, it is found that the ceramic stone is nothing but glass brought to a special molecular condition. In a certain sense, it constitutes a new substance which resembles flagstone, granite, or marble. This new product is obtained from broken glass heated to a temperature of 1,250 degrees and compressed by hydraulic force. The phenomenon of devitrification produces a sort of dissolution more apparent than real; for, upon chemical analysis, the devitrified glass preserves the identical composition of natural glass. It may be said, then, that devitrified glass possesses all the intrinsic qualities (physical and chemical) of glass, except the transparency, while taking on an entirely different aspect.

A bicycle recently shipped to Cheefoo, China, was found upon unpacking to be completely covered with rust, and the front tire full of cracks. The machine had to be sent to Shanghai for a new tire, costing about \$24 Mexican; the machine in the first place cost only \$140 Mexican. Here was an addition of \$24 before it could be used, besides the loss of its use for five weeks, due entirely to the carelessness of the shippers.

A sporting goods exhibition arranged exclusively for the trade is to be held in Paris from March 3 to 17. It will include bicycles and motor vehicles.



TRADE MARK



97



MANUFACTURERS ARE FURNISHING

# Dunlop Detachable Tires

On their wheels AT NO EXTRA COST, either wholesale or retail.

Agents should see that the manufacturers whom they represent are among this number. Write us about it.

1899 WILL BE A DUNLOP YEAR

## The American Dunlop Tire Company

134 Lake Street, Chicago.

Belleville, (North Newark) N. J.

36-38 Lombard Street, Toronto.



TRADE MARK



# THE STERLING

"BUILT LIKE A WATCH"

Spring

All Nature Awakens To A New Life - One Begins To Think Of A New Wheel.

**Sterling Bicycles**  
"BUILT LIKE A WATCH"

Fulfill All Expectations  
SEND FOR ART CATALOGUE

**Sterling Cycle Works,**  
Kenosha, Wis.

A BICYCLE IS WHAT IT IS MADE.

A good one is a pleasure and a pride to its owner, but if perchance he gets a poor one, it were better he never had bought.

Our agency for 1899 is

VALUABLE TO OTHERS; IT MAY BE VALUABLE TO YOU.

Our line is complete, our prices attractive, and our proposition awaits your request....

## STERLING CYCLE WORKS, KENOSHA, WIS.

## MONTREAL AGENTS ARE HAPPY

### MACHINES BRING LARGE PRICES

The Reduction in Lists Will Have a Strong Tendency to Stimulate the Demand.

Montreal, Feb. 28.—A tour of the principal cycle stores was made last week and it was found there was a hopeful feeling for the coming season—in some cases much gratification with the number of orders already received, which are far in advance of the same period of '98. The sales, however, will have to be fully one-fifth as large again as last year in order to attain the same result in gross values, as prices for the standard makes have been practically cut down 20 percent and even more in some cases. This reduction will undoubtedly create a demand for the bicycle among people who hitherto have been debarred from purchasing on account of high prices. That the increase will amount to more than 20 per cent. is a question which it is yet too early to speak of with any degree of decisiveness.

#### Slight Alterations in Models.

The chain machine will be the one generally pushed in this locality, although dealers handling the chainless look for good sales of it. So far as the chain driving models are concerned, there is but little change from last year in general outline and appearance, the improvements being merely in the bearings, spokes, handle and saddle clampings, and adjustment. There is no considerable change in the tubing, it being slightly heavier in some cases and in others remaining as formerly. The low frame which was so conspicuous last year will be but little seen this year. The gearing will average about 77, with a fair demand for higher. The tread will be narrower, the chains run at 3-16 and 1-4 inch. Adjustable handle bars are features. Simplicity in finish is looked for, and black will certainly be the predominating color.

#### Single Tube Tires in Favor.

It was claimed last year that the quality of rubber both in the single and double tube tires, particularly the former, was not so good as in 1897, and frequent complaints were made. Small blisters would raise on the tube, and after bursting would leave those particular spots extremely weak. Rubber this year has advanced in price, and there is a slight tendency on the part of tire companies to increase their price, but owing to severe competition it is unlikely they will be able to maintain such an increase. Single tube tires found favor last season, and dealers look for a big demand for them.

#### CHEAP Bicycles not wanted No. 6)

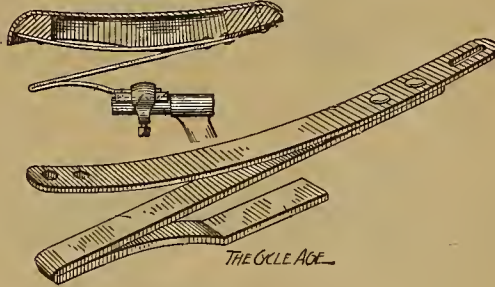
In past years there has been a marked objection to bargain counter bicycles. Unlike the riders of other cities, the Montreal cyclists look askance at anything below \$40 or \$50, and there have been exceptionally few cheap American machines sold in this district. The same condition of things is likely to prevail this year.

Local civic regulations will create a good call for bells and lamps. It is believed that electric lamps will find a ready market. As yet nothing of a satisfactory nature in such a sundry has made its appearance.

#### Saddle Spring for All Weights.

A saddle spring which offers the same proportional amount of elasticity and comfort for a light rider as for a heavy

rider is the recent invention of S. A. Bailey of New York city. The construction of the spring is shown in the accompanying illustration. It comprises in effect three members though it may be made from two pieces of flat spring metal or even from one. The uppermost portion is horizontal and is given a downward curve from each end toward its center. The middle section is a straight obliquely placed bar running from the front of the top member to the rear of

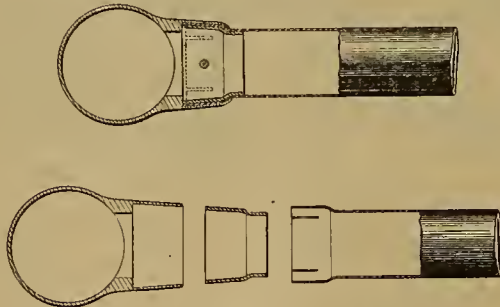


the bottom member which is similar in its curve to the uppermost but with its convexity reversed.

When the rider mounts the saddle the curved face of the uppermost member increases its area of contact with the inclined bar and the upper curved face of the lowermost member correspondingly increases its area of contact though from the opposite end of the middle section. This increased contact tends to stiffen the spring, thus giving each rider an amount of elasticity dependent upon his weight.

#### English Mechanical Joint.

To William Fraser of Birmingham, Eng., has been granted a United States patent on the brazeless joint shown in the accompanying illustration. The hole in the lug branch is bored tapering with the smallest diameter at the outer end. A tapered thimble matching the taper in the lug hole but enough smaller to admit between the two, when the ferrule is in place, the frame tube, is placed in the lug socket and rests upon the shoul-



der at the bottom of the taper boring. The end of the frame tube is enlarged but does not taper. It is instead split in several places for a short distance so that it is expansible and is driven into the lug between the thimble and wall of the branch till the curve connecting the large and the small diameter abuts against a corresponding curve in the thimble. The ferrule is supposed to be heavy so that the tube after having been driven into the lug will not have contracted it but instead have been expanded itself, and will bind against the wall of the lug. The finishing operation is to spin over the end of the lug thus effectually preventing the withdrawal of the tube.

In St. Petersburg there are but 15,380 cyclists among a population of 1,267,623, 139 of the riders being women.

The differences between the C. H. Sieg Mfg. Co. of Kenosha, Wis., and its employes have been settled.

A tax of 80 cents is to be levied on every bicycle used in Holland.

## GEAR OF CHAINLESS MACHINES

### SEVERAL WAYS OF FIGURING IT

With Two Persons to Count Simultaneously There is no Need of Figuring—Other Ways.

An inquirer desires to know how gear of chainless bicycles is computed.

Multiply number of teeth on driving gear by number of teeth on rear shaft pinion and multiply the product by the diameter of the rear wheel in inches—usually 28. Divide the product by number of teeth of front shaft pinion and divide the quotient by number of teeth of hub pinion. The result is the figure of the gear.

Commonly the computation may be simplified by crossing off some of the figures, as when the front and rear shaft pinions have the same number of teeth. Then the gear is found like that of a chaindriven machine, by considering driving gear as front sprocket and hub gear as rear sprocket. Or, if rear shaft pinion is like the hub pinion, they may both be left out of consideration.

In general it is simplest to place the three factors above a line and the two divisors below and cross out according to the usual school rules.

#### Without Counting Gear Teeth.

In order to determine the gear without removing gear casings or counting teeth, hold one pedal crank vertically; mark the highest point on rear wheel tire; turn the crank one revolution till it is vertical again; note how many times the rear wheel revolves. This is usually two times and a fraction; rarely three times or more. Measure the outer circumference of tire with a string. Measure also the distance from the highest point to the mark showing where the highest point was before. The circumference is usually close to 88 inches. If the other measurement is, say, 20 inches, multiply diameter of wheel—28 inches—with 2 20-88. The product is the gear; in this case 62 4-11. If the rear wheel has revolved three full revolutions the figure should of course be 3 20-88, making the gear 90 4-11.

For ordinary purposes take it for granted that circumference of rear tire, inflated, is 88 inches; measure from last high point to mark as before, lump the fraction by reducing it to sevenths. For example, if measurement shows 50 inches—always measuring the way the wheel revolves—call the fraction 4-7.

Any fraction of 88 inches can be conveniently reduced to sevenths by multiplying the measurement by 2 and dividing by 25. And sevenths are convenient for multiplying by 28 afterwards. In this case with the measurement 50 inches, the gear is thus found to be 2 4-7 multiplied by 28, making 72.

With three revolutions and a measurement of 12 inches, the computation would be: 2 times 12 inches 24; divided by 25 is very nearly 1, which is 1 seventh. Hence multiply 3 1-7 by 28; result 88 gear.

#### Quickest and Simplest Way.

If it is desired to avoid figuring as much as possible yet get very close to a correct result, the following method may be used. Mark a spot on the wheel rim or tire. Revolve pedal crank twenty-eight times and count the revolutions of the rear wheel by noting the marked spot as it comes around. The figure of the count is the gear.

With 30-inch wheels revolve crank 30 times. This is applicable to chain-driven bicycles as well.

The German reichstag has voted \$31,250 for the purpose of experimenting with

THE POPULARITY OF  

# Barnes Bicycles

was never more evident than it is this season.

Riders know the BARNES to be the free running and lasting kind.

Agents know it is the BARNES line which brings them prosperity.

It is the general excellence of the BARNES which satisfies.

Is there a BARNES agency in your town? If not, write us.

... WISE BUYERS BUY WHITE FLYERS ...

The Barnes Cycle Co., - Syracuse, N. Y.

motor vehicles for the transportation of ammunition and materials for the army. Seven vehicles have been ordered for the purpose.

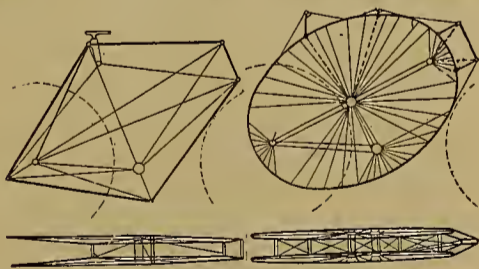
## SUSPENSION CYCLE FRAME

Designed to Receive Only Tension and Compression Strains—Bending Stresses Obviated.

The suspension frame idea has been struggling for existence in some modified form or other ever since the diamond safety frame became popular. Its latest advocate is one C. W. Atkinson of Penarth, Eng., whose frame, on which he has obtained a patent in this country, is shown in the illustrations herewith. Mr. Atkinson's primary reasoning is logical in a general way as it is not new but comprises merely the old idea that if a frame could be so built that the different members composing it were subjected only to either compression or tension strains acting in such ways that those members intended by their character to resist tension strains should not receive compression strains and vice versa much weight could be taken from the frame work. He contends that in the ordinary bicycle frame each member at different times, according to the variations in the external forces due to the use of the machine, receives tension, compression and bending stresses and accordingly has to be made sufficiently heavy so that the mere bulk of the member will give strength sufficient to resist these varying strains.

In the illustration the heavy lines are supposed to represent the frame members which this inventor has disposed so that they will receive the compression strains while the light lines represent the members upon which none but tension strains act. The crank hanger, rear wheel and seat post are hung within the compression

frame and supported in a suspension manner by radiating spokes, the strain upon which is tensional. That there may be no bending stresses upon the different members the frame is doubled and the two sections coupled together by cross spokes and short tubes. It is at this point that the inventor's scheme is apt to fall short, for though the frame be made double it is doubtful whether the many twisting strains given a bicycle while in use will take effect solely upon the cross members which couple the two sections together and not to some extent at least exert a bending strain upon the side members intended



only to receive either tension or compression stresses. The invention is not limited to any exact form, several patterns of frames being shown by the patentee. The two illustrated show the construction applied both to a frame resembling in contour the ordinary diamond shape frame and to a frame in which the outside compression member on each side of the double frame is in the form of an ellipse.

The inventor has evidently overlooked one advantage that his frame might have. If he would use tensional spokes within the frame of varying thickness so that they would yield musical chords when picked, a proficient trick rider might, by riding hands off and bowing his knees out to admit his hands between them,

play as on a harp while scorching down the dusty pike or while circling around some creaking vaudeville stage and thus tickle the musical as well as the cycling interest of the onlookers by rendering for their benefit the sweet strains of "She Was Bred in Old Kentucky."

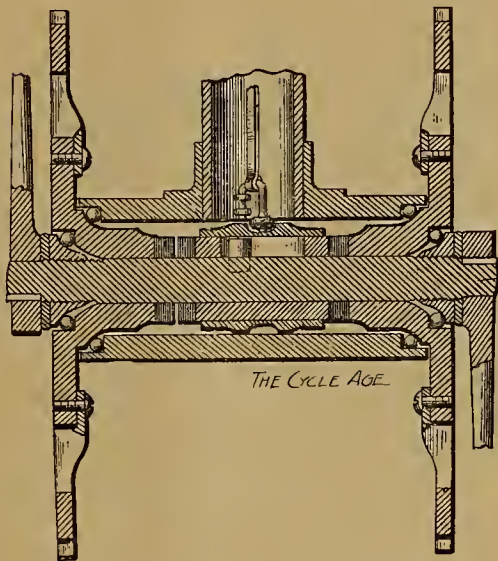
## NEW CHANGEABLE GEAR

Two Sets of Sprockets and Chains Used—Gear Can Be Shifted While Riding.

While there have been invented many changeable gear devices during the past few years the mechanism here illustrated represents practically a new type, but one which is primarily of such a simple nature that it is to be wondered why inventors have not attempted such a scheme before. The main principle of the gearing is the employment of a set of sprockets and a chain on each side of the bicycle, one set affording a high and the other a low gear. The gear is changed through the shifting mechanism placing either set in driving engagement with the crank shaft according as to which gearing is desired. Thus far the idea of the invention, while it necessitates added weight on account of the addition of two sprockets and a chain, presents certain possibilities of simplicity and durability which are attractive to those who believe in changeable gears but have failed to find what they want.

The two front sprockets are mounted, each between two ball bearings, one in the bracket and one on the crank shaft so that they are free to rotate on the shaft, and the sprocket hubs have inner extension sleeves upon the shaft which are notched at their inner ends to match notches and projections cut in the ends of a central collar which is connected by spline and pin to the axle so that it may

slide lengthwise upon it but is fixed to rotate with it. A U-shaped yoke of stout wire is mounted near the bottom of the seat mast tube with one of the branches pivotally connected to the inner wall of the tube and the other fitted with a knob, or preferably with a roller, which travels around an annular groove cut in the collar splined to the axle. The pivoted yoke is turned by a shifting rod in the form of a flat spring running up-



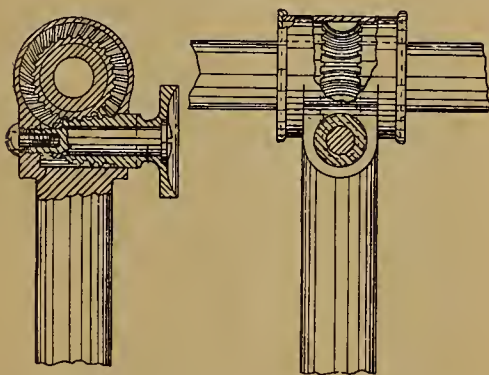
ward through the seat mast to a point near the top of the latter where it is secured to a horizontal latch which projects through a slot in the seat mast tube. By turning this latch the shifting rod is correspondingly turned and the sleeve on the axle moved either to the right or to the left, thus bringing it in engagement with the slotted end of one or the other of the sprocket hubs and causing that sprocket to rotate with the crank shaft and so drive the bicycle. Notches in the slot for the passage of the hand latch through the seat mast permit the gear to be locked in either position or in an intermediate position at which the collar is disengaged from both sprocket hubs, as for coasting.

Though the construction of this mechanism might be much improved and while the horizontal slotting of the seat mast materially weakens that frame member, it presents an interesting effect on new lines suggestive of new thoughts especially for those who might desire to incorporate a changeable gear in a bicycle with built-in gear cases on both sides. The inventor of the gearing is W. A. Tickner of Marshall, Wash.

RECENT CYCLE PATENTS

Tool Holder With Universal Adjustment—Penseyres' Hanger—Vose's Handlebar.

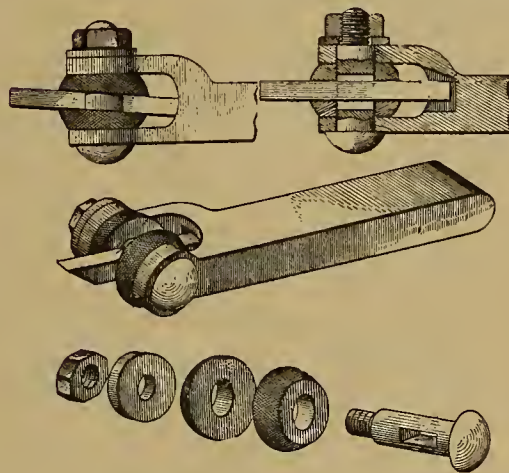
Adjustable Handle Bar.—The bar is adjustable without the use of a wrench or tools and may be raised or lowered while



the rider is on the bicycle. An annular worm gear extends around the center of the bar, the latter turning in the cylindrical head of the stem tee. A cross worm whose spirals engage the teeth in the worm gear is mounted in the stem di-

rectly underneath the bar and is maintained in a readily rotatable position by a bolt which passes through the central hole bored in the worm. The head of the worm and a nut abutting against its forward end keep the worm from slipping longitudinally on the bolt. A set screw locks the bolt tightly in place. The adjustment of the bar is effected by turning the worm by means of its thumb nut. The only locking of the bar after adjustment is the resistance of the worm to turning unless actuated by the thumb nut. The inventor is A. M. Vose of Brookline, Mass.

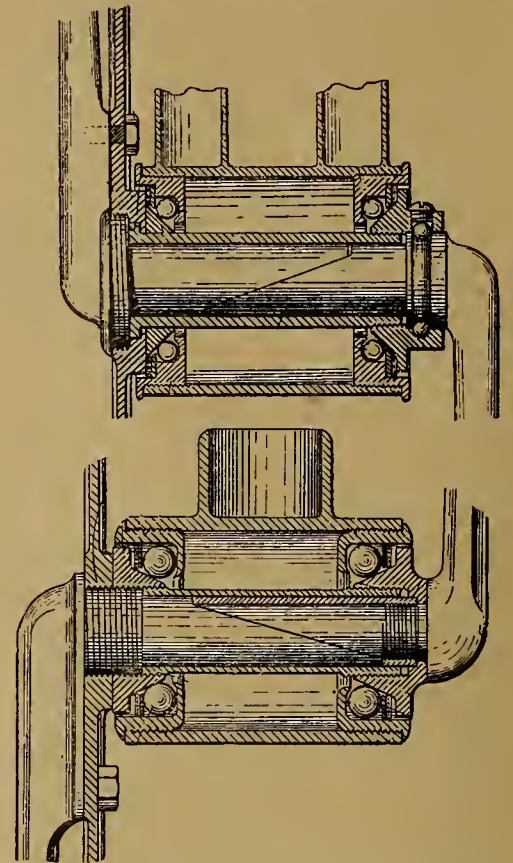
Lathe Tool Holder.—The holder is designed for holding the cutting tool at any desired angle and to allow the cutting of both right and left hand threads without changing tools. It allows the tool practically a universal movement with regard to the work to be operated upon. The securing of the tool is also more sure than with the ordinary tool holder in which the tool is clamped merely with a set screw. The shank of the holder is forked at the forward end and bored transversely for the passage of a cross bolt on which two knurled washers are placed between the fork blades. Through the center of the cross bolt a transverse slot is cut for the passage of the cutting tool and it is made large enough to receive cutters of different sizes. The outside faces of the knurled washers are machined at exactly right angles to the cross bolts and are thus parallel to the inner flat faces of the fork blades against which they are adapted to bind. The inner faces, however, are cut at a slight angle to the fork, so that they possess something of the nature of cam surfaces



and allow the tool which is clamped between them to be set at any desired inclination within certain limits. A socket in the shank at the bottom of the fork gives rear end seating for the cutter and aids in keeping it securely in place. The inventor is F. P. Kuhn, of Kearney, Neb.

Two-Piece Hanger Construction.—The inventor has been allowed patents on two hangers each of which is of that type of two-part design in which the shaft is divided in the center, the ends being inclined so that together they form a wedging union against each other and the inner wall of the surrounding sleeve. In that shown in the upper illustration the sleeve is held to the right axle section by a flange on the hub of the sprocket which screws on to a seat adjacent to the inner face of the crank. The opposite end of the sleeve is threaded. The left bearing cone is kept from longitudinal movement on the shaft by an annular row of balls placed between corresponding grooves around the cone and around the axle. The balls are inserted through a radial hole in the axle. The axle sections are drawn together by the cone and after the tightening is sufficiently attained are locked against rotation by a set screw screwing into the hole through which the balls

between the cone and axle were inserted and binding against whichever ball or balls are directly beneath it. In the second hanger the sprocket screws onto the axle and up against the crank face



and is locked by a threaded cone which also holds the shaft sleeve in place, the latter being screwed into it after the cone is in place on the enlarged portion of the axle. The left section of the shaft is smaller than the right and is threaded near its outer end. Onto this threading screws a sleeve inclined at its inner end to match the division between the shaft sections. This sleeve when in place enlarges the smaller shaft section to the inner diameter of the surrounding sleeve and also holds the locking cone from longitudinal movement, an annular flange on the cone being between the outer end of the sleeve and the inner face of the crank. The cone pulls the crank shaft sections together in the same manner as that on the previous hanger. In both patterns the adjustment of the bearings is made by the cups which screw into the barrel and are locked by cross bolts in lugs on the split underside of the brackets. The inventor is W. H. Penseyres of Buffalo, N. Y.

English Cycle Exports.

Cycle exports from England for the week ending February 10 are recorded as follows:

Auckland.. .. .	\$ 60
Blenheim.. .. .	120
Bombay.. .. .	420
Boulogne.. .. .	620
Calcutta.. .. .	1,415
Cape Town.. .. .	2,785
Christchurch.. .. .	1,145
Colombo .. .. .	550
Delagoa Bay .. .. .	615
Durban .. .. .	6,580
East London .. .. .	250
Ghent .. .. .	745
Gibraltar .. .. .	60
Hong Kong .. .. .	150
Invercargill .. .. .	110
Konigsberg .. .. .	75
Kurrachee .. .. .	415
Lisbon .. .. .	30
Lyttleton .. .. .	375
Madeira .. .. .	50
Malta .. .. .	50
Madras .. .. .	685
Melbourne .. .. .	2,205
Ostend .. .. .	195
Penang .. .. .	95
Perth .. .. .	425
Perth .. .. .	425
Port Elizabeth .. .. .	2,175
Rangoon .. .. .	55
Sydney .. .. .	115
Wellington .. .. .	320
Total .. .. .	\$22,400



## COMMERCE IN FOREIGN MARKETS

### BICYCLES ARE SCARCE IN MADAGASCAR

Bicycles are not in general use in Madagascar. There are two at Tamatave, owned by Frenchmen. The native has not as yet reached this stage of civilization. The roads about Tamatave are at all seasons of the year nearly ankle deep in sand, rendering cycling almost impossible. There is some talk of constructing a driveway along the seacoast. The country outside of Tamatave is mountainous and intersected by many rivers. The roads at the capital, Tananarivo, are better adapted to the requirements of the bicycle, and there are a few more in use there, among the European population. Bicycles are imported from France. The duty on foreign wheels is 250 francs (\$47.25) per 100 kilograms (220.46 lbs.), besides a municipal tax of 1 per cent of the cost. French bicycles are admitted free.

Tamatave is the principal receiving port on the east coast, as well as the chief port on the island. On the west coast are Majunga, Nossi Be, and Fort Dauphin. Port charges are 5 francs (96 cents) per ton. A recent decree from France has established a bonded warehouse at Tamatave. Goods should be packed and invoices prepared with great care. The slightest mistakes are fraught with serious consequences. The invoices should state the weight of all the parts of the wheel and the total weight, as well as that of the case and material used for packing.

### THE SWISS LIKE OUR BICYCLES

Bicycles are in general use in Switzerland, especially in French Switzerland, Geneva, Lausanne, Zurich, Lucerne, etc. The condition of the roads varies very much; they are not suitable for riding from December until March, owing to the heavy traffic everywhere and to the fact that they are repaved during this period. During the season (which of late has not set in before April) the best roads are found in French Switzerland, Italian Switzerland, and in the Cantons of Aarau, Lucerne, and Basel. They are rather rough in the Cantons of Zurich, Graubunden, and Schaffhausen, where the roads are often cut up by heavy traffic. Half of the roads are hilly, and the cycles have to stand a great strain.

The only bicycles suitable for this country are those with strong rims; thick, nonslipping tires; reliable brakes, spring saddles, and mud guards. This outfit should be made imperative for every wheel imported into this country. In French Switzerland, 1½-inch tires on 28-inch wheels are asked for most, while in German Switzerland, only 1½ and 1¾ tires find buyers.

The receiving port for French Switzerland is Havre and for German Switzerland, Antwerp. There are bonded warehouses in Geneva, Basel, and Schaffhausen.

The majority of cycles are imported from Germany; the United States follows, and then England. The duty on bicycles entering this country is 70 francs per 100 kilograms (\$13.51 per 220 lbs.). In French Switzerland, -20 per cent allowance is made for crating and packing; but in German Switzerland, the duty is charged on the gross weight. Consequently, the crating must be as light as possible, and closed boxes should never be used. It has frequently occurred that more duty had to be paid on the box, owing to its weight, than on the bicycle

itself. It is necessary that the metals be greased before leaving the factory, and that the whole cycle be wrapped in paper (preferably in large paper bags). There is no differential duty favoring certain countries.

All loose parts should be in small sealed boxes inside the crate; but no catalogues, bill of lading, or posters should be inclosed. These should be sent separately, or at least invoiced separately, or else the same duty will be charged as on the bicycle.

The retail prices are from 250 to 500 francs (\$48.25 to \$96.50). The latter are the American and English prices. There is a good demand for a well-built, solid, cheap cycle, but it must be strong and the price low enough to enable competition with the German prices, which range from 300 to 375 francs (\$57.90 to \$72.37). The American bicycle is recognized as the most satisfactory one on the market, but is considered too expensive for most purchasers. The best Swiss, Austrian and German machines cost from 350 to 375 francs (\$64.85 to \$72.37), while the American machine costs 500 francs (\$96.50). It has been found that when American machines need repairing there is a lack of proper facilities and, as this has caused dissatisfaction, their sale has been discontinued in some cases. The only way to reach the local trade is through energetic, capable agents. Last year Germany sent 3,257 commercial agents into this country and the United States sent none. The result was that Germany captured the cycle business and nearly every other line of trade. Circulars sent to Switzerland should be printed in the French and German languages. The usual credit is from three to six months.

If the American machines could be sold as cheap as the German makes, and could be as easily repaired, and if the same effort were made to gain the Swiss market that the Germans have put forth, they ought to be widely sold, as they are the best-liked wheels in Europe. Local competition would not be great, as only 2,400 wheels were manufactured in Switzerland last year.

### ARABIA IS A POOR CYCLE MARKET

The bicycle has not attained the popularity in Aden, Arabia, that it has in many places. Its use is confined almost entirely to the European and American residents. The natives have not adopted this method of conveyance to any great extent, which may be accounted for, as a rule, by their poverty. The conditions of the roads and streets are not such as would attract a wheelman. One main road leading from Aden (camp) to Aden (steamer point), a distance of some 5 miles, is kept comparatively smooth and free from sand; but it is very hilly and in some places, so steep that a cyclist can not ride up. Elsewhere in this section of Arabia, the roads are rough and sandy, and almost three-fourths of the year the monsoon drives such a dust as to add great discomfort to the topographical inconveniences.

There are no domestic manufacturers in Aden, and not even a repair shop. The bicycles in use there are imported from the United States and England, the greater number coming from the United States. There is no duty on bicycles, or repairs for same, in Arabia; but any that may be shipped to Somaliland would be subject to a duty of 5 per cent. This duty would be assessed on goods com-

ing from any country, and there is no differential rate. Aden is the receiving port for southern Arabia and Somaliland. There is a port charge of about 24 cents per each 35 cubic feet, which covers all the landing and port charges. There is no bonded warehouse at Aden.

### CYCLE TRADE CONDITIONS IN SWEDEN

Some time ago the use of bicycles in Sweden was confined to the wealthier classes, but with the introduction of less expensive machines their use has largely increased. In the cities especially, a great many workmen own bicycles. The condition of the roads is pretty fair, but after heavy rains, and especially in the fall and the spring, the country roads get poor. Certain parts of the country are very hilly and the roads more or less rough. As a rule, mud guards and brakes are used.

The shipment of inferior bicycles from the United States seems to have created a demand for the English and German bicycles. A dealer imported 350 bicycles from America; terms of payment, cash against documents. When the machines arrived, it was found upon examination that the inner tubes of the tires were so poor that the least pulling or stretching would tear them. The bicycles were later sold at auction at a great loss to the importer, who was at the mercy of the exporter, the money being already paid. Cases of this kind do great harm.

The English and German exporters give from three to six months' time, and all shipments are allowed examination before being accepted. Bicycles now retail there at prices ranging from 350 to 200 kronor (\$93.80 to \$53.60), and some are even sold as low as 160 kronor (\$42.88) apiece.

There are about sixteen bicycle factories in Sweden. Some of them are small concerns, however, and many buy parts of bicycles from larger factories. Repair shops are numerous. Bicycles are principally imported from England, the United States, and Germany. As to customs duty, there is no discrimination against the productions of any particular country. The Riksdag at its latest session changed the duty on finished bicycles to \$6.70 apiece, and on parts of bicycles to 53 cents per kilogram, which rates are now charged.

The chief receiving port on the western coast of Sweden is Gothenburg. There are also other ports of entry, among which Malmo and Helsingborg may be mentioned. The port charges on bicycles amount to 1 percent of the duty paid, to which should be added about 7 cents warehouse dues for each bicycle. The dues to be paid for bicycles placed in bonded warehouses also amount to 1 percent of the duty.

Bonded warehouses, as such, do not exist. Importers may use their own warehouses. Goteborgs Magasins Aktiebolag, of Gothenburg city, leases storerooms in which goods may be kept under bond until sold or otherwise disposed of. In either case, the goods are kept under the lock and seal of the custom house until the duty has been paid. Upon due notice to the customs authorities, such goods may also be exported to other countries, without payment of duty; but warehouse dues must be paid. In the presence of a custom house official, the owner of the wares may enter the warehouse and take out small samples, give the goods proper care, etc.

# The American Saddle Co.

OPERATING THE FORMER  
FACTORIES OF

**GARFORD MFG. CO.**

OF ELYRIA, OHIO

**HUNT MFG. CO.**

OF WESTBORO, MASS.

**WHEELER SADDLE CO.**

OF DETROIT, MICH.

**WHEELER SADDLE CO.**

OF TORONTO, ONT.

**GILLIAM MFG. CO.**

OF CANTON, OHIO

**P. & F. MFG. CO.**

OF READING, PA.



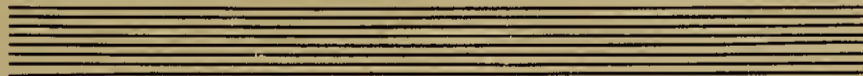
**Offices: 608-613 American Trust Building**

**• • • Cleveland, Ohio • • •**

# Concentration

**T**HE companies composing The American Saddle Co., having demonstrated their ability to successfully conduct their affairs in an individual capacity, and having combined their capital, brains and facilities, it is but a natural result that this "composite" of the best there was in each, must and will be far more effective in producing the best there is or can be in saddle construction and at the minimum of cost.

The American Saddle Co. unquestionably takes precedence from the moment of its organization, and buyers will be quick to see that their interests will be best subserved by an organization controlling the best facilities and the greatest resources as regards capital and saddle-making intelligence ever concentrated under one management.



## The American Saddle Company

AMERICAN TRUST BUILDING

Cleveland, Ohio

## DEALERS WELL PLEASED

### Expect This to Be the Banner Year in Retail Trade— Effect of Reduced List

While the profits on individual sales of bicycles will be slightly reduced, dealers in all sections of the country seem to welcome the reduction of list prices on standard reputable makes this year and predict good results therefrom. One of the probable effects which has not before been suggested is that fewer machines will have to be taken back from riders because of failure to complete their installment payments. The heavy losses due to this common cause should be relatively very small this year, because with the improved industrial and financial conditions of the country generally purchasers will have little reason for evading the few payments necessary to complete the transaction after the first cash payment of \$15 to \$25 on a \$40 to \$50 machine has been made.

Many dealers anticipate that the trade this season will be better so far as actual profits are concerned than any that has gone before, and, while immediate buying by the dealers from the makers does not go far toward warranting this belief, there is rather reason in this for indulging the opinion than for apprehension, as it is one of the evidences that the dealers as well as the manufacturers have learned caution by experience and are buying conservatively. They have reason for supposing that factories will be in position to make prompt shipments, and they prefer to not overstock themselves.

Following are additional expressions of opinions of agents located mostly in the north central states:

#### Anticipates a Banner Year.

We think the bicycle trade will be better this year than ever before, partly because of the lowered prices. Dealers are buying more freely than we have ever known them to do.

Indiana.

FEETER BROS.

#### Lowered List a Stimulant.

We think the sales will be greater this season because the use of bicycles is becoming more general. Lower prices will certainly stimulate the demand. I do not think the dealers are buying yet; in fact, the only dealers here are agents of standard makes who sell from samples.

Indiana.

HUNTER BROS.

#### Will be the Banner Year.

The sale of bicycles in this suburb of Chicago will be greater this season than last, as there is more money in circulation. The lowered list prices will enable those people to purchase who have not felt that they could pay \$50, but might pay \$30 or \$35. The better times and prospects will combine with lower prices for good machines to make the year of '99 the star year. We do not know whether other dealers here are buying more freely than usual, but intend to do so ourselves.

Illinois.

H. GEO. PROUTY & Co.

#### Reduced Prices Will Increase Sales.

The sales this season will be greater than in '98 on account of lower prices. The dealers are not buying more freely than in previous years.

Illinois.

PHIL WADE.

#### Expects Trade to Remain Constant.

I think trade will be about the same as last year; possibly a trifle better, on account of the reduction in prices. Dealers here are buying a little more than last year; that is, they are carrying a larger stock of bicycles.

Illinois.

F. H. PURDY.

#### Bad Roads a Calamity.

I think the sales will be less on account of our poor country roads. We have depended almost entirely on city trade up to the present, but now the fad is over and bicycles will be bought for business only. I don't think this will increase the agent's

enthusiasm much, but will, on the contrary, lower it.

Illinois.

JAS. M. NEWTON.

#### Young Men Are Buying Horses.

I am not able to say as to whether sales will be greater this year. A great many of our young men have purchased horses and buggies, and they will not be likely to want bicycles until the novelty is worn off of their rigs. I am the only bicycle dealer here and I am not buying very heavily.

Illinois.

J. A. BEELEY.

#### Buyers May Look for Cheap Machines.

The sale of bicycles is apt to be about the same as last season. The lowered list price is likely to make buyers look for something still cheaper. We think that dealers are not buying as freely this season as in previous seasons.

Illinois.

BRODE HARDWARE CO.

#### Buyers Will Complete Their Purchases.

I think the sale of bicycles will be greater this season than last year. I have sold more so far than in '98 up to the same date. I think the lowered list prices will help sales and that there will be fewer machines to be taken back. I have placed sample orders for more bicycles than in '98.

Michigan.

STEELE & COLLINS.

#### Dealers Expect Prompt Deliveries.

I think the sale of wheels will be greater this season because money will be easier and Uncle Sam says peace and prosperity are in sight. The effect of lowered list prices will be good, for I believe they will induce the public to buy higher grade bicycles, and thus make more satisfied riders. Dealers are not buying noticeably any more freely than usual, because they think they can get the bicycles delivered as needed.

Michigan.

H. E. BELDING.

#### Two Reasons for Better Sales.

From what I can learn I believe the sale of bicycles in this vicinity will be greater this year than in '98. My reasons for this belief are that the lower prices and the improvement in general business will both tend to increase the demand. I don't think the dealers here are generally buying more freely this season than last, for past experience, I think, has taught them to buy cautiously.

Michigan.

F. W. MORTON.

#### Has Come to a Standstill.

The sale of bicycles will not be any larger this season than in '98 and the lowered list prices will have no beneficial effect. The dealers are not buying more freely than usual.

T. E. BIBHEL.

#### Anticipating Larger Sales.

The sale of bicycles will be greater this season than in '98. The effect of lowered list prices will be to increase the sales. Dealers are buying more heavily than usual.

Michigan.

BATTLE CREEK CYCLE CO.

#### Dealers Buying More Freely.

The sale of bicycles will be greater this season than in '98. The lowered list prices will increase the sales. Dealers are buying more freely than usual.

Michigan.

SMITH & GLASS.

#### Expects Fewer Sales.

We think there will not be quite as many bicycles sold this season as in '98. The lowered list prices will help sales. Dealers are not buying as freely as usual.

Michigan.

ALDRICH BROS.

#### A Dealer's Complaint.

To the Editor—I have been reading with a good deal of interest what the dealers throughout the country have to say about express rates. We dealers in the south probably have as much cause as anyone to feel the force of high express rates, as we are further from most of the distributing points for cycle goods. We hope the movement will have its proper effect and that we will shortly have lower charges. We use freight

wherever possible and are having very good results.

There is another point, however, that I think is equally as important as a reduction in the express rates and that is the employing of thoroughly competent men in the shipping departments of factories. To illustrate: A few weeks ago we gave a well known tire manufacturer an order for one pair of light tires and three dozen inner tubes. In a short time we received a pair of tires weighing about four pounds and about eight pounds of the manufacturer's advertising matter. The expressage was \$1.50. Two weeks later we got the tubes; expressage \$2.05; making \$3.55 in all. The value of the goods so bought was less than \$25, and the charges on carriage were \$3.55 or about 15 per cent. Rather heavy, isn't it?

Why didn't that factory pay the charges on their advertising matter? And why didn't their shipping department ship all the goods at one time?

We are in favor of lower express rates and also of more careful attention to shipping on the part of factories.

Nashville, Tenn. DUNCAN R. MORRIS.

#### "LET THERE BE LIGHT"

##### Need of Lamps Grows Greater Yearly—Objections Overcome By Improvements.

The number of bicycle riders has increased so greatly in the past few years in all parts of the United States that pedestrians and teams are likely to be met most unexpectedly at all hours of the night, even on remote country roads and in small villages. For this reason every cyclist who goes out after dark without a light menaces the lives and limbs of men, women and children, whether in city, small town or on country road, annoys drivers of horses and runs innumerable risks himself.

European countries have national laws compelling the carrying of lighted lamps at night which apply to every hamlet and country highway as well as to large cities, but in this country it is a matter of local option. Many of our leading cities have adopted ordinances compelling the use of lamps, and, though these met with great opposition from wheelmen at first, principally owing to the common deficiencies of bicycle lamps of some years ago, which have now been overcome, those cyclists who have become accustomed to carrying lamps and know their value now carry them from choice.

Opposition to such regulation is a mistake, and all large communities where cycling is common should have ordinances requiring the use of lights. Undoubtedly this should apply to other vehicles as well as to bicycles, and it has been made to do so in a number of enlightened cities, but because the bicycle is such a silent machine and so swift it becomes especially necessary to warn others of its approach. The old objections to lamps and arguments against carrying them, particularly on country roads, no longer hold good in these days of highly improved oil, gas and electric lamps, which will be found of much assistance in avoiding obstructions and bad places in the road even by the impatient road scorcher.

#### Chainless 30-inch Wheel Machines.

In the state of Connecticut chainless machines with 30-inch wheels are being offered for \$40. In the state of Ohio a chainless machine with 28-inch wheels is being offered at \$40, the regular price of which is advertised at \$60. It is scarcely necessary to add that the form of gear used in both instances is not of the types which have found most favor with the trade.

# CYCLE AGE ADVERTISES

Vol. XXII. No. 18.

THE CYCLE AGE OFFICE.

March 2, 1899.

## CYCLE AGE REPAIR BOOK.

Orders Pour in Rapidly—A Summary of the Contents.

Last week's announcement of the early issue of "Modern Cycle Repairs" has borne abundant fruit. Orders have poured in rapidly, showing that the trade appreciates the value of a work of the kind under Cycle Age auspices.

"Modern Cycle Repairs" will be ready in a few days. It will contain over 100 illustrations. Its contents are here briefly summarized:

### CHAPTER 1—Repairs, or Replacement.

First equipment of the shop. A study of economical methods. Illustrations of good and bad methods. List and cost of tools and fittings. Use of assembling jacks.

### CHAPTER 2—Wheels and Component Parts.

Purchase of spokes, sizes to buy and how to keep them. Rims; tools for spacing and drilling. Inexpensive truing jigs. To repair broken spoke holes in hubs. Nipple grips. Replacing cups and cones. To braze a split cone.

### CHAPTER 3—Frame and Forks, Brazers and Brazing.

To braze without spoiling enamel. Three ways to repair broken tube. Broken lugs, fork ends and fork stems. Dangers of twisted forks. Truing a frame. Selection of a brazer.

### CHAPTER 4—Remodeling of Frames.

Computing the cost. Cutting down frames. Changes of all sorts in singles and tandems.

### CHAPTER 5—The Crank Hanger.

Remodeling. Loose cranks. Buckled tandem sprockets. Two-piece construction.

### CHAPTER 6—The Steering Head.

Broken crown cones. A question of solder. Fixing loose cones. Squeaking steering heads. Rust on nickel.

### CHAPTER 7—Seat Posts and Handle Bars.

Broken parts. Internal expanders. The flashing of tubing. Ways of bending bars.

### CHAPTER 8—Hints on the Art of Enameling.

Necessary equipment. Keeping of enamels. Coating and baking. Two and three color work.

### CHAPTER 9—Saddles and Pedals.

Springs and clamps. Repairing pneumatic saddles. Rattan lacing. To make pom-

mel clip. Broken springs. Difficulties of pedal repairs and how to overcome them.

### CHAPTER 10—Building Frames from Component Parts.

Should be undertaken by men of experience only. A variety of patterns. Correct angles. Dimensions. Cheap mandrels and their uses.

### CHAPTER 11—Purchasing Parts for Special Work.

Ingenuity of great value; examples. Methods by which many parts may be made of unexpected value.

### CHAPTER 12—Experimenting With Construction.

Repairmen best suited to devise practical improvements. Value of their ideas.

### CHAPTER 13—Mechanical Power in the Shop.

Practical advantages. Cheapest forms of motors. Installation. Floor plan.

### CHAPTER 14—Miscellaneous Repairs and Suggestions.

### CHAPTER 15 Tire Repairs.

According to tire construction. Method for each kind described.

Price to Cycle Age Subscribers, One Dollar; to all others, Two Dollars. Order at once. First come, first served.

## Advertisers and Advertising.

A furious shower does not soak in so well as a steady rain.

Does it?

A double-column advertisement once a year is not so good as a half-inch fifty-two times a year.

Is it?

The parallel is fitting.

The time is ripe to make a contract for a steady rain of advertising. Let the water begin to fall, it will begin to soak in at once; and as the weeks lengthen into months, you have watered your entire territory.

Don't get funny at this argument, and say that after a while things would get too muddy.

We are not talking about deluges.

That's what these once a year fellows enjoy.

The highest praise Artemas Ward had for George Washington was that he "never slopped over."

Did you ever study mathematics, and learn that 1 and 1 make 2, and 2 and 2 make 4, and 4 and 4 make 8, and 8 and 8 make 16, and so on?

Some of you never get above 1 and 1 make 2.

You don't figure the cumulative powers of advertising.

You believe one good "old soaker" is worth twenty "drizzles."

You don't realize that three-fourths of the water in an "old soaker" runs off, and finds its way into the gutters.

Figure how much you are going to appropriate for advertising. Divide it by fifty-two, and take so much worth for each week.

The water might freeze now as it falls, but it will be there when the thaw comes in the spring.

## Your Uncle Sam

Is the Safest and Best Traveling Man in the World.



He reaches every town in the United States the same day.

He is admitted by every buyer.

He is always received with respect.

Everyone moves aside to let his big red wagon go by.

His expense account never varies.

There are no items you need trouble to question.

He draws no salary when he is not working.

And he calls on every possible customer.

Why not let him work for you and deliver your circular matter to the 38,000 bicycle agents in the United States?

The Cycle Age will address the matter for any of its advertisers.

Ask for pamphlet, "The Cycle Age Lists."

### Insure Your Business.

"Advertising bills are the premiums business men pay to insure them against loss of trade."

### SATISFIED ADVERTISERS.

A few days since we received a letter from a Japanese party, stating that he noticed our "ad." in your paper. We wish to congratulate you on the wide circulation in which this letter indicates you have.

THE GRANT BALL CO.,  
Cleveland, Ohio.

## If this should meet the eye—

of some person who does not believe in advertising

## Will continued blindness result

in the ruination of his business because he hides his light,

## Or will he see more clearly

that if he reads this announcement other people would read his

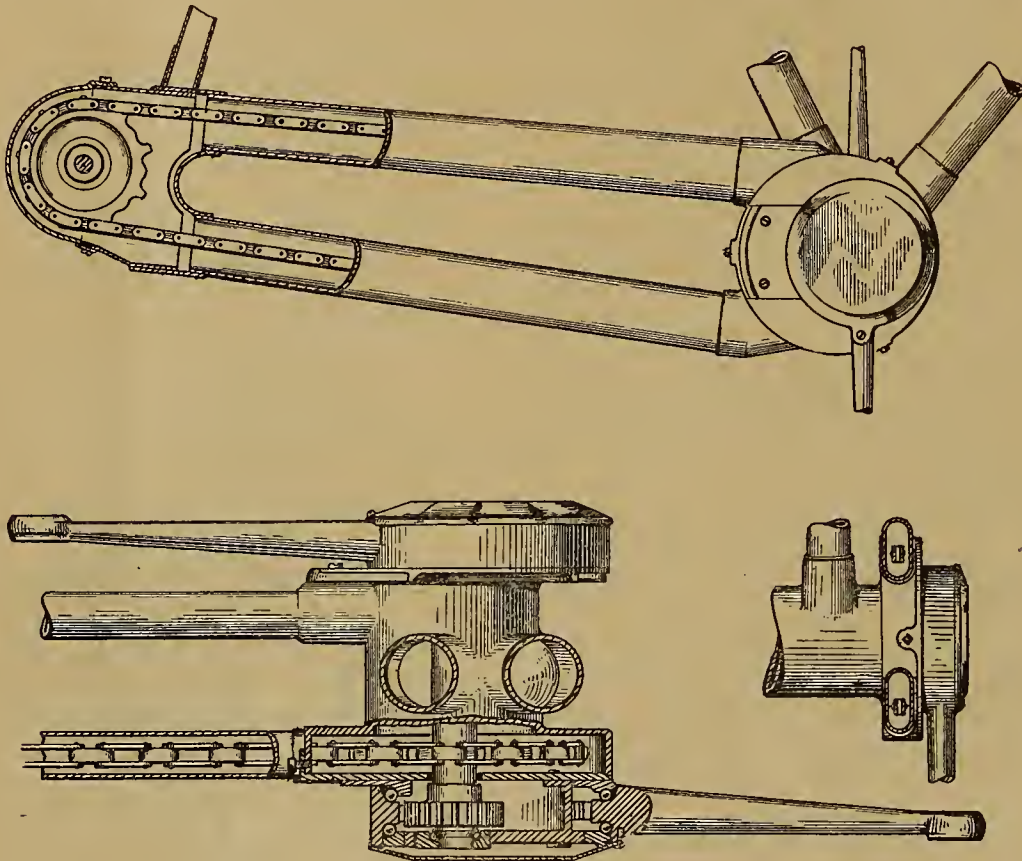
## And improve his business?

## BUILT-IN GEAR CASES

### Chain Runs Replace Right Forkside — Similarity of Lindsay and French Constructions

Two patents were this week issued which are interesting to those who believe in the future of the gear case and especially to those who prefer the gear case which is built in as a part of the

ordinary manner but the right bearing cup is held by the outside face cover to the sprocket box. This cover is slightly dished around the axle so that the crank hub may lie close to it and not cause by



bicycle frame. One patent is that granted to T. J. Lindsay of Lafayette, Ind., and comprises the chain and gear case construction applied to the Lindsay bicycle with which the public is more or less familiar. The uppermost illustration shows this device. While it is principally intended for use in connection with the Lindsay gear the inventor states that the same construction is applicable to bicycles in which the front sprocket is attached to and driven directly from the crank shaft in the ordinary manner. The claims embody a construction in which the hanger bracket has an enlarged box on the right end containing the forward gearing and two chain runs securely attached to the box and forming part of the bicycle frame by displacing the usual single right rear fork. The right rear stay is fastened to the rear sprocket box, the back portion of which is separate from and telescopes into the forward section.

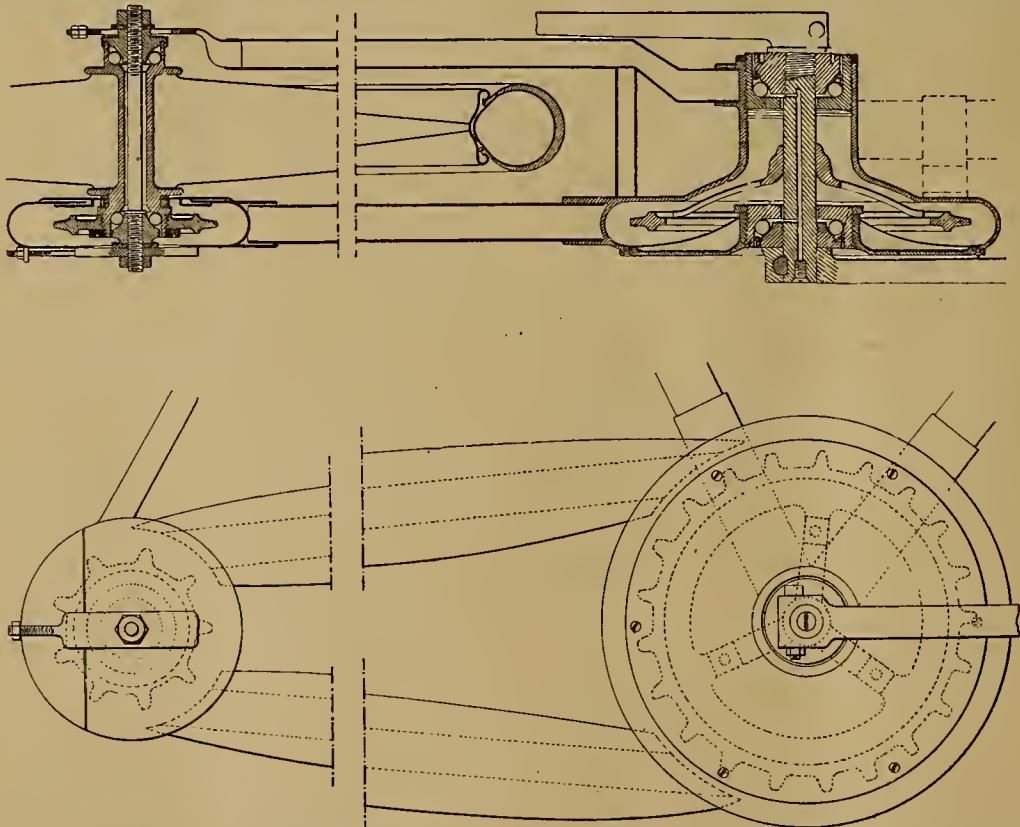
#### Enlarged Hanger End Covers Sprocket

In the second illustration is shown the design for built-in gear cases invented by two Frenchmen, the patentees being C. A. Chevalier and N. G. Vasseur of Caen, France. The bracket is formed with a dished box on the sprocket side from which project chain runs forming, as in the Lindsay machine, a double rear fork for the right side of the bicycle frame. The rear end box is very similar to that of Lindsay's though the detached telescoping portion represents a smaller part of the whole box and the chain adjusting screw operates from the rear instead of from the front.

#### Bearings Attached to Removable Cover.

The left crank shaft bearings are placed in the end of the bracket in the

its offset an excessive distance between the crank end and the case. With some forms of American cranks in which there is no offset hub at the axle end this pro-



vision would not be necessary, but in this invention the design is made to accommodate a three-piece crank and axle construction with keyed-on cranks. A short sleeve is formed by the inturned edges of the dished cover and it is in the hole thus formed that the bearing cup is placed,

the sleeve and cup being correspondingly threaded so that the latter may be screwed into position. This construction brings the right bearing entirely within the outer face of the sprocket housing and almost directly under the chain line of the sprocket which is dished quite deeply and secured to the axle near the center of the latter. The bearings are to be lubricated through an oil way drilled longitudinally through the axle and from which short ducts lead to the cups.

While it can be claimed for this construction that the right side row of balls is farther out toward the end of the crank shaft than they could possibly be were they run in a cup fastened to the bracket inside of an ordinary straight or slightly dished sprocket, it is a disadvantage that the gear case cover cannot be removed without first taking off the right crank and then the axle cone and finally pulling the cup and balls out with the cover.

#### London Motor Vehicle Show.

The international motor vehicle show to be held in Richmond near London by the Automobile Club of England, from June 17 to 24, promises to be a great affair. The automobile clubs of France, Belgium and Switzerland have promised to hold races. Already 54 English, 25 French and one American firm have applied for space. Subscriptions for prizes for the different competitions amount to \$1,080. There will be eight sections in the show, as follows: 1—motor vehicles; 2—motors; 3—tires and wheels; 4—vehicle frames and bodies; 5—parts and accessories; 6—machinery and tools for making motors and vehicles; 7—costumes; 8—newspapers, publications, and photographs.

#### Edison's Opinion of Motor Bicycles.

Buffalo, Feb. 28.—Thomas A. Edison was a visitor to this city last week. In the course of a chat with a Cycle Age representative concerning automobiles, to which "the wizard" is devoting much time at present, he was asked why he didn't turn his attention to the bicycle.

"Oh, that's a mere toy compared with the horseless carriage or truck," was his reply. "It's too small and light, and would not lend itself to electricity or other mechanical methods of propulsion. You might have an electric tricycle and with speed, too, but no bicycle."

**Arnold, Schwinn & Co.**  
INCORPORATED  
**THE "WORLD" CYCLES**  
240-254 WEST LAKE ST. CHICAGO, U.S.A.

CABLE ADDRESS "WORLD CYCLE" CHICAGO.

A-B-C CODE USED. WESTERN UNION WIRE DIRECT TO FACTORY

THE WORLD IS MINE

# Plain Talks on **ANDRAE** Cycles

## VIII—Light Roadster for Men, \$50.

This is the most handsome bicycle built.

Its taking points have been turned into selling points.

There's more money in selling than there is in talking. We needn't argue that with agents.

The Andrae improved pattern frame, Andrae rigidity quality, bearings sell the bicycle without talk.

The Andrae hub, with sprocket-like flange for direct spokes is another selling point.

This light roadster is to be shown to the "elite" of your city. There is no reason why a man should not buy an Andrae after he sees it.

There are 14 models in the Andrae line. Every one a seller on sight. Write for trade prices and our monthly paper, "The Andrae Agent."

**Julius Andrae & Sons Co.**

MILWAUKEE, WIS.



## EVERYTHING CAME OUR WAY

in February. Biggest month's business in our history. Lots of good customers of the right kind.

MANUFACTURERS, JOBBERS and DEALERS are appreciating the value of our Famous 12-Ounce

## HOLLENBECK

### RAWHIDE SADDLE

more and more every day....



**ARE YOU GOING TO JOIN THE CROWD?  
THE BOOM IS ON!**

IT IS OUR PURPOSE to make the best Saddles money, experience and inclination can contribute. Therefore, we would be pleased to have you investigate our product, prices and methods.

**Hollenbeck Saddle Company**

We'll call on you if you can't call on us.

SYRACUSE, N. Y.

Chicago Representative: C. K. Anderson, Room 59, 164 La Salle St.; 'Phone, 3841 Main.



## The Watson Automatic Seat Post

The only PATENTED Automatic Seat Post in the world. Convertible to front or rear L. Locks and unlocks automatically and instantly. Made on the wedge principle, therefore binds equally its whole length, and can't bulge the tubing. Fits any wheel made. Our customers will confer a favor by informing us of any bona fide sale and delivery of a seat post similar to ours, as we shall positively prosecute any infringement on this post. In the United States we have two patents issued July 12th, 1898, February 28th, 1899, the third allowed and the fourth pending. Outside of the United States our post is patented in every country where bicycles are made. We have doubled the capacity of our factory and from this time on will be able to fill all orders promptly. We manufacture a Handle Bar on the same principle as the Seat Post, but are sold ahead until April 1st. Orders will be received for delivery after that date. Send for circulars and price lists of Seat Post and Handle Bar.

**THE WATSON AUTOMATIC SEAT POST CO.,**  
7 & 9 WARREN ST., NEW YORK. Factory: Bridgeport, Conn.

Hibbard, Spencer, Bartlett & Co., Chicago, Western Distributing Agents.  
Canadian Office, 19 Toronto Arcade, Toronto, Ont.  
European Office, No. 1 St. Swithen's Lane, London, England.  
Cable Address, Dactilicas.

## MOTOR VEHICLE PATENTS

### Means for Reducing Shocks on Gear in Electric Vehicles —Barr's Construction of Freight Truck

Clinton E. Woods, of Chicago, assignor to Fischer Equipment Company, No. 619,527, February 14, 1899. Motor vehicle.

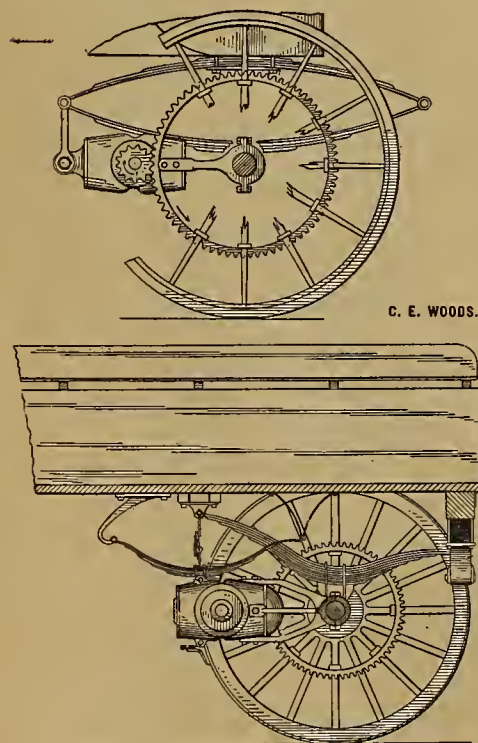
The patent has reference to the manner of mounting the bodies and motors of electric vehicles on springs and is of interest also to constructors of vehicles propelled by gas or steam. In electric vehicles it has been common to either attach the motor rigidly to the running gear or to give it an entirely independent spring support. In regard to the objections to rigid attachment the patentee says:

"It is important to give the motor a spring mounting to prevent sudden impact or violent engagement between the cogs of the gearing, as when the vehicle is suddenly started ahead, stopped, or reversed, or when the vehicle-wheels strike ruts. But such a wide range of motion as permitted to bodies of light vehicles would be objectionable if possessed by the motor. By attaching the motors to the ends of the elliptic springs, as shown, the vehicle body and motors may have the ranges of movement to which they are peculiarly suited."

Of the illustrations the first one indicates the application to light vehicles, the second one to heavy vans. In either case the patentee employs two motors, one for each of the driving wheels, and dispenses with differential gearing. In the light construction the elliptic spring supports the wagon body over its middle portion and one end of the motor at the end of the spring which has a smaller range of movement than the middle part. The other end of the motor is pivotally mounted on the driving wheel axle.

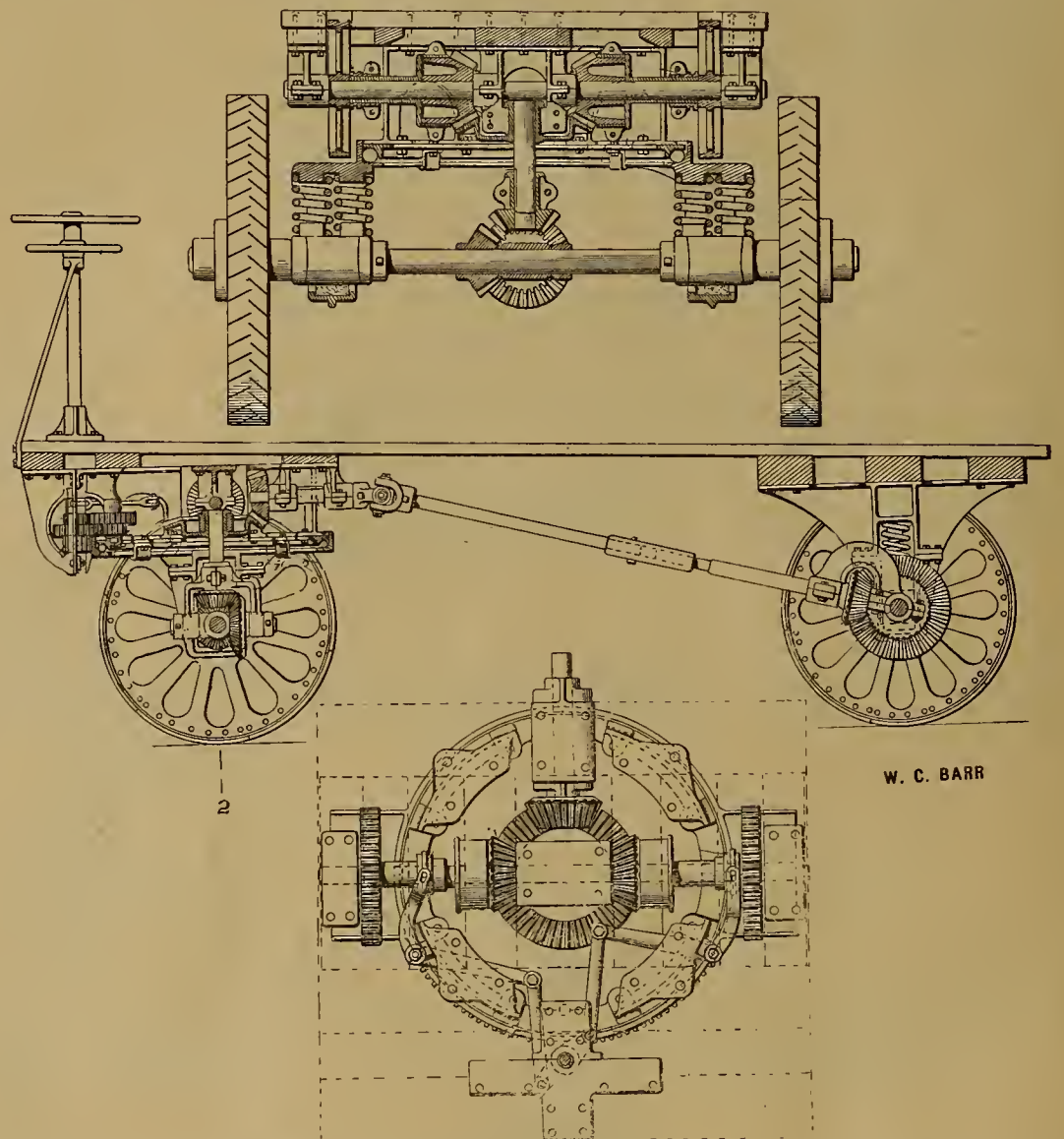
#### Yielding Motor on Freight Wagons.

With vehicles of heavy construction the range of motion of the vehicle-body is decreased and approaches more near-



ly the desired range of motion of the motor. In adapting the invention to heavy vehicles, the rear portion of the vehicle is supported upon three semi-elliptic springs. The forward ends of the two side springs are attached to the

wagon-body and the free ends of the motors are also attached at the same point by adjustable straps of leather. Supplementary semi-elliptic springs are anchored to the wagon-body at their ends and yieldingly limit the tendency of the motors. By this construction a direct downward pull is exerted by the motors upon the wagon-body through the medium of the straps when the motor is started to



back the vehicle, this downward movement being resisted by the supplementary springs. When the motor is started to move the vehicle forward, the springs yielding limit the tendency of the motor to move upward. When the vehicle is suddenly stopped or when it strikes a rut, the elliptic springs will give to ease the motor. The motors are preferably firmly braced together, to maintain the motors in alignment.

#### To Make Motor Tricycles Fool Proof.

Albert De Dion and Georges Bouton of Puteaux, France. No. 617,984. January 17, 1899.

The invention relates to a mode of securing the motor axle to the frame of a motor carriage—especially a motor tricycle—and allowing the taking to pieces of the part of the axle on the right, together with its wheels, or that on the left without taking the motor to pieces, and especially without interfering with the adjustment of the ball-bearings, which form a part of or are carried by the axle.

The means employed are described in the one claim allowed as follows: In motor-vehicles, means for securing each of the halves of the motor-axle to the frame of the vehicle, the said means consisting of cones on each of the halves near their extremities, a tube surrounding the axle and having sockets, clips supporting said tube, balls disposed to roll upon said cones and caps screwed into said sockets holding the balls in place.

#### Elastic Speed Change Gearing.

Clarence Sterling of Bridgeport, Conn.; No. 618,915, February 7, 1899. Motor Vehicle.

The patent carries thirty claims, involving among the principal features a speed-changing mechanism, in which coiled springs surrounding collars on the driving wheel axle are connected to the

various gears at one end while the other end may be engaged by rotatable sleeves carrying drivers. By the gradual tightening of the coiled springs around the collars, breakage of gear teeth, when speed is changed, is avoided. The inventor uses a spring mechanism for supplying the first power wherewith to start the vehicle after a rest and subsequently charges the storage-spring by means of his driving power.

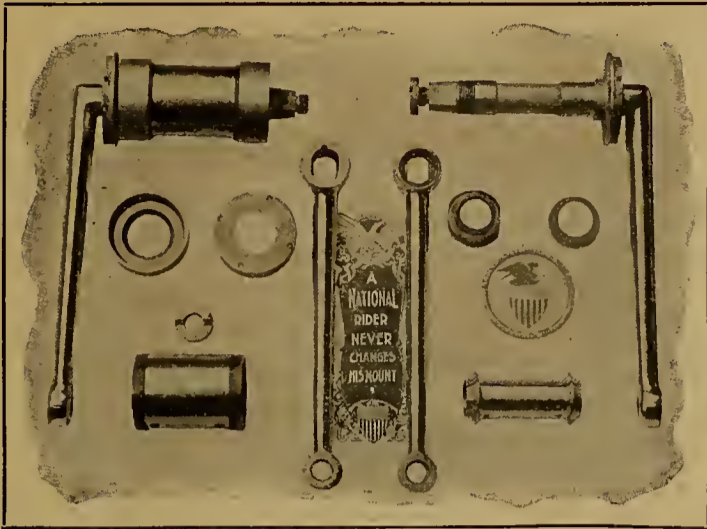
#### Looks Like Compressed Air Autotruck.

William C. Barr, Jersey City, New Jersey. No. 618,244, January 24, 1899. Motor Vehicle Truck.

All four wheels are operated. Steering is effected without interfering with the motor, and the front axle has a vertical movement which does not interfere with the gearing.

The illustrations show a vertical lengthwise sectional view, a transverse vertical sectional view through rear wheel axle and a plan view of the forward end of the truck.





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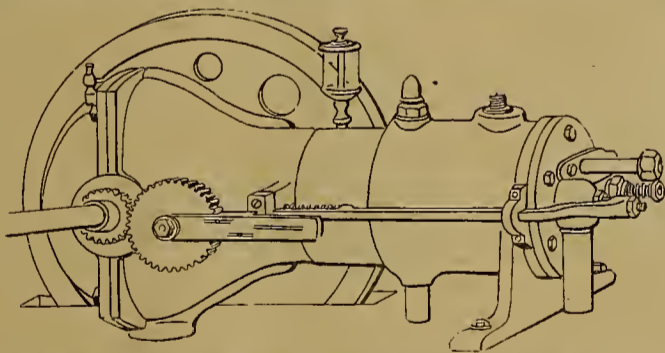
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OURS can be run at cost of less than 1-2 cent per hour (2 horse power—larger ones same ratio). **SPECIAL MOTORS** and **TRANSMISSION GEARS** for Carriagemen and others to construct **THEIR OWN VEHICLES.**



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Ivanhoe Specials, - - - \$35  
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# THE PASTIME AND SPORT

## STEVENS THE 24-HOUR HERO

**Wins Coast Race Without Dismounting  
Once—Turville a Close Second—  
McFarland Defeats Elkes.**

Score at end of twenty-four hours:

M.	L.	M.	L.
Stevens	459 6	Chapman	440 1
Turville	459 6	Fredericks	435 4
Lawson	455 6	Julius	422 7
Pierce	455 3	Ashinger	412 4
Waller	451 4	Nawn	401 1

San Francisco, Feb. 27.—The twenty-four-hour race which ended at 10:23 Sunday night in Mechanics' Pavilion, was won by E. D. Stevens of Buffalo by several yards from Charles Turville, retrieving the fair name lost when he quit the six-day race without apparent excuse. During the entire twenty-four hours he did not dismount. He had only Turville to beat in the last mile and he shook him at the bell by starting a sprint down the last bank and gaining a lead which he held to the tape.

This was the first twenty-four-hour race ever held on the Pacific coast. There were eighteen starters, among whom were all the riders who rode in the 144-hour race a week ago, with the exception of Gimm. Besides these, Charles Kraft, the champion road rider of the coast, and William Furman, of Los Angeles, started also.

### Sprinting Becomes Lively.

Miller, Aronson, Hale, Barnaby and Pilkington dropped out early in the contest, probably not sufficiently recovered from the exhaustion of their supreme efforts in the six-day race, and the others, encouraged thereby, had many lively sprints in the endeavor to gain laps on the bunch. Waller's eyes still troubled him and he wore glasses, but followed the pace well until his chances were spoiled by a general spill caused by the breaking of Pierce's pedal, which brought down all but Julius.

Next to the riding of Stevens and Turville, the work of John Lawson attracted especial attention, as he rode from start to finish without dismounting except when brought down in the mix-up.

At the finish the fight for first prize was between the two leaders, the other eight competitors withdrawing. The record of 464 miles was not approached but the score in the New York race was beaten by 9 miles 7 laps.

A careful measurement of the track in Mechanics' Pavilion, proves that the riders keeping 18 inches from the inside edge would travel 56 inches over a mile every eight laps, instead of the exact mile with which they were credited.

### Western Circuit Opens in San Jose.

The racing men will leave this week for San Jose, where a two-days' race meet will open the circuit which the American Cycle Racing Association intends to conduct on the coast. On March 11 and 12 a two days' meet will be given at Fresno, and after that the riders will go to Santa Monica, where another two days' meet will be given. From Santa Monica the party will return to San Francisco for a meet to be given by the Olympic Wheelmen at the Olympic grounds. The managers are also figuring upon a meet in Sacramento. From there the circuit will extend east to Ogden, Salt Lake and Denver. It will end at Chicago, where it is planned to hold the last six-day race of the season.

Last Wednesday Floyd McFarland defeated Harry Elkes in a fifteen-mile

paced pursuit race. The riders started from opposite sides of the track and were paced by twenty men. Elkes quit at the end of eight and a third miles, McFarland then being almost ten laps in the lead. The time of the winner, which lowers all indoor records from three miles up, was as follows, by miles:

Miles.	Time.	Miles.	Time.
1.....	2:01	9.....	17:52
2.....	4:04	10.....	19:59
3.....	5:45	11.....	22:03
4.....	7:44	12.....	24:14
5.....	9:44	13.....	26:14
6.....	11:45	14.....	28:14
7.....	13:46	15.....	30:22
8.....	15:41		

## RUMORS OF RACING TEAMS

**Makers of Chainless Gears to Demonstrate Them  
on the Track—Will Revive Interest.**

Persistent rumors are in circulation regarding the formation of "all-star" racing teams by two or more leading manufacturers of different styles of chainless bicycles. These teams, it is reported, will include sprint racers and middle and long distance riders. While the make-up has not been definitely decided as yet, it is said that Cooper, Bald, Gardiner and Kiser will form one of these teams, with two long-distance riders and pacemakers. McDuffee will be the star of another aggregation, which may include also Elkes, Michael, McFarland and Orlando Stevens. These men will enter open and match races throughout the country for the purpose of demonstrating the superiority of each type of gear over the others and all over the chain-driven machine. One of the makers in question has not supported a racing team for several years, and it is felt that his action will influence a few others to take similar action. Another firm has made offers to several crack racing men to join a team of which Major Taylor will be the star.

These reports are most plausible and the movement mentioned is so natural that it was predicted at the end of last season. While no names of manufacturers are mentioned it is easy to guess at the identity of the concerns affected from the racing men involved, the sources of information and the half-guarded descriptions of the companies. That there is going to be commercial competition between the makers of the several styles of chainless gears is perfectly obvious, and it is most probable that this rivalry will take the usual form of practical speed demonstration on the track, ocular proof of the practicability, durability and especially the speed of a machine being most convincing to the riding public. The formation of such teams would bring about a partial revival of team rivalry that will be most stimulating to the sport.

A Parisian manufacturer of bicycles has rented large grounds adjacent to the exposition grounds and will fit up buildings for the storage of 2,000 bicycles and 300 motor vehicles daily during the 1899 exposition. He has secured the promise of the patronage of the Touring Club of France.

The hour motorcycle record was broken in France on February 11 by Vigneaux, who covered 51 kilometers 608 meters (32 miles 131 yards), adding 2 miles 1,032 yards to the best previous record.

The U. V. F. has fixed the license or registration fee for French professional riders at \$4.

## AUSTRALIAN NATIVES' RACES

**Melbourne Favorite Wins the Great Prize  
—Attendance of 51,000—Night  
Racing at Sydney.**

Sydney, Jan. 28.—The great Australian Natives' Association race meet, which is extended over three days this year, was opened in Melbourne January 26. In the afternoon when the racing began there were 25,000 persons present, and in the evening when the meeting was continued by electric light there was an estimated attendance of 26,000, making a total of 51,000 who paid for admission during the day.

The racing was of a brilliant nature. The principal events were the A. N. A. wheel race with prizes aggregating \$3,750 and the A. N. A. Gold Stakes, \$700, limited to twenty riders. The big handicap race was run off in eighteen heats, three semi-final and a final. It was won from the 220-yard mark by W. Matthews, who has been favorite for nearly every big race run in Melbourne during the last three years. He rode an American machine. The field bunched early. Matthews shot out half a lap from home and after a slashing finish with Herman won by a wheel, with Esler a close third and Hopkins fourth.

### Walne Takes the Gold Stakes.

The Gold Stakes scratch race was won by Walne by inches. After the conclusion of the race Walne was hauled up before the officials, who considered that his riding had been inconsistent during the day. They held an inquiry which was adjourned. The meet will be continued today and next Saturday. The summaries:

Two-mile A. N. A. wheel race, \$1,250 first prize, \$750 second, \$225 third: Final heat—W. Matthews, 220 yards, first; L. Herman, 230 yards, second; J. Esler, 200 yards, third. Time, 4:21.

Three-mile A. N. A. Gold Stakes, \$350 first, \$175 second, \$75 third: Final heat—R. Walne, first; W. C. Jackson, second; A. C. Forbes, third.

One-mile Federation handicap, \$200 first, \$100 second, \$35 third: Final heat—S. E. Gordon, first; G. Carpenter, second; R. W. Lewis, third. Time, 2:03 3-5.

### New South Wales Electric Light Meet.

A race meeting by electric light was held on the Sydney cricket ground track January 17 and 19. The first night the races went off smoothly but the second night's racing was a chapter of accidents. Several riders were severely injured and one rider, James Somerville, fell and fractured his skull, succumbing to his injuries three days afterwards. About 12,000 people attended each night with the expectation of seeing Joe Megson defeat Walne, but the latter scratched for the scratch race each night. Megson won the 5-mile scratch race on the first night from Forbes and would have won again on the second night only for falling.

### The L. V. W. Cup Meet.

The League of Victorian Wheelmen held a meeting January 14 and 21 on the Melbourne cricket ground. The attendance was about 7,000 the first day and about the same number the second. On the first day of the meet there was an unusually large number of spills caused by the unbanked grass track.

Walne won the mile scratch race in 2:23, and Jackson annexed the ten-mile scratch in 25:02 4-5, with A. B. Crisp second and A. C. Forbes third. There was a one-mile race on ordinaries which

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last fall at Philadelphia for all  
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Francisco's Six Day Race  
Two days' ride on a chain  
wheel nearly exhausted him  
and put him in 8th place. The  
stimulant of an Orient Sager  
Chainless made him finish  
strong and in second place.

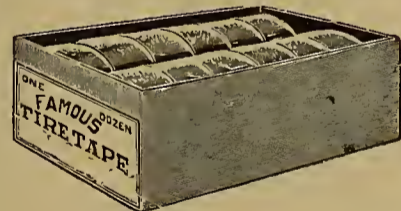
We have our opinion. Think it over and write us yours.

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was won by Herman from 100 yards behind scratch.

The principal event, the two-mile scratch race for the L. V. W. cup, for which first prize was \$250, went to S. E. Gordon. Fitzgerald finished first but was disqualified for fouling.

#### Sydney to Melbourne Record.

T. Riley, forty-five years of age, established an unpaced record between Sydney and Melbourne that will likely stand for some time. The road was very bad on the Victorian side and the thermometer registered above 100 in the shade during the last three days of the trip. The exact time for the 576 miles was 96¼ hours. He rode an American machine.

#### Selecting the Racing Board.

New York press correspondents report that Fred Gerlach, ex-member of the L. A. W. racing board for Illinois, will be the next chairman of the national racing board, to be appointed in a few days by President Keenan. The guessers even go so far as to state that if Gerlach is appointed he will move from Chicago to Philadelphia, where he will be in closer touch with league affairs. Other probable members of the board are expected to be A. W. Robinson of Boston, George L. McCarthy of New York, Harvey Uhler of Philadelphia and C. W. Mears of Cleveland. The profitless curiosity of these cycling scribes is exceeded only by their audacity in seeking to arrange the membership of the board for the league president without so much as consulting his opinion.

#### Banker Shut Out in Rome.

The European winter circuit was brought to a close February 12 by the meet for the great prize of Rome. On February 9 Grogna won the consolation heat and qualified for the final. Tommaselli ran second to Conelli in the first semi-final, Banker second to Ferrari in the second, and Singrossi won the third with Minozzi second. The consolation for the seconds in the semi-finals was won by Tommaselli, with Minozzi second and Banker third. This left four of the best Italian riders for the 2,000-meter final, which was won by Singrossi by a foot from Tommaselli. Conelli was third, by inches only, and Ferrari a close fourth.

Grogna won the consolation race by five lengths from Dei, with Aghemio third.

The 3,000-meter tandem race was won by Banker and Tommaselli, with Dei and Singrossi second and Prisini and Bixio third.

#### Managing Committee for Racing Men.

The Riders' Syndicate of France, corresponding with the American Racing Cyclists' Union, had a stormy meeting February 10 upon the demand of several of its members, including Bourillon, Lamberjack, Jaap Eden, Nieuport and Domain. It was announced by the president that an understanding had been arrived at with the Belgian, Dutch, and Swiss riders' syndicates, which will work in unison with the French union. A protest was raised against the decision of the U. V. F. to charge the members \$1 for license to race as professionals. The president then announced a project for the appointment of a committee to have charge of all the engagements of the members of the syndicate, making the committee virtually the official representative of each member individually in his relations with the tracks. The proposal was favored, provided the committee be made to act absolutely independent and that no outsider be allowed to enter the combination. A tumult was raised

when some one demanded a statement of the financial standing of the body and another proposed a commission to examine into the finances. The motion was lost and another meeting announced at which a report of the finances would be read.

#### Fear Still Felt for Gimm.

Louis Gimm is still in a critical condition and unable to regain strength. He has apparently been recovering from the effects of his six-day ride and it was reported that a fortnight's rest would put him on his feet, but it has been discovered that an abscess is forming in his hip and unless it can be dispersed will have to be operated on. In his weakened condition he might not be able to successfully stand this. He was taken a few days ago from his hotel to St. Luke's hospital in San Francisco. Sunday his trainer, Leonert, telegraphed his condition at length to Gimm's parents in the East.

#### Skate Sailing Norwegian Fashion.

The home of skate sailing is Norway. In order to sail in the Norwegian fashion two skates 3 feet long and a sail rigged to a long bamboo pole are required. Long skates are necessary, because the



enormous lateral pressure of the wind on the sail would otherwise overturn the skater. The sails are made in all conceivable shapes; almost every sportsman has his own particular form, of the efficiency of which he is firmly convinced. Perhaps the most useful type is the one illustrated.

The sail-frame is firmly held by the right hand and is directed by a steering cord held in the left hand. A downward pressure of the right hand forces a steel spur at the end of the bamboo pole into the ice, whereby the skater is enabled either to reduce his speed or to stop himself entirely. The sail is simple in construction, but requires no little dexterity in handling.

#### NEWS IN BRIEF.

Dave Shafer says "it was a sorry day when promoters became managers of racing teams."

J. W. Stocks, the veteran English rider, is coming to America this summer on business and to try a new motorcycle on our tracks.

Plans are being drawn up for the construction of a new quarter-mile board bicycle track at 67th street and Stony Island avenue, Chicago.

Worth Cummins of Springfield, O., and E. Moross of Detroit have completed arrange-

ments for a cycling trip around the world, following the route of the McIlraiths.

The tax on bicycles in Niagara County, N. Y., yielded \$2,331 the past year. This sum was expended in building sidepaths.

T. J. Keenan, Jr., president of the League of American Wheelmen, has been appointed on the staff of Governor Stone of Pennsylvania, with the title of lieutenant-colonel.

Ottumwa expects to get the state meet of Iowa this year and enthusiasts there are figuring on building a new track and stand for \$2,500, of which \$1,500 has already been raised.

Harkins Downing of San Jose announces that he is coming east to follow the National circuit this season. He will be under management of Charles Ward with Harry Gibson.

Some of the members of the N. C. T. A. have at last received their back salary. McDuffee, Coulter, Henshaw, Kent and Hines are among the list of those whose accounts have been squared.

Major Taylor says that before the season is over he will go for all records up to the hour. His attempts will probably be made at Willow Grove, Philadelphia. He expects to do 1:23 for the mile.

Joe Downey has secured a motor cycle, and will probably make his debut behind the machine February 28 at New Bedford on the 19-lap indoor track, when he will try to lower Harry Elkes' paced record.

Tom Eck says he is considering an offer from the South London Athletic Association to act as athletic trainer in the English metropolis the coming season, and if he accepts will sail for the other side next month.

Jimmy Michael has signed a contract to ride for Phil Dwyer as a jockey and left San Francisco for the east last Thursday, announcing that he had ridden his last mile as a professional cyclist. While on the coast he practiced horse riding daily, coached by Tod Sloan.

It has just become generally known in racing circles that Oscar Hedstrom, C. S. Henshaw's tandem mate for several seasons, eloped with Miss Julia Anderson of Middletown, Conn., recently. Hedstrom celebrated his wedding by winning the half-mile indoor championship, and then returned to Middletown, where he is now building bicycles.

Friends and relatives of August C. Mertens of St. Paul, ex-five-mile champion, fear that the racing man is losing his mind. Reports say that Mertens secured a razor the other day and threatened the life of his wife and his other relatives. This is only one of his many peculiar actions. Mertens had a bad fall last spring while in training at Atlanta and was badly injured about the head. This it is feared has been the cause of his actions of late. That the fall had a bad effect on him was shown by his riding last summer. From being one of the best second-raters Mertens went backward until he couldn't win in any company.

A story has just leaked out of a fistic encounter between Tim Hurst, the little St. Louis professional amusement promoter, now associated with Jim Kennedy and Pat Powers in the racing venture on the coast, and Al. Weing, Michael's six-foot trainer. During the recent six-day race Hurst appeared in the pavilion one afternoon, and in conversation with Weing made some very sarcastic remarks about the bicycle fraternity in general, closing with the intimation that professional riders were the "scum of the sporting world." Weing resented this reference to the men of his calling and promptly hit Hurst on the jaw. The ex-league umpire made an attempt to retaliate, and got a terrible wallop, necessitating retirement to his rooms for a week for repairs.

George Kruger of South Africa is being proclaimed the Michael of that country and is looked upon as a coming world beater if he continues to display the remarkable speed which has won him fame in his own country. He is only seventeen years of age and of small stature, but has extraordinary staying power. He judges pace excellently and follows multicycles at top speed with great ease. Moreover, he is good at open competition and unpaced work, knowing how to use his head. At the championship races in Johannesburg he won the ten-mile open race from a large field of starters in 24:48, the first five miles of which he covered in 12:13 2-5. The African enthusiasts are so confident he can make a showing in any field that they are raising a fund to send him around the world on a racing trip to meet all the top-notchers, and Montreal and the east will be given a chance to see his work this year.

## MINNETONKA CYCLE PATH

### The First Instance in the Country of a Path Built By County Funds—Forty-Mile Ride

Minneapolis, March 28.—There is no more enjoyable bicycle run in the northwest than over the Minnetonka cycle path. The path is 12 miles in length at present. It commences at Lake Calhoun, within three-quarters of a mile from the west city limits, and finishes at the Hotel St. Louis, Lake Minnetonka.

The Minnetonka path is the first instance in the country of path built by a county. The entire expense was borne by Hennepin county, which appropriated \$6,500 for the improvement of the Minnetonka boulevard. The action was taken at the suggestion of the Minneapolis Cycle Path Association last spring. The scheme had been spoken of to some extent, but when secretary Frank H. Wadsworth appeared before the commissioners it was uncertain just how he would be received. The commissioners, however, proved to be up-to-date men and made the appropriation.

#### Day Labor Instead of Contract Labor.

It is not surprising that mistakes were made in the construction of the path. The commissioners were perfectly honest in the matter, but made the fatal mistake of having the work done by day labor instead of contract. The three-quarters of a mile stretch within the city was done by contract labor. This

run is out into the country. There used to be a couple of bad hills, but these were leveled when the roadway was improved, so now the run is a very smooth one. It goes through fields and by beautiful farm homes, and finally ends at the Saratoga of the northwest.

#### Extension of Path is Planned.

The present path is but the start of what will finally be the most beautiful

The path at present connects with the Lake street path, Minneapolis, which runs towards St. Paul, and connects with the Summit avenue path there, and from there on to White Bear Lake. There is thus at present a continuous path of 40 miles.

The Minneapolis Cycle Path association has already commenced an active campaign in behalf of path building. The new 1899 tag has been received and is selling rapidly. To stimulate the sale two bicycles have been offered as prizes for those selling the most tags.

#### Oregon Passes Cycle Tax Bill.

The state legislature of Oregon has passed a bill providing for the levying of a tax of \$1.25 each on bicycles on or before March 1 of each year and collection within sixty days from date of levy, the



PATH AROUND THE LAKES.



ENTRANCE TO THE PATH.

was rapidly completed, and in such a way that the wheelmen figured on having a grand opening of the entire path some time in June. Through the employment of day labor, however, the work dragged out in such a way that it was not until last September that the path was ready.

#### Path is Eight Feet Wide.

The path is eight feet wide, and of excellent surface. The run is a beautiful one. The first half mile is along the shore of Lake Calhoun, after which the

50-mile trip a wheel in the country. The cycle path association will this year complete the path to Excelsior, five miles farther around the lake and possibly go further. The path will within a couple of years, at least, be built around Minnetonka, striking the present path again about a mile and a half nearer the city than the lake. From the city and around will make 50 miles, and will be along the lake front the entire way. This run can now be made, but, of course will be greatly improved with a path.

proceeds to be known as the "path fund" and devoted to the construction and maintenance of side paths for cyclists and pedestrians. Numbered tags to be attached to the machines will be issued as receipts for the collected tax. The bill further provides that every person who sells, transfers, trades or loans a bicycle must keep a list of all such machines and the names and addresses of the persons obtaining them, which shall be always open to inspection of the tax collector. It is made a misdemeanor for any person to throw glass, tacks or other substances injurious to pneumatic tires on the side paths when built, and a fine of \$10 is fixed for wantonly injuring the paths by driving stock or wagons upon them. Certain counties in the state are exempt from the operation of the law by request of delegations, which believed that the difficulty of constructing paths would be too great to warrant the collection of the tax.

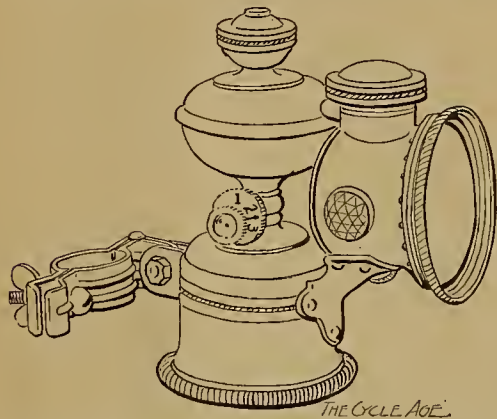
Governor Geer has assured the wheelmen that he will sign the bill, and work will begin in a short time on the path from Portland to Oregon City, and from there will be built south to Salem and on up the valley.

Brooklyn riders are complaining that their cycle paths are being used for horse traffic both by drivers of the speeding fraternity and by teamsters with heavy wagons. Inadequate police service along the path is responsible for the abuse.

# INFORMATION FOR BUYERS

## "ARC LIGHT" GAS LAMP.

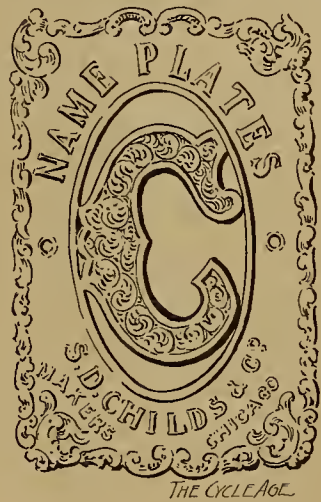
A somewhat novel form of acetylene gas cycle lamp is that manufactured by the Miller Mfg. Co. of Torrington, Conn., and called the "Arc Light." The combustion chamber is separate from the carbide receptacle and the water tank, being supported on a bracket projecting forwardly from the carbide cup. The screw cap covering the opening into the water reservoir is at



the extreme top of the lamp, and the water regulating valve is located in the reduced central portion of the main body. This valve has an indicator, which is graduated into twenty-four spaces marked by six numbers, making it very simple for the user of the lamp to set the lamp each time it is relighted at the point where the best results were previously obtained. The carbide is contained in a removable holder and may be used in any commercial form. The holder is divided into four spaces, each of which represents the amount of carbide consumed in one hour's burning. The lamp is easy to take apart and assemble, all of the connections being made by ordinary screw threads, and should an owner of one of the lamps break, injure or lose any part, he may obtain a duplicate direct from the maker by inclosing the price given in the illustrated price list of parts published in the catalogue. The descriptive matter in this catalogue also contains full directions for the care of the lamp under ordinary conditions and when unusual accidents occur.

## CHILDS & CO.'S ATTRACTIVE NAMEPLATES.

S. D. Childs & Co., 142 Monroe street, Chicago, are making highly decorative nameplates by a process which enables them to sell at prices much lower than is commonly asked for distinctive and artistic metal nameplates. The company puts out plates both with raised and with sunken letters and has on hand special stock shapes in great variety which can be filled out with initials and lettering to suit the purchaser. The plates can be obtained in nickel, gold,



silver, oxidized silver, or in combination gold and silver finish, and the stock patterns offered are of such variety that nearly every taste can be pleased. The company is also doing a large business in nameplates of special design, and is always pleased to submit sample designs of special plates to manufacturers sending particulars concerning the style of plate wanted. The illustrations above show two of the company's recent productions in nameplate design.

The company has been making some decided improvements in its plant. At

the present time they have a capacity of about 12,000 plates per day and have been running to their fullest extent, part of the time twenty-three hours a day. They have secured orders from and have been making rapid delivery of nameplates to practically every leading concern in America. Among the additions to their equipment has been a new hydraulic press, weighing sixteen tons, capable of pressing anything requiring a pressure equal to 1,300 tons and requiring 30 horse-power to drive it. They are using this press especially for die sinking work and are making bayonet shaped rear and front forks on contract. The most popular nameplate is reported to be the oxidized silver, but special attention is called to their new purple, blue and black finishes. These are not oxidized or acid finishes, but are actually plated. Their black finish is something entirely new and will undoubtedly be very popular next year.

Childs & Co. have also been cultivating a very extensive foreign business, and during the past week received not less than three orders from Sweden, one of which was for 6,000 plates.

They make a specialty of stamped nameplates, although they can furnish any kind, especially cast plates, but they do not recommend the latter, owing to their bulkiness, weight in shipping and general rough and unfinished appearance. Among the plates worthy of especial mention is the one they got up this year for the Viking bicycles. It is 5½ inches long, encircles the tubing, and is an exquisite piece of work. They are



also making something like forty stock styles of plates, suitable for small dealers, jobbers and agents.

## BRECKENRIDGE FACTORY BUSY.

The E. P. Breckenridge Co. of Toledo, manufacturer of the Breckenridge acetylene gas lamp and the Light Weight oil lamp, states that its business has been so great that the factory facilities have been increased so that from 500 to 500 lamps can be turned out daily. The company is doing considerable business in foreign countries and its new gas lamp seems to have "caught on" extremely well in this country, considering the short time it has been on the market.

## SUNOL AND HERCULES BICYCLES.

The catalogue of the McIntosh-Huntington Co. of Cleveland is plainly gotten up but is very complete, containing full descriptions of the line of bicycles handled by the company and also a complete list of sundries and cycle repair shop tools. It is a catalogue from which a dealer in a small town can order anything from a twist drill to a complete bicycle.

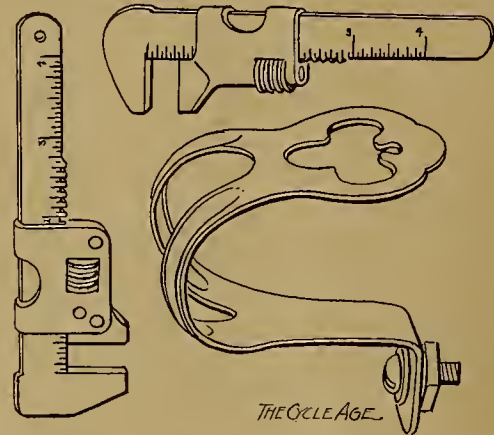
Sunol bicycles are listed in three regular models, a man's and a woman's road machine selling at \$50 each and a 30-inch wheeled pattern at \$60. The regular colors are tan and black. The standard tire equipment is the McIntosh, though Hartford or Morgan & Wright tires will be allowed as options. There are also listed a man's and a woman's Hercules at \$35 each, a 30-inch wheel pattern Hercules at \$40 and the Euclid at \$25.

One of the features of the company's catalogue is the illustration and description of the Hydrocycle—a light boat of the catamaran pattern driven by a propeller operated by a tandem bicycle placed in the middle of the boat. It is furnished regularly with the tandem driving equipment though it will be built to order for a single rider

or for any number of persons. A speed of five or six miles an hour may easily be attained to on it and no experience is required to operate it.

## SMITH & EGGE SUNDRIES.

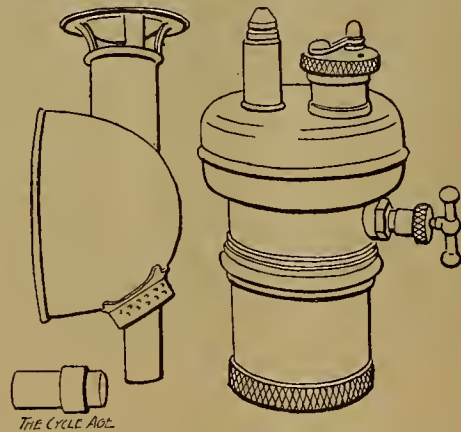
The Smith & Egge Mfg. Co. of Bridgeport, Conn., has added to its line of standard bi-



cycle sundries. The illustrations herewith are selections from the new articles catalogued. The wrenches shown are both manufactured with a view to furnishing strong, durable tools rather than to meet lowest competitive prices. One has a solid and the other a two-part jaw, and both have four-inch scales divided to sixteenths on the flat arms. The Club toe clip, as will be noticed from the illustration, is of the short, rigid pattern, preferred by those riders who wish a stiff, unbreakable clip which does not project back as far as the usual flexible clip. The sundries catalogue also include other forms of wrenches and toe clips, several patterns of cycle locks, and foot rests, lamp brackets and screw drivers.

## BUNDY LAMP FOR PHYSICIANS.

In the accompanying illustration is shown a lamp which the makers claim is the only perfect and safe acetylene gas lamp for physicians' use in the world. It is as safe to burn as a candle and is designed for use in examining the throat, eye or ear and for delicate surgical operations in which artificial light is needed. It is the product of the factory of the Frank E. Bundy Lamp Co. of Elmira, N. Y., and the resemblance to the Bundy gas lamp for bicycles is at once apparent. The drawing shows the lamp with the reflector and burner cap removed for placing in the case. The actual size is 6½ inches high, with reflector and chimney attached. The lamp and reflector complete are put up in a handsome leather covered case six inches long, four inches high and two inches wide which can be carried in the pocket. The generator is constructed and operated the same as that in all Bundy lamps. The burner cap is intended to pre-



vent the escape of gas after the flame has been extinguished. One charge or "carbott" will furnish gas for one hour.

## FAUBER REAR FORK DESIGN.

W. H. Fauber of Chicago, manufacturer of the Fauber hanger, has been granted a design patent on a form of rear fork tube intended for use in two or three-crown frame construction. The tube is cranked near its forward end, the bend being approximately a quarter circle. The inner face of the tube in front of the bend is flat

# To Our Patrons

It is with sincere regret that we announce to our friends and patrons that through the recent total destruction of our warehouse and stock by fire we are, owing to the lateness of the season and our inability to immediately arrange to take care of your orders, obliged to discontinue the bicycle supply business. In so doing we feel that there are many of our patrons who wish to hear from us direct concerning the disposition of future orders that would in the due course of business be sent to us for goods listed in our 1899 "G" catalogue, a copy of which was recently mailed you.

It is therefore with great pleasure that we announce that arrangements have been made whereby your future orders will be filled direct by the **Excelsior Supply Co., 88 and 90 Lake Street, Chicago**, to whom we have sold our good will.

The Excelsior Supply Company have the largest and most complete line of everything for the bicycle manufacturer and dealer in the country and have facilities that are unsurpassed for the handling of your orders, and at prices that are right. You will find them very liberal in their treatment of you and we bespeak for them your continued patronage and favors.

In closing we personally, and as a firm, wish to extend to you our most hearty thanks for all past favors and regret that we shall not in the future be in a position to enjoy your continued patronage. Very truly,

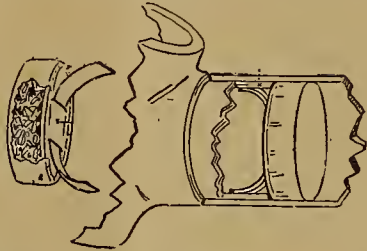
**MANUFACTURERS & MERCHANTS WAREHOUSE CO.**

Per P. P. COOLEY, *Manager.*

and the flattened side extends backward nearly to the rear end of the fork, the D section of the tube there gradually tapering into a round section so that the fork may be attached to round a thimble on the rear end lug of the frame. In using the fork the inner flat faces of the straight D section portions in front of the bend in each fork side are placed together and the two thrust into a central round branch projecting from the hanger bracket.

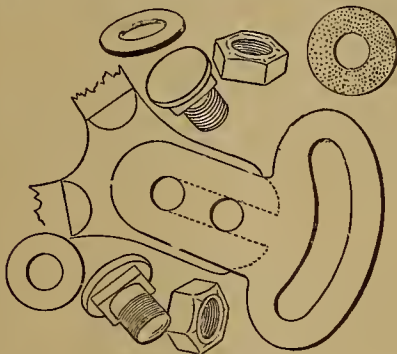
#### TWO WHITE NOVELTIES.

The White Bros. Cycle Co., 616 North California avenue, Chicago, is introducing the two novelties shown in the accompanying illustrations. The first is a loaded brazing cap, which renders the brazing of flush joints on a flame brazing stand absolutely secure. The cap consists of a box of thin pressed brass filled with a quantity of mixed spelter and flux sufficient to braze any joint. The cover of the cap is of light sheet steel



and has projecting from it light metal expanding springs which are intended to hold the cap securely in place inside the joint and against the end of the frame lug branch. The cap is placed in the joint while the frame is being assembled, and when the joint is heated in the brazing fire the brass box will melt, allowing the spelter and flux inside to melt and run into the joint. Cut-open samples of joints brazed with these caps show that the brass after leaving the caps flows directly down between the tubing and the lug branch.

The other novelty is a rear fork end extension, which allows the use of a 30-inch rear wheel on a frame intended for ordinary 28-inch wheels. It is attached by means of two square shanked bolts which pass through the rear axle slot in the bicycle



frame, and provides by means of the vertical arc shaped axle slot for an adjustment of drop of from one-half inch below the center to one inch above the center. The hardened steel washers which are supplied with each set of extension ends burr into the soft steel of the extensions sufficiently to prevent the wheel axle from slipping out of place after the nuts have been tightened. The parts are nicked and will fit any style of standard rear fork end.

#### ELMORE BICYCLE CATALOGUE.

The recently issued catalogue of the Elmore Mfg. Co. of Clyde, O., shows four models of Elmore bicycles. The first two patterns are a pair of men's and women's bicycles listing at \$40 each and representing the company's best effort to produce a strictly first-class bicycle at a moderate price. A feature of Elmore hubs is the axle nut construction. The nuts are cap nuts and have neat conical heads which give them a very characteristic and tasty appearance. The frames have flush joints throughout and are regularly enameled in plain black, though maroon, green, orange and blue are offered as options. Hartford and Morgan & Wright tires are supplied.

The two cheaper models list at \$30 each and while they follow in general lines the construction of the higher priced machines they differ enough in certain points and in equipment to allow them to be sold at the lower figure. The finish on these patterns is decorated. The rims are natural wood color with zebra stripe. At a slight additional charge any of the Elmore models will be fitted with the Hall-Moore roller sprocket and chain.

#### SOLAR PATENTS SUSTAINED ABROAD.

The E. L. Williams patents covering the Solar acetylene bicycle lamp manufactured and controlled by the Badger Brass Mfg. Co.

of Kenosha, Wis., have been sustained in the French courts and an infringer has been ordered to pay fifty francs damages for each infringing lamp sold and the costs of the proceeding.

#### THE IMPERIAL COMPANY AND FIXTURES.

Interest in chainless bicycles was not strongly manifested until very late in '98, so late that it would have been impossible for manufacturers who had not made previous preparations to devise a chainless mechanism and get their tools ready in time for '99 business. This was a very serious problem, and one practical solution was offered by Charles H. Metz, well known as president and general manager of the Waltham Mfg. Co. and as inventor of the Dunlop tire, the center bearing pedal and numerous improvements connected with bicycles and automobiles, including a new compensating gear for automobiles which has just been patented.

For the past two years Mr. Metz and the experts in his experimental department have been experimenting, improving and perfecting various chainless devices which have culminated in a patented chainless mechanism entirely different both in appearance and construction from any that had been previously produced.

The most apparent feature in this mechanism is that instead of running the transmitting shaft inside the right rear stay, two right rear stays are used, connected in front by the crank bracket and in the rear by a specially devised yoke forming a complete loop. The transmitting shaft runs between the stays, and the shaft and gears are entirely inside this loop. This construction gives the appearance of three tubes instead of one. It has a very distinctive appearance and is readily recognized even at a distance. The advantages claimed are greater rigidity, saving of weight and simplicity of adjustment. The transmitting shaft can be taken out of the machine without removing the gears. It also has special gear case, adjustments for front and rear gears, special rear hub, rear axle, etc., patents for all of which have either been allowed or are pending.

These patents have all been transferred to the Imperial Company, which, instead of licensing the manufacturers, will make and sell a complete fixture consisting of crank bracket, rear stays and rear connections—brazed and finished ready for enameling—cranks, crank axle and bearings, rear hub, rear axle and bearings, and gear cases, nicked, buffed and assembled. With this fixture any manufacturer can make a chainless model without additional tools and can turn out finished chainless bicycles within a few days after receiving the fixtures. The Imperial Fixture is suitable for a Sager, bevel, spin roller, or in fact almost any gear, but the Imperial Company is at present confining its attention entirely to fixtures for the roller pin gears.

The Imperial Fixture first made its appearance last October, when Major Taylor, on a bicycle fitted with Sager gears and Imperial Fixtures, lowered all the world's records from one-quarter mile to two miles, including the much coveted mile record. There is no doubt that this success had a great deal to do with the largely increased interest in the chainless bicycle.

The Imperial Company has its offices at 620 Atlantic avenue, Boston, opposite the new Boston Terminal. The work is at present being done in the factory of the Waltham Mfg. Co., and some other factories in the vicinity of Boston. The company expects, however, to have a plant of its own for the manufacture of chainless fixtures and other accessories for bicycles and automobiles in the near future.

The company has already closed contracts with about twenty-five leading manufacturers for the season's supply of fixtures for their Sager chainless models.

W. D. Gash, who has been associated with Mr. Metz for several years as manager of the Chicago branch of the Waltham Mfg. Co. and later as manager of the Boston branch of the same company, is the manager of the Imperial Company.

#### WORLD BICYCLES ABROAD.

Arnold Schwinn & Co., 240 West Lake street, Chicago, makers of the World bicycles, report that orders for its higher priced machines, the \$50 Worlds and the \$100 tandems, are greatly in excess of those for its cheaper models. The company is now filling an order from Norway for 284 bicycles of the \$50 pattern. The catalogue recently issued by Arnold Schwinn & Co. is attractive and readable and fully up to the artistic standard which has been maintained in the past by this firm.

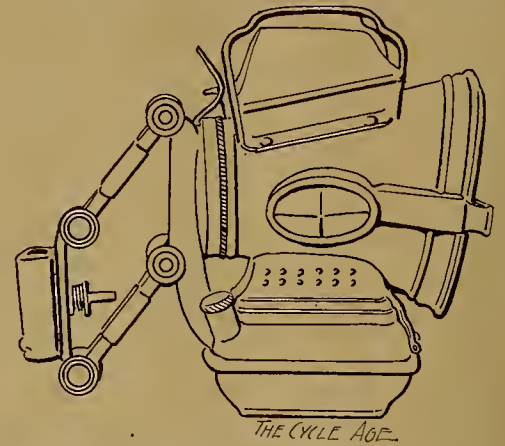
#### FISK TIRE CATALOGUE.

While the name Fisk is comparatively new to the tire trade, the parties interested in the Fisk Rubber Co., of Chicopee Falls, Mass., which makes the Fisk tire in several

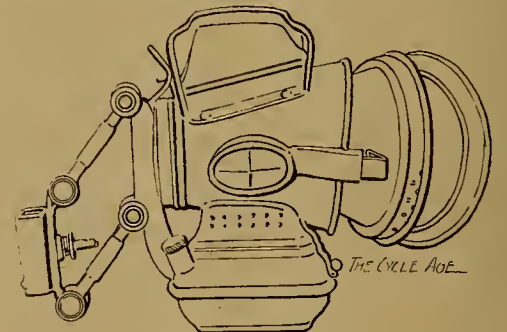
patterns both for bicycles and carriages, are by no means new to the tire making industry. Three patterns of Fisk cycle tires are shown in the recently issued catalogue of the company. They are a light roadster, a roadster and a racing tire. The Olympia tire, also made by the Fisk company, is of a cheaper grade than the others, but is strong, durable and repairable and is fully guaranteed.

#### TYPE OF ENGLISH OIL LANTERN.

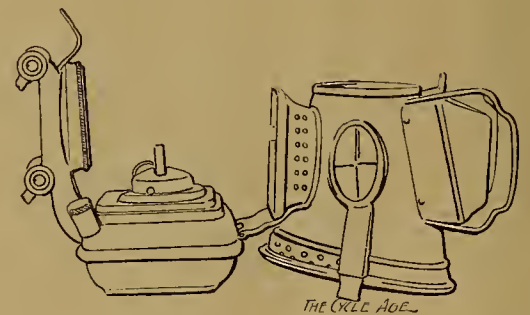
The illustrations below show the general design and some of the convenient features of an oil lamp now selling in the English market and which is both very practically



designed and very handsomely made. It is manufactured by the Lucas & Sons Co. and possesses the notable advantage that all of its parts can be reached for cleaning or other purposes very readily and without re-



moving the lamp from the lamp bracket of the bicycle to which it is attached, or detaching the several members. The front part of the lamp body and lens can be reached from both the inside and out by



releasing the spring catch at one side of the frame, and the entire body of the lamp being hinged to the oil reservoir, it can be turned down, exposing the back part of the combustion chamber, the burner and the reflector.

#### HANDSOME CLEVELAND BROCHURE.

As H. A. Lozier & Co. of Cleveland are justly proud of their line of Cleveland bicycles, so may they be justly proud of their newly issued catalogue, for from its striking colored cover to its last page of Bartlett-made illustrations and catchy, sensible reading matter is it a work of art both from a designer's and an advertiser's standpoint. It is replete with high-grade illustrations, showing the many distinctive mechanical features of the Cleveland, and the various models of bicycles composing the company's line are shown in groups and singly in a manner sure to convince the reader, had he any doubts before, that the Cleveland bicycle has merit which none can gainsay.

#### AN ADVANTAGE IN BUYING.

The New Brunswick Rubber Co. has one obvious advantage—its relations with the United States Rubber Co. are very close. The United States Rubber Co. is the largest rubber manufacturing and consuming company in the world. It is estimated that it consumes fully one-half of the crude rub-

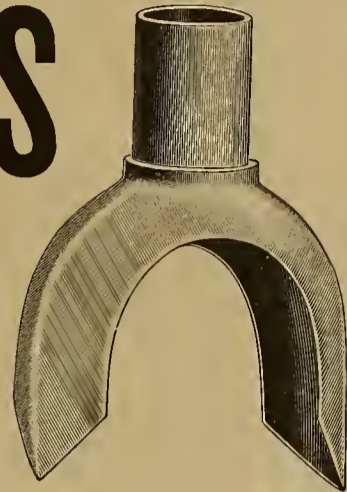




# FORK CROWNS

—FOR—

FRONT AND REAR  
CONTINUOUS FORKS



We are ready to deliver our New Crown for Continuous Forks. It is the Strongest, Handsomest and Most Practical Crown of its kind on the market.



## TAPER GAUGE CONTINUOUS FRONT AND REAR FORKS

IN SEVERAL DIFFERENT PATTERNS.

Write for our 1899 catalogue of Front and Rear Fork Sides, Stays, Fork Stems, Bent Tubes, etc.  
Also catalogue and price list of



# Shelby Seamless Steel Tubing

SHELBY STEEL TUBE COMPANY

General Sales Office: CLEVELAND, OHIO, U. S. A.

BRANCH OFFICES AND WAREHOUSES:

CHICAGO, 135 Lake Street.

NEW YORK, 144 Chambers Street.

BIRMINGHAM, ENG., 29 Constitution Hill.

TELEGRAPHIC ADDRESSES:

" Surprise," CLEVELAND.

" Surprise," NEW YORK.

" Surprise," CHICAGO.

" Surprise," BIRMINGHAM.

ber brought into the United States, and about one-quarter of the entire crude rubber output of the world. This means, of course, that the United States Rubber Co. can buy its crude rubber at the lowest possible rates, and the New Brunswick Co. buys its crude rubber through the United States Rubber Co., getting the same price. The saving thus effected can revert to the purchaser of its tires in lower prices or better quality.

#### COLTON COMPANY FORGING AHEAD.

The Colton Cycle Co. of Toledo, O., has secured the services of A. K. Hoff, who has for years been connected respectively with the Maumee Mfg. Co., Yost Mfg. Co. and Mackintosh-Huntington Co. He is thoroughly posted in the trade and will be invaluable to the Colton company as local sales manager in Toledo. The company is altering and decorating its salesroom with the end in view of making it one of the most attractive in the central states.

The Colton factory is at present very full of business, having contracted for practically its entire output, which will consist of three-crown and regular frame machines with either 28 or 30-inch wheels and an attractive line of juvenile machines. Good business is reported on all these lines.

#### BULLIS GEAR READY FOR THE TRADE.

The Bullis Ball Gear Company of Rochester, N. Y., has arrived at the point where it is able to supply its ball-roller gear and chainless mechanism, which has been described in these columns, to the trade. In outward appearance the machines to which this gear is fitted resemble very closely those chainless machines of the bevel-gear type—such as the Spalding—in which the driving gear is in the same plane as the wheels with the casing brazed to the frame tubing. The Bullis company sells its mechanism ready to be joined by brazing at the lower front tube, the seat mast and the upper rear forks, the mechanism including, as it is sold, the one piece hanger and gear casing with frame lugs, the transmitter shaft and lower rear stay, the rear hub (of the Thor pattern) and complete set of gears.

#### LARGE LINE OF PARTS AND SUNDRIES.

The Condon & Ferry Co., 569 Broad street, Newark, N. J., shows in its catalogue one of the most complete line of cycle sundries, fittings and general equipment and building supplies that has been catalogued for some time. The goods listed are not limited to the product of one firm in each line, the company jobbing the product of many firms making standard articles, and in several instances handling numerous makes of certain particular articles. The company also handles a full line of sporting goods, being one of the largest sporting goods houses in the east.

#### NATIONAL CEMENT & RUBBER CO. GROWING.

All necessary arrangements in the way of additional machinery, etc., for tripling the productive capacity of the National Cement & Rubber Co. of Toledo have been made, and on and after March 10 this company will be prepared to fill and ship all orders for goods on the day the orders are received. This is an indication of the remarkable energy that has in a few years built up the business of this young concern until it now occupies one of the foremost positions in the country in its especial field.

#### CHASE TIRES IMPROVED.

Believing in the efficacy of the small folder as an advertising medium, L. C. Chase & Co. are now sending to the trade two such circulars, calling attention to the past success of Chase tires and to the recent improvements in their manufacture. One of the circulars, which bears the title "Facts and Figures," is a business reminder to dealers that Chase tires, besides possessing ungainsaid merit, are sold at cash prices which are very low, considering the grade of the material and manufacture.

#### IMPROVED CYCLE REPAIRING TOOLS.

Under the caption, "Ten Good Tools," the New England Supply Co. of Keene, N. H., tells in a twenty-page illustrated folder the utility, merits and advantages of its line of appliances for up-to-date bicycle repair shops. The ten tools mentioned are the wheel assembling jig, rim drill, assembling jack, wheel repair and truing stand, frame enameling stand, tube straightener, frame straightener, rim spacer, bench wheel truing stand, crank and axle straightener, and foot power emery wheel grinding machine.

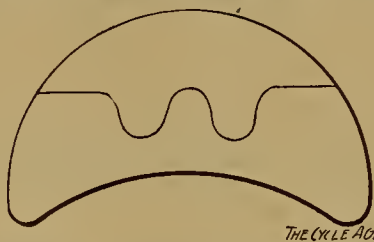
#### THOMAS CATALOGUE READY.

The Thomas Mfg. Co. of Springfield, O., is now ready with its new catalogue, which is being mailed to the trade. The catalogue contains a very complete illustrated description of the construction of the differ-

ent models of Thomas bicycles and presents a substantial appearance in keeping with the reputation which has been accorded the machines made by this company.

#### RUSS TWO-PIECE RIM.

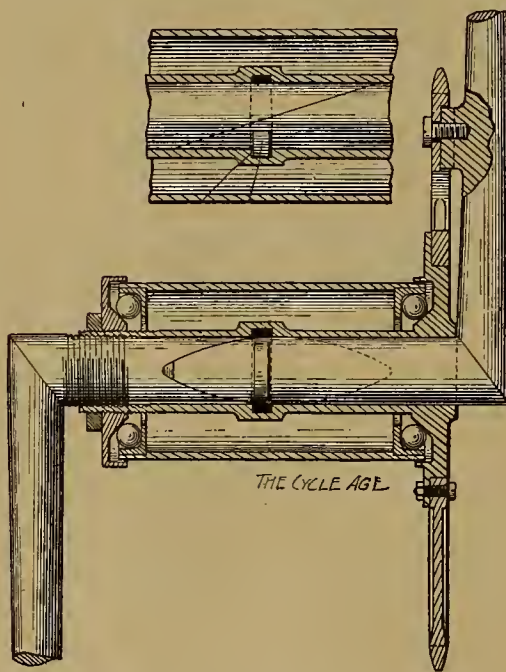
The Russ Rim Co. of Buffalo, N. Y., is manufacturing and placing upon the market a two-piece rim of new construction. The sectional view herewith shows the form of the joint between the two parts of the rim. The corresponding annular curved de-



pressions and ridges insure a tight and secure union under all circumstances, and the direction of the grain of the wood in the two sections being across each other, the rigidity of the rim and its ability to resist twisting strains is materially increased. The rims are highly finished and if desired are furnished with broad colored stripes. Some patterns are also made in V section, to meet the demand that is now quite strong for that form of rim section.

#### STEBBINS' HANGER CONSTRUCTION.

The illustration below shows the construction of the hanger made by the Stebbins Mfg. Co. of Springfield, Mass., and on which G. P. Jones was lately granted a patent, which was assigned to the Stebbins company. The cranks and axle are of that form of two-piece design in which the division is at the center of the axle and the union formed by the wedging of the parts



inside of a surrounding sleeve. The adjacent ends of the axle sections are correspondingly beveled and on one section near its end is an annular projection which engages an annular groove in the sleeve. As the axle sections do not fit the sleeve tightly, the section bearing the lug may be tipped slightly while thrusting it into the sleeve so that there will be passage room for the lug till it reaches the engaging groove. The sleeve, secured at one end to the sprocket hub, is internally threaded at the other to match threads cut on the left axle end. Thus when the two sections are placed together in the sleeve the latter may be turned in relation to the cranks and the shaft sections drawn together, the annular lug on the right axle part preventing longitudinal movement in the sleeve.

#### A STEARNS PENETRATES TO KLONDIKE.

To Miss Lotta Burns of Seattle belongs the honor of taking into the Yukon country the first ladies' bicycle to arrive there. She exhibited the machine, which was a Stearns that she had purchased in San Francisco, at the various points along the big river of the North and very amusing were the receptions accorded her by the Indians.

#### BOSTON SELECTS ST. LOUIS VEHICLE.

The electric construction division of the Public Buildings department of Boston, Mass., after the examination of a number of

motor vehicles, has placed an order with the St. Louis Gasoline Motor Co. for a sample gasoline vehicle to be used by the inspector of that department in going about the city in the performance of his duties.

#### DESIGN PATENT FOR STEARNS.

The form of rear fork construction used in Stearns bicycles is now covered by a design patent recently granted to E. C. Stearns, of E. C. Stearns & Co. of Syracuse, N. Y. In the construction patented both fork tubes are of tapering elliptical form, with the longest diameter of the ellipse placed vertically. The left fork tube runs in a straight line from the hanger to the rear end lug, but the right tube is cranked inwardly just back of the cross brace to allow for sprocket clearance.

#### BUNDY LAMP POSTER.

The Frank E. Bundy Lamp Co. of Elmira, N. Y., is sending out a new hanger advertising the Bundy acetylene gas lamp. The hanger is lithographed in colors and shows a night scene in which abundant lighting of a dark street is afforded by the Bundy lamps on the machines of a couple of cyclists and on the carriage of a hackman.

#### TRADE NOTES.

The Shelby Cycle Co., of Shelby, O., shipped three carloads of bicycles to Paris last week.

The Eclipse Bicycle Co. of Elmira, N. Y., recently received an order for about forty bicycles from the island of Trinidad.

The Black Mfg. Co. of Erie, Pa., is working 700 men double turn, and recently refused an export order for 20,000 machines.

The Remington agency in Philadelphia, formerly in the hands of George Foley, has been transferred to Shannon, the Market street hardware man.

George W. Helmer is representing A. Featherstone & Co., of Chicago, in Mexico, where he is appointing agents in the various commercial cities of the republic.

Guy L. Bunch is about to open a first-class bicycle store and repair shop in Raleigh, N. C., and desires prices and discounts on bicycles and specialties from manufacturers.

The A. J. Lucia Cycle Co., of Green Bay, Wis., is opening a large bicycle and sporting goods emporium in a new store recently leased. Bicycles of home manufacture will be handled.

The Garland Cycle Co., of Waterloo, Ia., is getting ready for a prosperous business, it having already started on a lot of 300 machines to be ready when local trade opens in the spring.

W. S. Cranmer of Cedar Run, N. J., catalogues four patterns of bicycles—a pair each of Cranmer and Favorite machines. The Cranmer models list at \$25 each and the Favorite at \$35.

The National Cement & Rubber Mfg. Co. of Toledo is proud of the fact that while a comparatively young concern its business interests are not now limited to this country. It states that it constantly ships goods to almost every civilized country on the globe.

The Hollenbeck Saddle Co. of Syracuse has engaged Archie Hughes of Syracuse to act as general traveling representative. Mr. Hughes is very well known and popular in the trade, having been connected with W. D. Andrews, the largest bicycle dealer of Syracuse.

The National Sewing Machine Co. of Belvidere, Ill., is rapidly extending its export business in Eldredge and Belvidere bicycles. A fortnight ago a shipment of 250 machines was made to Paris to fill an order, and an order was recently received from Milan, Italy, for forty bicycles.

E. H. Ehrman of Walker & Ehrman, Chicago, has been granted a patent on the Walker & Ehrman seat post clamp. The expander has a direct binding action, the post being tightened by screwing the actuating nut downward to force a taper sleeve, against whose top it binds, into a taper seat formed between the outside shell of the expander and the seat post.

#### Seeks Hints from Employes.

The Overman Wheel Company has a novel method for obtaining suggestions for the operation of the minor phases of its business from its employes. It offers cash for such suggestions as will lead to improvements. Boxes are placed in each

room in the factory and blanks are procurable for those who desire to offer hints. Any suggestion which may be used by the company with profit or which in any way will facilitate the work in the factory is liberally paid for. Some such stimulus as this is needed, for in many cases the employes are in considerable fear of the foremen, who are contractors, and naturally they do not desire to run counter to their interests, for by suggesting methods by which work could be turned out more economically than at present the tendency would be to reduce the contractor's profits and make the position of the one giving the hint insecure. The scheme has been in operation for a month. Awards are made once a month.

**TO IMPROVE DISTRICT ROADS**

**Plan to Use Worn Granite Blocks and Asphalt on Main Arteries Leading Into Washington.**

Washington, Feb. 27.—The wheelmen of Washington are greatly interested in a recommendation made by the Board of Commissioners relative to the roads leading out of the city. Several of these roads have such a large traffic that macadam seems to be insufficient to stand the wear and the commissioners recommend that granite blocks from the streets within the city be removed and used upon the country roads. The surface of these highways need not be more than 30 feet wide, and if the granite blocks were used to pave a 10-foot strip on either side it is believed this portion of the road would be practically removed from the cost of maintenance. A 10-foot strip of asphalt or asphalt block laid down in the middle would give a smooth way, the cost of maintaining which would be no greater per square yard than the cost of

keeping in repair the same amount of macadam roadway.

There are 207 miles of suburban streets and country roads to be cared for and Congress appropriates only \$241.54 per mile for maintenance. This is insufficient and as a result the roads are in anything but good condition. Wheelmen hope that the above suggestion will be carried out and they will urge early action in the matter.

**MISCELLANEOUS.**

Advertisements under this head 5 cents per word first insertion, 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received.

**WANTED**

**WANTED**—Salesman to carry complete line of bicycle sundries on commission. CLARK, HORROCKS & Co., Utica, N. Y.

**WANTED**—Already established wholesale bicycle dealer, in the Netherlands, will take on a few more choice American lines of sundries to job in connection with regular trade. Mail catalog and export quotations. Satisfactory American references given if business results. J. C. VAN OUDENALLEN, Frombergstraat No. 2, Arnhem, Holland. 2

**WANTED**—A mechanical engineer, having made the horseless carriage a study, desires a position as salesman or mechanical engineer. Has important improvements and inventions he wishes to carry out. Has a good technical and practical training in mechanics; eighteen years' experience with electric, gasoline and steam motors. Address AUTOMOBILE, care Cycle Age. 1

**WANTED**—Salesmen and traveling men to take orders. Address CHAS. A. BRAUCHLER, Mr. Hollow Needle Tire Mender, Canton, Ohio. 1

**FOR SALE**

**TO EXCHANGE**—100 seamless forksides to exchange for sundries. Box 564, Louisville, Ky.

**CLOSING OUT SALE**—Until closed out, we shall offer the following: 600 pairs finished, flat cranks, regular thread, rights and lefts, at 20c per pair, 6 in.; 2200 pairs brazed forksides 1 1/2 in., 10c; 350 pairs brazed forksides 7/8 in., 10c; 4360 seat post forgings, 2c each; 630 crown forgings, 2c each; 2700 pairs upper back stay forgings, 1c each; 2200 lower adjustment forgings, 1 1/2c each. CORTLAND CARRIAGE GOODS CO., Cortland, N. Y.

**FOR SALE**—500 up-to-date '98 wheels in lots of 25 or more. Bargain for spot cash buyers. Address Box 472, Canton, Ohio. 2

**OUR CATALOGUE**

...OF...

**Temple Bicycles**

IS READY.

15 Models in all. Chainless, 3-crown machines. 28 and 30-inch wheels.

**PRICES** are made at "Net fixed wholesale prices,"

**LESS** Saddle, Pedals, Tires and Tools....

Fittings are quoted separately at factory cost—Every style and price of Saddle, Pedals and Tires for your choice if you want them. Quality and PRICE beats anything out.

**"GIMME A TRY"** 

**The Ralph Temple Co.**  
82 Lake Street, - - CHICAGO.

**SOUTHERN**

**DEALERS**  
**REPAIRMEN**  
**RIDERS**

... OUR ...

**'99 CATALOGUE**

IS READY.

Biggest line of Cycles and Sundries to be found in the Gulf States. Are you on our mailing list?

**Abbott Cycle Company, Ltd. WHOLESALE DEALERS**  
**NEW ORLEANS, LOUISIANA.**

**The Manhattan and Hendrickson Exercisers...**

Pat. in United States, England and Germany.

A Complete Home Gymnasium with book of Instruction.

- |                                    |                      |
|------------------------------------|----------------------|
| <b>MANHATTAN.</b>                  | <b>HENDRICKSON.</b>  |
| No. 1, 45 cents each. extra light. | No. 11, \$1.25 each. |
| No. 2, 50 cents each. light.       | No. 12, 1.50 each.   |
| No. 3, 60 cents each. medium.      | No. 13, 2.00 each.   |
| No. 4, 75 cents each. heavy.       | No. 14, 2.50 each.   |
| No. 5, 90 cents each. extra heavy. | No. 15, 3.00 each.   |

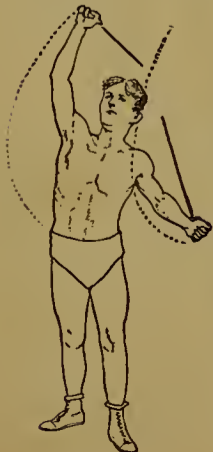
They are a paying side line for bicycle stores. Any of the above Exercisers mailed to any part of the United States on receipt of above prices.

Write for our wholesale discounts and proposition to consign you a stock.

We want an agent in every town and city in the United States.—L. A. W. Members Preferred.

**MANHATTAN WEB CO.,**

Cor. Grand & Market Place, - New York City.

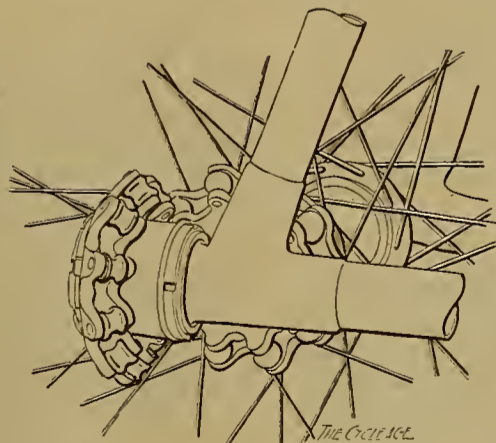


MANHATTAN.

**We Quote**

an extract from a catalogue just at hand of a well known manufacturer of the bevel gear type of chainless bicycles, on the necessity of ADJUSTMENT in all forms of gears.

"The reader is doubtless a bicycle rider and the possessor of a first-class bicycle, having ball bearings, perfect bearings. The balls hard as glass and the cones and cups properly tempered. The bearings doubtless run perfectly, give satisfaction, and are as good as can be made. DID YOU EVER ADJUST THOSE BEARINGS? Would you buy a bicycle having no provision for the adjustment of its bearings? Would you buy a chainless bicycle, whose gears are pins or rollers, with no provision for adjustment or taking up the wear, because you were told that no



wear will occur and no provision is necessary? What a fine rattle trap you would have in the course of six months! Ball bearings, universally used in cycle construction, and recognized by everybody, mechanical or un-mechanical, as being the perfection of simplicity and durability, minimizing friction, wear and trouble, require adjustment, as is well known. Any piece of mechanism that performs work or transmits power will sooner or later require adjustment, if used at all, and when said adjustment is not provided for, the so called mechanism is simply a trap."

**NOW READ**

our advertisement in this paper of February 2nd and draw your own conclusions as to the superiority of the Bullis Ball Gear over all others.

**"What Would you think of a Bearing Without an Adjustment?"**

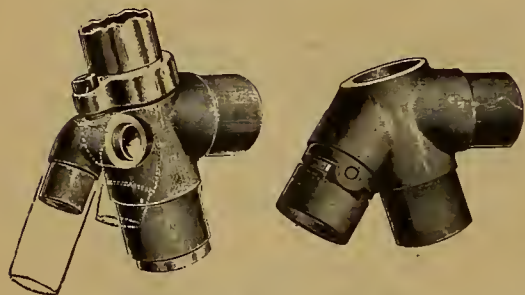
All forms of roller gears are in this class but ONE—The Bullis Ball Gear. "The Bullis Bearing Gear" has an independent adjustment of every ball and cone. No rattle. Purely rolling contact. Friction eliminated. Write us.

**THE BULLIS BALL GEAR COMPANY,**

38 East Ave. 353-355 East Main Street, - Rochester, N. Y.

General Western Agents—Excelsior Supply Co., 88-90 Lake St., Chicago.  
Guterman & Rosenfeld Co., 35 S William St., New York; 35 36 Aldermanbury, London, E. C., Foreign Representatives.  
Munger & Dickinson, 203 Broadway, New York Agents.  
R. C. Stevens, 804 Arch St., Philadelphia (Pa.) Agents.  
Charles H. Weld, Mfrs. Agent, Marshall, Mich.

**ADJUSTABLE  
ALL RIGHT  
SEAT POST  
CLUSTER**



One angle for all heights and lengths of frames  
**NOW READY**

**MAXIM MFG. CO.**  
MILWAUKEE, WIS.

**Liquid  
Brazing  
Crucibles**

All sizes and shapes as required to fit any make of furnace, made by the original makers of brazing crucibles and the largest and oldest manufacturers of plumbago or graphite crucibles in the world.

**JOSEPH DIXON CRUCIBLE CO.**  
Jersey City, . . . . . New Jersey.



Do you want **NEW** Customers?  
Do you wish to hold **OLD** ones?  
Then buy **OUR SUPERB**  
**Bicycle**  
**Stands..**

Write for descriptive circular and prices.  
**CITY FORGE AND IRON WORKS,**  
Dayton, O., U. S. A.



**"D. & J."**  
Single, Tandem,  
Triplet, Quad  
**HANGERS**

We make Hangers for only high grade wheels.  
**PARK CITY MFG. CO.,**  
N. W. Cor. Jackson & Clinton Streets, - CHICAGO.

THE HART & COOLEY MFG. CO., So. Chicago, Ill.

**HOT and COLD ROLLED STEEL**

Geo. Nash & Co., General Sales Agents, 35 South Canal Street, CHICAGO.

GET THE GENUINE.....

**DIAMOND E** Nicked Spokes...

and you will find this trade mark



on every spoke. It is conceded to be the most important feature of the season.

Western Office....  
204 Lake St., CHICAGO.

**EXCELSIOR NEEDLE CO.,**  
Torrington, Conn.

**Vim BICYCLES**  
Best Wheels on Earth.  
**LOWEST PRICES.**  
Agents Wanted. Catalogue Free.  
VIM BICYCLE CO., Inc., CHICAGO.  
List Prices, NINE MODELS, \$25.00 and \$35.00.

**ECLIPSE CYCLES** ARE FITTED WITH  
**Morrow Automatic Coaster and Brake**  
You can ride 50 miles with this device and not pedal to exceed 35 miles.  
Investigate before you purchase your '99 mount.  
SEND FOR CATALOGUE.  
**ECLIPSE BICYCLE CO., Elmira, N. Y.**

**ADLAKE BICYCLES**  
THE WHEELS OF HIGH DEGREE.  
THE ADAMS & WESTLAKE CO. MAKERS. CHICAGO.

**"MODERN CYCLE REPAIRS"**  
You cannot afford to be without it. See elsewhere this issue or write  
THE CYCLE AGE.

**PEORIA TIRES**  
Complete Catalogue Ready  
Peoria Rubber & Mfg. Co.  
Peoria, Ill.

**SALAMANDER** FOR THE CHAIN  
**JUVENILES** FOR THE CHILDREN  
**SUNDRIES** FOR EVERYBODY  
E. G. EAGER & CO., TOLEDO, OHIO

Mail us your Subscription.

A NEW LIGHT ON AN OLD SUBJECT  
It saves from 35 to 50% propelling force.

Notice to... **BICYCLE MANUFACTURERS.**  
The riders of 1899 will insist upon their wheels being equipped with  
**"The Star Ball Retainer."**  
Send us samples of Cups and Cones and write for prices.  
THE STAR BALL RETAINER CO. LTD.  
LANCASTER, PA. U. S. A.

**"I USE THE STAR BALL RETAINER!"**  
**"I DON'T!"**  
ALL ROADS ARE EASY WHEN THE **STAR BALL RETAINER** IS USED  
**DU**  
PATENTED IN U. S. A. AND APPLIED FOR IN FOREIGN COUNTRIES

# THE CYCLE AGE

Vol. XXII—No. 19.

CHICAGO, MARCH 9, 1899.

NEW SERIES No. 68.

## ADOPTS AGGRESSIVE TACTICS

### Buffalo Department House Bidding for Trade on Its Own Product—Clearing Fall Stock.

Buffalo, March 6.—“Buffalo’s Great Department House” introduced its advent into the cycle making business last week in the following rather terse terms:

“We are pleased to announce that we are manufacturing bicycles for the season of '99. Our bicycle business has grown to such an extent, not only in our retail but also in our wholesale department, that in order to give our customers the best bicycles that could be produced we have found it necessary, after carefully considering the subject in all its phases, to own and operate a complete bicycle factory instead of having them manufactured for us as heretofore.

“We use only the best material throughout and also employ only the most skilled labor. Our bicycles are sold in connection with our immense business in other lines and we also give the trade absolutely the best that can be produced for a reasonable price, which has always been beyond the possibility of the exclusive bicycle manufacturer.

“We desire to state that the above is made possible by the advantages of our cash purchasing power and the economical plan on which our factory is run. Our experience has taught us that quality and price are the best salesmen. We are now in a position to give our customers better service than ever before.”

#### Likely to Cause Price Cutting.

Sunday a week ago it came out in the daily papers with the following announcement, which is the forerunner of what promises to develop into an early and sharp war of prices with those concerns that carry the cheap grades.

“To celebrate the opening of the bicycle department and start the season with a rush, we shall place on sale Monday morning 100 high grade wheels for men and women at \$18.

“This is the lowest price ever made at the commencement of a season for strictly high grade, fully guaranteed bicycles. They are well made in every respect, including 22 and 24-inch frames made of Shelby seamless tubing, one-piece hanger and 2½-inch drop to hanger.”

#### Thought to Be Hold-Over Stock.

The machine that is offered for this money is believed by the dealers to be part of a lot of about 500 that the company purchased late last fall, which were then offered at \$15. The store, it is understood, got caught with 300 which it was obliged to carry over to '99 and which it is attempting to dispose of at an advance in price.

Later in the week this card was followed with a display advertisement reading:

“We believe in starting the season with a rush. We’re getting it. This store is pre-eminent in its command of good wheels, partly because we’re manufacturing for ourselves on a large scale, and partly because we’ve a tremendous outlet here for high-grade bicycles at a popular price. It is fair to expect that the success of last year will be very largely discounted this spring. Mail and telegraph orders carried away others, and altogether we had the biggest kind of business all day long.

“We have several kinds of wheels here, but special interest is centered just now on these two: Special bargain at \$18, strictly

high grade, and new 1899 models at \$25, our own manufacture.

“In addition to bicycles of our own manufacture we’re sole agents again this year for the well known \_\_\_\_\_ wheels, comprising 12 models of new and advanced construction and of the highest type—a variety not offered by any other concern in the world.”

These announcements have stirred up the trade generally and the prices are being met by some with a machine of superior qualifications and by others with one that is an extraordinarily poor example of the art of cycle construction.

#### Scramble for Orders Grows Easier.

The \$1 down and \$1 a week plan for retailing bicycles, which has been in successful operation here since the beginning of the year, was discontinued on the last day of February by the largest of the stores selling under the system. On this day the agent adopted an advertising scheme which was an unqualified success so far as attracting the public attention was concerned.

Outside of the store, in full military regalia, with the regulation arms and military tread, paced a soldier of the guard whose evident purpose was the guarding of the show window which was strewn within with silver and paper dollars together with placards announcing that it was the last day that bicycles could be bought under the plan and that it was desired to sell 100 bicycles before the close of the day. The success met with in the matter of selling the 100 machines is not known but it was a good scheme for advertising his store.

#### Purchase of Red Cross Co.

The entire business and goodwill of the National Red Cross Cement & Rubber Company of Rochester, N. Y., were purchased last week by the National Cement & Rubber Manufacturing Company of Toledo, O. The purchase includes also all names, trade marks, patents, patterns, etc. The manufacture of the Red Cross specialties will be continued hereafter in the Toledo plant of the National company under the same name and all orders received and shipments made from its offices in Toledo.

## CURBSTONE AGENTS INACTIVE

### Kentucky Dealers Find That the Installment Payment System Gives Needed Protection.

Paducah, Ky., March 6.—The curbstone dealer is gradually becoming extinct here. The principal reason for this is that 75 per cent. of the machines here are purchased on the installment plan. The first installment payment is usually from \$10 to \$15 and subsequent payments \$2 a week. Such curbstone agents as have threatened the business of the regularly established dealers usually sell cheap machines, and the dealers have lost no opportunity to convince the public at large of that fact.

The department stores sell a few cheap machines to country customers hereabouts. There is no demand for tandems. At one time and another four such machines have been purchased. Now they are for sale, with no buyers.

#### Irregular Repair Prices.

Paducah with its 25,000 inhabitants has for years been noted for its fine gravel streets and flourishing bicycle trade. There are six dealers, four of whom do a good business. Repair work is looked after by half a dozen shops. An effort was made last year to regulate the prices on repairs by adopting the list which was made standard in Toledo in 1897, but some of the smaller shops thought they would be unable to obtain work except by cutting prices, and so the effort at organization collapsed. At present repair prices vary from 25 to 40 cents for single spokes put in, with a charge of 10 cents each for more spokes. Valve stems are fitted at prices ranging from 25 to 40 cents, and inner tubes at prices ranging from \$1 to \$1.50. The cost of straightening frames is from 50 cents to \$1.50; front forks straightened, 50 cents to \$1; wheels trued, 50 cents to 75 cents; vulcanizing, 50 cents to \$1. This sufficiently indicates the irregularity of repair prices.

#### Exchange Allowances.

The exchange of second-hand machines last season cut less figure than in 1897. No more was allowed for such machines than the dealers felt sure they could obtain in selling them with repairs added. There were a few instances where dealers fictitiously listed new models so that they could offer big prices to customers with second-hand machines for exchange.

At the present time the streets are torn up. For the past six months local authorities have been putting in sewers and indications are that the streets will not be suitable for cycling for at least a year. In spite of this drawback, however, the dealers are looking for good trade as soon as the weather breaks. Given the same street conditions that existed in 1897, the cycle trade would increase 30 per cent. this year with machines selling at their present prices.

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## A PROMISING OUTLOOK

### Opinions of a Salesman Who Has Traveled Extensively Among Cycle Dealers

To the Editor—From close observation and lengthy talks with hundreds of dealers, there is no doubt in my mind but that this year is going to be one of the best the bicycle business has ever known. The reasons for this promising outlook are many and manifest. General prosperity reigns, the prices of bicycles are low, the war is at an end, and there is almost universal confidence among the dealers.

#### Dealers Are Confident.

Manufacturing communities are the first to feel the benefits of the dawning good times. Factories that last year were running with a short force, and sometimes on short time, are now running full force and often over time. In a great many of them wages have been increased. The small town that owes its maintenance to four or five of these manufacturing institutions feels the change almost instantly, where as in most things the small town lags behind. To my mind this accounts for the unanimous opinion of the cycle dealers, irrespective of the size of their town, as to the good year's business in store for them. And isn't confidence a most necessary condition to a successful business? This confidence shows its good effects in the manner in which the dealer orders.

#### Sample Orders Are Plenty.

In no previous year in the history of the bicycle business have the dealers had a more pronounced or definite policy. All seem to know just about what they are going to do and what they want. Contracts for specified quantities and shipments are not as plentiful as in the days of the old boom, but sample orders are generous, and nowadays when an agent takes on a sample line of machines he usually intends to give that line equal representation with his others. The sidetracking of a line is, generally speaking, a thing of the past. Dealers are not so numerous as heretofore, those that only nibbled at the business not finding it profitable enough to continue. Of course there are occasional exceptions to this condition, but in the majority of places it is true. Curb-stone dealers seem to be gradually becoming extinct, evidently not receiving as much encouragement from the manufacturer as in the past. All of which materially helps to make the sound dealer feel pretty good.

The existing low list prices on standard goods would make it seem that the people who have waited for years until "good machines will sell at \$25 and \$35" are to be rewarded at last. In them, and in that class which never buys anything on installments and yet could not pay the previous higher cash price, there exists a new list of customers for the dealer.

#### Mail Order Houses in Disfavor.

Riders who last year bought the cheap machines sold by some mail order houses will this year become the customers of some local dealer. These cheap models, with unguaranteed tires and other equipment to match, have proved anything but satisfactory. One dealer and repairer told me that he actually made more money off the riders of cheap mail order machines shipped into his locality than he

would have made if he had sold such people a low priced machine. He claimed that there was hardly one of them but had to purchase a new pair of tires in two or three weeks after receiving the machine. This and the other repairs necessary from time to time, though small in themselves, aggregated quite a respectable profit during the season, and in the end cost the rider more than a good bicycle bought at home would have cost. These riders find it cheaper to have the repairs made at home than to pay the express charges both ways on a machine, the seller of which advertises all repairs free of charge. The new riders in the majority of cases will buy \$25 or \$30 bicycles. The rider of cheap machines last year is likely to join the old rider and purchase a mount listing at \$40 and \$50, while those that have an idea that the high priced machines only are good enough for them will divide their patronage between the numerous \$55, \$60, \$65 and \$75 models, according to their prejudices and pocket-books.

That the war hurt the business last year is beyond argument. Almost any dealer can tell of sales lost through some young fellow going to the front and leaving his machine to some friend. Others sold at a sacrifice, desiring to raise a little ready money, and so blocked sales by dealers. Many who had intended to purchase were summoned to war. And if the boys had not been called away, how many more wives, sisters and sweethearts would have been riding and how much greater would have been the interest in cycling?

#### Profitable Work for Dealers.

The cycle store openings already held, perhaps more than any other one thing, give a practical foretaste of what may be expected in the coming season. I believe that, without exception, there were more machines sold and more general earnestness displayed by prospective buyers than ever before at these functions. I know dealers who were surprised at the number of sales made at these openings—sales where they looked for possible later buyers, deep interest where they looked for curiosity seekers. By the way, these general openings—a simultaneous display of the improved models by all the dealers in town, lasting a week—should be used more commonly among dealers and encouraged more by manufacturers. Though the displays, the decorations, the music, the advertising, and sometimes the souvenirs, all smack of the big cycle show, the results are entirely different. The expense is practically nothing. The public remembers the place they saw a machine that took their fancy. They become acquainted with the people they are apt to deal with, get an idea from the appearance and location of the store and have some notion of the responsibility of the dealer as a consequence. A show is the place to see things; the store is the place to buy things.

#### Why Trade Will Be Better.

I started to give some idea of why business would be better, and, though I wandered from the subject somewhat, I will display some idea of consistency by closing with a few more reasons, each small in itself, perhaps, but all tending to

help. Good roads are making slow but sure progress; towns that have had street paving are doing more of it; some of those that have never had any have contracted for some. Bicycles have in many places become a practical necessity and are more generally used. Like pins, it is a wonder where all the old ones go, and new ones must replace them.

TRAVELER.

### COLUMBUS' GENERAL OPENING

Rain Fails to Keep Lady Visitors from Cycle Stores  
—Many Sales Please Dealers.

The '99 selling season was opened auspiciously in Columbus, O., by a general house warming during the first four days of the month. From the crowds that flocked to the various stores, which were attractively decorated for the occasion, it would seem that the cycling fever is increasing rather than growing weaker, notwithstanding several croakers have written extensively to the effect that cycling is merely a fad and attempted to prove by comparative figures that it is dying a natural death.

Managers of the several stores report many actual sales to visitors during the week, amounting to several hundred in the aggregate. The weather was somewhat unfavorable, yet the stores were filled with as many persons as could be comfortably received, and a noticeable feature of the attendance was the large number of ladies. Basing their judgment upon the number of visitors, the business-like interest shown in the lines, material, workmanship and constructional features of the various models and upon the number of purchases made, the dealers prognosticate that this will be the best season the Columbus dealers have ever had.

Nearly every dealer in the city did a very good business Saturday evening and all feel that the opening was a success in every way.

A talk with some of the dealers disclosed the following:

That chainless machines will be ridden to some extent this year.

That 30-inch wheels will have a considerable following also.

That the demand for the very cheap machines is gradually dying away.

That medium-sized tires will rule as favorites this season.

That extra wide handlebars have had their day, and people are willing to accept a rational width.

That there is a tendency to decrease rather than increase the size of sprockets on chain-driven machines.

That very few tandems will be ridden this year.

That cranks will not be lengthened in order to allow of the use of extremely large gears.

That most people do not care to be bothered with a gear case.

That 22-inch frames are the most salable size.

That diamond frames will be ridden by not a few women who derive much pleasure from long rides.

### Fowler Nominated for Alderman.

Frank T. Fowler, president of the Fowler Cycle Works, was nominated for alderman on the fifth ballot Monday night by the Thirteenth ward republicans of Chicago. There was only a weak contest for the nomination, three other aspirants having waived their claims after the fifth ballot and making the nomination unanimous. Mr. Fowler is also president of the Illinois Cycling Club and the West Side Driving Association.

The Bavarian army has been supplied with cycles weighing about 22 pounds, fitted with 20-inch wheels and low gears.

## KIRK BROWN IS IN CONTROL WILL DIRECT DUNLOP AFFAIRS

He is Re-elected Vice President and General Manager—Company Affairs Are Very Satisfactory.

The success of the American Dunlop Tire Company has been wholly due to the intelligent work of Kirk Brown, the company's vice-president and general manager. Some time ago hasty contemporaries went out of their way to make it appear that Mr. Brown was in danger of being shut out of all interest in the company when the controlling interest in the concern passed from the Dunlop Pneumatic Tire Company, Limited, of London, to certain Canadian capitalists who are not otherwise interested in the cycle or tire business. At a meeting of the directors of the company held in Belleville, N. J., on March 1, Mr. Brown was re-elected vice-president and general manager.

The former manager of the Canadian branch of the business is continued in his position, but not as an officer of the company. The Canadian branch, as stated in the last issue of this paper, is to be formed into a separate company. The business in Belleville will be continued just as it is.

### Tribute to Mr. Brown's Ability.

The entire management of the company's business in the United States is left in the hands of Mr. Brown, and its policy and the conduct of the business will be determined by him. No more flattering tribute to the ability of Mr. Brown could be furnished by the new owners of the concern than is implied in his re-election and continuation in authority. During the New York cycle show, while Mr. Brown was in England, gossips who did not thoroughly understand the drift of affairs spread the story that the management of the company would fall into other hands, and color of truth was lent to this belief by the airs of importance which one of the alleged new owners gave himself at that time. No one who had knowledge of the difficulties which Mr. Brown, through persistent work, had surmounted took much stock in the stories which were being circulated to his disadvantage while he was not there in person to refute them.

### Satisfactory Company Outlook.

The business affairs of the American Dunlop Tire Company in the United States are, thanks to Mr. Brown's efforts, in a very satisfactory condition. Over one hundred of the leading bicycle makers and about sixty jobbers who sell bicycles with their own brand names are furnishing Dunlop tires this season. The business has increased wonderfully, due in large part to the fact that twenty-five traveling representatives have been on the road all winter preaching the Dunlop gospel. The firm has twenty-five distributing depots in as many cities of the United States. The factory at Belleville is working to its full capacity and the buildings are to be enlarged as soon as the busy season is over.

### Coventry Cross Company in Distress.

A receiver has been appointed for the Coventry Cross Company, which a year ago was regarded as one of the soundest and most prosperous concerns in the English cycle trade. The shares stood at a big premium and a dividend of 15 per cent. on the year's business was paid, besides the carrying forward of a large sum to the reserve fund. But the company

fell in arrears in the rent of its premises in London and the debenture holders made a motion for the appointment of a receiver, asking that the receiver be permitted to borrow funds for the purpose of carrying on the business. The ground upon which this was made was that a distress had been put in on the London property for rent, which made the debentures payable. The company was bound by agreement to use only tires made by certain companies, to which it was debtor, and had 600 machines awaiting tires for which there was no money, while wages were also due.

### CHAINLESS MODELS IN TACOMA

Dealers Who Violently Opposed Their Introduction Last Year Are Now Singing Their Praises.

Tacoma, Wash., March 3.—The chainless machine is making considerable headway here. One dealer has already sold five such machines, notwithstanding the fact that the weather has been exceedingly unfavorable for trade. The few chainless machines which were ridden here last year have given excellent satisfaction and the experience of their owners no doubt is responsible for the growing popularity of this type of power transmission.

There is a noticeable change in the opinion of local dealers with respect to chainless machines. Last year but few of them would speak a good word for the new model. Now, however, nearly every retail establishment is loud in its praises. One dealer, who last year was the leader of the opposition, now says that he and his fellows took that stand merely because the factories from which they obtained supplies were not in a position to supply chainless models. And this statement has a much more universal application than appears upon the surface.

### Lozier to Build Naphtha Engines.

Toledo, March 6.—The Lozier Manufacturing Company will soon begin the manufacture of naphtha engines for launches and power purposes, going into the new venture on a large scale. A portion of the Toledo plant will be devoted to the new venture. The engine to be manufactured is the invention of Superintendent G. A. Burwell, and will be known as the "Lozier." For the time being, the hulls of the launches will be built elsewhere, but as the business increases the Lozier people will give attention to building naphtha launches complete from keel to power.

Col. W. H. Raynor, of the company, says: "We will be ready to supply the trade by April 1. We feel that there is a large field for naphtha launches. We will make the best naphtha engine on the market."

### Sale of Arrow Plant Stopped.

The plant of the Arrow Cycle Company of Shelbyville, O., was about to be disposed of by the county treasurer to secure the payment of \$400 delinquent taxes last week when the Indiana State bank secured an injunction stopping the sale, giving a bond to secure the county. The works have been idle for a year or more, during which time the owners have been in court, and the bank appears to have an interest in the property.

The Metal Polishers' Union is again showing signs of activity in its crusade against makers of certain machines who have not fallen in with the views entertained by union workmen. In the east three bicycles are being extensively placarded as being made by non-union labor, and intending purchasers are being urged to remember this fact when considering the purchase of a machine.

## DENVER OUTLOOK IMPROVING CHAINLESS CLAIMS ATTENTION

Many Orders Already Placed—Dealers No Longer Pin Their Faith to the Cheaper Grades.

Denver, March 6.—While it is true that all local dealers of prominence were represented in the show held during the week of February 20 to 25, the full attendance at the close of the week was found to be much smaller than at last year's show. The motor vehicles were responsible for a large part of the attendance, which otherwise would scarcely have paid expenses. Among the cycles displayed almost the only interest shown was for chainless models. The riding public seems to have decided that the best bicycle is now, or will soon be, the chainless in some form, to be judged by the results of the riding season which is now at hand.

A prominent dealer declares that he has booked more orders for chainless bicycles than he has for his best chain driven machines. Other dealers who handle chainless machines report flattering results and have discarded the sceptical ideas that were firmly rooted last year and now welcome gladly the new candidate for recognition.

### Buyers Will Want Reputable Goods.

The cycle show demonstrated that the bulk of business will be done in the higher priced machines, and that the cheaper goods will command only a light trade. A tendency to notice only those bicycles built by the makers of reputable goods of known quality in the past was also manifest. Some business was done by those firms represented at the show, while some manufacturers who were not represented directly have a few orders to show for the interest developed by the exhibition.

The prospects of increased trade for the coming season do not warrant a statement that more business will be done, measured in dollars, than last year. The number of sales will be increased, it is true, but the cost of doing business will necessarily be increased over the previous year because more customers must be handled and incidental expenses will be increased in proportion. If the Denver dealers can show a volume of business at the end of '99 equal to that of '98 they will be fortunate.

### Experienced Dealers Wary.

The second-hand and trading business is being reduced to a more satisfactory basis. Several prominent houses refuse to accept second-hand machines and most of the others will not allow more than 25 per cent. of the price of the new machines for any second-hand bicycle, and will not allow even that much unless the old machine will sell for an equal amount.

The instalment business presents two directly opposite phases. Several firms which have recently ventured into the cycle trade boldly announce that they will sell all bicycles at list prices and require a payment of but \$5 down, and the balance in instalments of \$2 per week. Others, who have been through the mill, insist on a payment of one-third down and the balance in \$10 payments per month, adding \$5 to the list prices on all time sales.

The desire to have lines of medium and low-priced models which was manifest earlier in the year has largely altered in favor of the standard makes, although many dealers have taken up the cheaper class of goods who are in a position to handle the trade of the small outlying towns of the state, and they anticipate satisfactory results from this source.

# The Crescent Bicycle

## FOR '99.

All the Essential Qualities of an Ideal Bicycle are United in the Crescent.

*Our Fine Illustrated Catalogue No. 2 containing The Care of the Wheel, FREE.*

### STRENGTH

The frames are made of cold-drawn seamless steel tubing modeled on lines giving maximum of strength with minimum of rigidity.

### SMOOTH-RUNNING GEAR

The gears and chains are so perfect that once adjusted the longer they are used the more easily they run.

### SIMPLICITY

The less complicated the construction of a wheel the less liability to breakdowns. Simplicity and durability are marked features of the Crescent.

### BEAUTY

The lines which make the Crescent model for '99 the strongest wheel make it also the most beautiful wheel. Every bar, rod and cone is exquisitely finished.

CHICAGO.—WESTERN WHEEL WORKS.—NEW YORK.

NEW TESTIMONIALS EACH WEEK.

# MILWAUKEE TIRES

## PUNCTURE PROOF

Pneumatic

Resilient



Single Tube

Easy Riding

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### PRESENTING TESTIMONIALS.

NORTH MILWAUKEE WHEELMEN.  
 GERHARD AUSSEM, President. H. SOULEN, Secretary.  
 E. W. SCHREIBER, Treas. and Capt.  
 NORTH MILWAUKEE, Wis., Dec. 1, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
 Gentlemen:—In reply to your valued favor of 1st inst., beg leave to say that I have used one pair of your Patent Puncture-Proof Tires for the season of 1898. I put the tires on my wheel April 1st, 1898, and have left them on ever since, never having an occasion to remove them and have ridden them over 2,000 miles over both city and country roads without receiving one puncture. Personally I would not be without a pair of your tires and will cheerfully recommend them to my friends. I have given your tire a thorough test and my experience has been that the tires are resilient, strong

and as near puncture-proof, if not absolutely puncture-proof, as any tire I have ever seen.  
 Respectfully yours,  
 (Signed) GERHARD AUSSEM,  
 President North Milwaukee Wheelmen.

EVANSTON, ILL., Dec. 10, 1898.  
 MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
 Gentlemen: In reply to your letter of Nov. 30th, I beg to say that your tires which I purchased some time ago look to-day as good as new.  
 An Ajax wheel, which I have fitted with a pair of your Milwaukee Patent Puncture-Proof Tires makes a wheel fit for a King.  
 Yours truly,  
 (Signed) NELS SWANSON.

Representatives Wanted. Write for Prices and Other Information.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.



# THE CYCLE AGE

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

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## VALUE OF INSTALLMENT SALES

Impressed chiefly with the losses which inevitably attend the sale of bicycles on the installment plan, a dealer writes to the Cycle Age deploring the existence of this well-grounded custom and prophesying its complete extinction within a very short time. In pleading for the abolition of the lease-hire system it is obviously meant to be understood that the correspondent intends his argument only to apply to high priced machines, for it is inapplicable to cheap goods since they are largely sold for cash. This view of the subject is taken:

The evils of the installment payment system are manifold, and instead of growing less, with experience as a teacher, they seem to have been aggravated. When high grade machines sold for \$125 or \$150 and afforded a good profit for the dealer, he was practically safe in selling on the part-down-long-time plan for two reasons—one that he could demand enough cash down so that the installments would make him solid on his cost in a short time, and the other that few people dared to venture the purchase of a machine unless they saw their way reasonably clear toward the settlement of the debt within the allotted time. The dealer thereby secured good customers and was willing to accede to any reasonable request for credit.

Now, however, the dealer's profit is smaller and his customers are people who strive to have everything and pay as little as possible, and it is this class, adding their weight to the short profit of the dealer, who are overbalancing the scales which have number-of-sales in the opposite pan.

Bicycles are now at a price where the person who can afford to own one can pay cash for it, and the dealer cannot afford to sell those who cannot pay in that manner. When a dealer at the close of a season looks over his stock and finds even a small number of machines back on his hands, while only a few dollars have been paid on them, and they are in a condition which precludes their being sold again except for a very small part of their original price, he feels aggrieved. The machines which are well cared for by the installment purchasers are the ones which are paid for, while the misused machines are the ones returned by the people who never intended to finish their payments, but have ridden out the worth of what they paid.

It is these returned machines, in such condition, which stir the soul of the dealer within him. He is avowing that he prefers to sell less quantity (if that be the necessary result) and know for a certainty where he is at, than to run the risk of a big business with the profits on the wrong side of the balance sheet.

It is easy to find fault with the installment payment system, but it is correspondingly difficult to replace it with some other method of sale which will not seriously impede or cripple the business of dealers. Selling for cash might breed troubles compared with which those now endured in selling on installments would indeed be trivial. In the absence of the credit system dealers would be deprived of the aid of one of their most useful methods for decoying purchasers, and the volume of sales would be very apt to shrink.

The price of high grade bicycles is yet too high to seriously entertain the idea of violently putting away the installment payment system. Firms which resolutely set out to conduct a retail cycle business without the services of a book-keeper or collector may flatter themselves that they can be independent of customers who purchase high priced machines, but the growing competition in cheaper grades, and the shrinking margins of profit which are obtainable through their sale, will in the end react strongly in favor of high priced products. It is the general testimony from all parts of the country that a decided fillip was given to the sale of high priced machines this year through the accommodations which dealers extended to purchasers. For months past small weekly deposits from customers have been sought by agents, and as a result cheap priced goods have suffered in the face of this competition. It may be urged by those who advocate the abolition of the installment payment system that this state of affairs cannot continue indefinitely, inasmuch as the dealers are practically made the bankers of the riders, but the change will not come while the purchasers of high grade bicycles are heavily recruited from a class which has tastes out of proportion to wealth. Moreover, the favors are not all

on the side of the buyers, for at the time machines are delivered to riders under the early contract system they are not fully paid for, and hence the dealer is fairly entitled to the use of money which has been advanced to him, especially since he is bound to carry the risks for some time to come.

Granting, then, that the abolition of the installment payment system would only affect purchasers of high priced machines, is it not natural to conclude that the retail trade would be in danger of being afflicted with the presence of curb-stone agents as competitors in the sale of such goods? The curb-stone agent in order to thrive at his unsanctioned profession is under existing conditions debarred from extending credit and consequently is driven to handling the cheaper class of machines. Manufacturers are fighting shy of him and his occupation is almost gone. If, however, high priced machines were sold for cash, the curb-stone agent would in all likelihood again be strongly in evidence.

## SPRING DELIVERIES ARE SLOW

Some bicycle makers in the middle western states complain that assembled goods are accumulating in the factory, while others, apparently no stronger before the trade, testify that shipments are unusually heavy. These opposing reports are typical of the methods practiced by energetic and lethargic manufacturers. It would seem that the concerns which have given especial attention to the securing of sample orders are now enjoying the benefits of their work, and, while they cannot boast of heavy deliveries, still the accumulated sample orders amount to a very respectable volume of business which later will undoubtedly be swelled to much greater proportions. The establishments which, on the other hand, have principally sought to obtain outright contracts have fallen short in their expectations and are for the moment without sample orders or instructions to ship on contract.

It is a demonstrable fact that it does not pay nowadays to urge agents to make heavy purchases early in the season, firstly for the reason that they are disinclined to carry stock long in advance of the time when it is salable to riders, and secondly because the average manufacturer's reluctance to tie up money in large purchases of material ahead of the season when he can sell his product to dealers. Heavy deliveries of goods from factories, therefore, do not usually take place until the beginning of April, and then should, barring accidents, continue steady, for dealers are very sanguine of a good season.

## COST OF ILLUMINATING STORES

What makes the best and most satisfactory light for a store? This question was recently asked in a meeting of Ohio dealers. One of those present stated that two years ago he had put in a gasoline plant costing \$70, with which he is now lighting his store at a cost of not over 1 cent per hour, with gasoline costing 10 cents a gallon. Another declared that he had a gasoline plant which furnished light until 1 o'clock at night which cost him 75 cents per month. During the winter months, however, when the days are shorter, the cost of operating was \$1.50 per month. This machine cost \$60, and, like the first, is fitted with Welsbach mantles. A third dealer testified that he paid from \$18 to \$25 per month for electricity and from \$4 to \$8 for gas. One who had used coal oil, which had cost from 15 to 17 cents a night and had given great trouble on account of the care necessary to keep the lamps in good working order, said that last fall he put in an acetylene plant under a guarantee that it would not cost more than 20 cents a night. He found that it cost 45 cents a night during the first month of trial. Some alterations were then made, after which it cost from 15 to 17 cents a night, but the following month the cost rose again to 48 cents a night. In the meanwhile, however, the electric company in his town, anticipating the competition of acetylene gas plants, reduced the cost of lighting and furnished electricity at a cost of 20 cents a night. Then he threw out the acetylene plant and used electricity.

This whole subject of store lighting is attracting general attention throughout the country. A number of letters have been received by the Cycle Age requesting private information upon lighting cost, and in order that the trade at large may obtain the benefit of the thought which the matter is receiving dealers are requested to relate their experiences with the various plants which they have installed.

## BRAZING BY IMMERSION

### Advanced Practice in a Western Factory—Fork Crowns Successfully Brazed By Dip Process

When general experimenting with dip brazing began so many obstacles presented themselves that a number of faint-hearted shopmen were loath to proceed very far. However, as soon as the more diligent brought the process to a point where it could be practiced with undeniable success and economy, the doubting ones awoke to the fact that many of the seeming difficulties had been overcome by amazingly simple means. Indeed the small problems which now seem to hinder the general adoption of immersion brazing are in reality quite simple of solution and will in the near future be satisfactorily worked out.

#### Most Frame Joints Can Be Dipped.

It is occasionally pointed out that immersion brazing can never become universal because it is impossible by the process to braze all of the various connections of a bicycle frame. There are two ready answers to this objection. The first is that nearly all of the joints commonly used in cycle construction can be brazed by the dip method and that the economy of so doing makes it desirable to use the process wherever available, even though a few joints have to be flame brazed. Of course it is generally granted that the best factory policy is to have as few separate and distinct methods as possible for accomplishing the same results; but where there is a choice between an expensive and sometimes unsatisfactory method by which all of the work in one line can be done, and an economical and thoroughly reliable method which is applicable to nine-tenths of the work, it is the part of wisdom to use the latter method as regular shop practice and the former when absolutely necessary. The second answer to the objection is contained in the probability that constant experimenting will doubtless reduce the number of joints which cannot be brazed by the immersion process.

#### Brazing Rear Cross Braces.

In an ordinary diamond frame the only joints which cannot be readily dipped in a crucible are those at the cross braces between the rear stays and between the rear forks, and at the front fork crown. Yet in many shops the cross brace between the rear forks is now regularly brazed by dipping, the operation being simultaneous with the brazing of the hanger joints. The depth to which the hanger must be dipped in order that the brass may flow to the top of the hanger lug connecting the seat mast tube is in most cases sufficient to also cover the rear cross brace. If it is not, the brace may often be brought beneath the brass by dipping the frame at a different angle instead of dipping it deeper. No matter at what angle the frame is held when dipping the hanger the depth to which it is immersed is always more than enough by a liberal margin to cover the lug connecting the lower front frame tube. Thus if the frame be dipped only to a depth which covers the seat mast connecting lug, but at such an angle that the brass runs further back on the rear forks and not so far out on the lower frame tube as usual, the rear cross brace may be covered and brazed and but little if any more superfluous brass deposited upon the frame than by dipping merely to braze the hanger joints.

Whether the rear stay cross brace may be dipped at the same time that the seat cluster is dipped depends upon the height

of the frame, which determines the distance of the cross brace from the cluster.

#### Fork Crown Brazed By Immersion.

Some of the oldest dip brazers in the country have given up as impossible the brazing of fork crowns by other than the flame method, unless no objection is taken to immersing the entire stem. In the accompanying illustration, however, is shown the crown portion of a front fork which was recently brazed by the immersion process and in a manner which proved so satisfactory that it has been

ive experimenting and where the ingenuity of the workmen must occasionally make up for lack of certain appliances. The fork was brazed in the new factory of B. E. Harris & Co., of Chicago, in the circular dip brazing furnace described in Cycle Age of February 2, and which as soon as the plant was moved from the old building to the new location was installed. Its operation proved so successful that no other brazing facilities were provided at the time, and when in the course of the rush to turn out the first lot of frames for the season it became necessary to braze front forks the foreman of the frame room found that he was compelled to braze them by immersion or to rig up a flame brazing table. Being an ardent advocate of immersion brazing he determined not to resort to the old method unless absolutely compelled to do so. He gave the matter a little study and made a few experiments, and the next day turned out a large lot of front forks solidly brazed and every one as well exe-



FORK CROWN DIP BRAZED WITHOUT IMMERSING ENTIRE STEM OR BLADES.

adopted as the regular method of operation in the factory where it was accomplished. The fact that at least one immersion brazer is able to braze front forks, in the face of the many statements current concerning the impracticability of the feat, indicates that future experimenting and development may lead to ways and means whereby almost any form of joint imaginable may be successfully dipped.

The story of the fork illustrated is interesting because it shows that new and valuable facts are sometimes discovered in shops not fully equipped for exhaust-

cutted as the sample from which the photograph herewith was taken.

#### How It Was Done.

Though the method adopted at the time, and which has since been regularly employed, is contrary to many old time shop prejudices, the results obtained are ample proof of its reliability. The procedure was as follows: The fork blades were pinned to the crown as usual, but the stem was not placed in its seat. One man then held the stem with a pair of tongs and another the crown and blades, and simultaneously the lower end of the stem



TRADE MARK



We Have Authorized



THE STATE OF MAINE WOOD RIM CO.,



of West Paris, Maine, to manufacture



Dunlop Laminated Wood Rims



and use our trade mark on same. The trade is referred direct to them for quotations. The list of authorized wood rim makers now stands as follows:



Fairbanks-Boston Rim Co., Bradford, Pa., and Bedford, Mass.  
Kuntz Bending Co., Cleveland, O.  
Olds Wagon Works, Ft. Wayne, Ind.  
State of Maine Wood Rim Co., West Paris, Me.



The American Dunlop Tire Company



Belleville, N. J.

Chicago, Ill.



TRADE MARK



# THE STERLING

## "BUILT LIKE A WATCH"



AS MEN AND WOMEN ADVANCE ALONG THE LINES OF CULTURE AND REFINEMENT,

there comes a taste for those styles in all articles of use that are out of the ordinary. It is universally conceded that the STERLING embodies an "individuality of style," a "compactness," and a "grace" that are not associated with other makes.

The progressive dealer derives a genuine pleasure in selling a wheel of this character, for he knows that it means "value received" to his customer, and that a staunch friend has been made for his house.

Our descriptive catalog and agency proposition will be submitted upon request.

### STERLING CYCLE WORKS KENOSHA, WIS.

and the upper end of the crown and blade group were dipped in the crucible. After being in the brass long enough for the parts to be heated to brazing temperature and for the brass to flow, the parts were removed, and before they had had a chance to cool below brazing heat were thrust together and the stem driven down to the bottom of its seat in the crown. The machining of the crown and stem having been well done in the first place the placing of the two parts together was but the work of a few seconds, and as soon as the parts had cooled the entire fork was as solidly brazed as if it had been pinned together in a jig of the most improved pattern.

Some may doubt the safety of brazing such parts without previously pinning them together, but the forks turned out in the Harris factory are as true as the general run of forks brazed after having been pinned together in a jig. The fork from which the photograph was taken was picked at random from a lot of over two hundred, and is so nearly accurate that nothing but filing and enameling need be done to it to make it ready for assembling into a bicycle. The main point to be considered in preparing fork parts for brazing by this method is that of machining the stem and crown so that they match properly.

**SOUTHERN REPAIR PRICES**

Charges That Prevail in South Carolina—Little Interest in Thirty-inch Wheels in Charleston.

Charleston, S. C., March 4.—Bicycles with 30-inch wheels are not gaining popularity in this part of the country. Dealers, however, carry a few such machines and the necessary material for making repairs in them.

The bicycle dealers here have never adopted a fixed scale of prices for repair work. The following charges, however, are in general use throughout the state, with some slight modifications here and there:

Frames cut down, re-enameled, plain colors, knocked down.....	\$4.50
Frames re-enameled, plain colors, knocked down .....	2.50
Frames re-enameled, plain colors striped .....	3.00
Frames re-enameled, fancy colors, striped .....	4.00
Taking wheel apart and putting together, extra .....	1.00
General overhauling, bearings only..	1.00
General overhauling, bearings and nickel cleaning .....	1.25
Truing and aligning frame .....	1.50 up
Truing and aligning forks .....	50 up
Spokes (one) .....	15
Spokes (two) .....	30
New rims, plain .....	1.75
Pair rims, plain .....	2.50
Truing wheel in frame (fair condition) .....	25
Truing wheel in frame (bad condition) .....	50
Punctures, double tube (laced tires)..	25
Single tubes, one plug .....	25
Single tubes, two plugs.....	35
Clincher tires .....	25
Morgan & Wright, valve and stem...	35
Cementing on tire .....	25
Vulcanizing, casing and repairing tube, small .....	50
Vulcanizing, casing and repairing tube, large .....	75
Vulcanizing valve stem, single tube..	50
Straightening crank .....	25
Straightening handle bar.....	25
Truing sprocket .....	25
Cleaning bearings .....	1.00
General overhauling .....	1.50
Cleaning spokes, varnishing rims and enameling rims .....	1.00 up
Chain guard complete and lacing .....	1.00
Dress guard complete .....	1.00
Lacing mud guard .....	50
Lacing chain guard.....	25
Rear stays .....	50
Pedal rubber put on .....	40
Repairing chain .....	25

**Eastern Dealers to Sell for Cash.**

The bicycle dealers in Beverly, Salem, Marblehead, Danvers and Peabody, in the state of Massachusetts, have combined for the purpose of conducting their business

on a cash basis. It is their intention to refuse to sell goods on the installment plan. They have also decided to maintain a uniform price for all repairs, and no credit will be given to customers who wish repairs made. Five cents will be charged for pumping tires. Dealers will furnish customers with the opportunity of pumping their own tires, but a charge will be made for the services of an attendant. The dealers claim that during the past season they have been doing little else than pumping tires for nothing.

**REPAIR PRICES IN CANADA**

No Movement to Adopt a Schedule in Montreal and Toronto—Prices Vary Little.

Montreal, March 6.—With the advent of spring there appears to be no general movement in the bicycle repair trade towards a regular schedule for repairs, as is the case in some cities of the United States. Notwithstanding the absence of such a schedule, the repairmen's prices do not vary greatly, and last year they were well maintained. Neither can Toronto boast of a fixed schedule, but a close calculation of repairs on standard machines in both cities would be about as follows:

Punctures .....	\$ 25
Vulcanizing .....	50 up
Valve .....	50
Valve stem .....	25
Inner tube put in.....	1.65 up
Outside cover .....	4.00 up
Cementing on tires, each.....	25
Valve cup .....	10
Link in chain.....	25
Extra link .....	10
Chain bolt .....	15
Chain bolt nut .....	10
Chain bolt .....	15
Axles for front wheel.....	50
Axles for rear wheel.....	65 up
Crank axle .....	1.25 up
Plain crank .....	1.00 up
Right hand crank .....	1.50 up
Cementing Grips, per pair.....	15
Straightening cranks .....	25
Brazing in two pieces of tubing.....	5.00 up
Brazing in two pieces of tubing.....	3.00 up
Enameling frames complete, black..	2.00 up
In colors .....	2.50 up
Striping, extra .....	50
Aluminum finish .....	3.00
Lacing chain guard.....	25
Lacing mud guard .....	65
Mud guard, wood only.....	65
Chain guard, wood only .....	65
One new fork side.....	1.50
Two new fork sides .....	2.75
Fork stem .....	1.35
Truing forks .....	75
New rim .....	1.50 up
New spokes, complete, each wheel..	2.00
One spoke .....	25
Additional spokes .....	10
Truing wheel .....	40 up
Cleaning bicycle all over, adjusting bearings, etc .....	1.50 up
Cleaning bottom bracket .....	35
Pedal axles, each .....	30
Pedal cones, each .....	20
Pedal cups, each.....	20
Pedal dust cups, each.....	25
Upper head cup, each.....	25
Lower head cup, each.....	30
Upper head adjusting cone, each....	35
Lower head cone, each.....	20
Head lock nut, each.....	10
Head lock nut washer, each.....	10

**Advertising a New Store.**

W. D. Wilmot is a bicycle dealer in Fall River, Mass., who has the reputation of doing things in an original fashion. Recently he opened a new store and repair shop and naturally was anxious to get as much publicity as possible. Instead of buying large space in the daily newspapers, hiring musicians, or making use of any of the other recognized methods for gaining publicity, he decided to give the first 1,000 customers who visited his new store 1,000 free orders for some sundry, repair or service in his line. The list of gifts follows:

One guaranteed tire, 1 saddle, 1 handle bar, 1 pair pedals, 1 chain, 1 wood rim, 1 wood rim fitted, 1 pair rims enameled, enameling one bicycle black, cleaning one bicycle, nickeling one handle bar, 1 fork trued, 1 frame trued, 1 sprocket trued, 1

crank trued, 1 wheel trued, 1 puncture vulcanized, 3 punctures plugged, 5 new valves (wired in), 5 cementing on a tire, 5 front axles, 5 honing a razor, 5 to sharpen a pocket knife, 10 each of the following: Spoke put in, lace a chain guard, to sharpen skats, cyclometers, bells, adding machines, hanks lacing cord, rim cement, plug cement, patch cement, enamel polish, elastic bundle carriers, pairs toe clips, 20 pairs grips, 25 pairs scissors ground, 25 frame buffers, 50 bottles bicycle oil, 50 valves (not put in), 50 hand pumps, 50 plugs, 100 sticks graphite, 100 pairs pant guards, 100 free lesson tickets, 100 bachelors' buttons, 100 rolls tire tape, 50 spokes and nipples.

As a result Mr. Wilmot made 1,000 small cash sales in three days, and in the first ten days booked orders for 14 chainless machines. He will be glad to exchange ideas with any other active dealer, or send samples of his circular and gear table to any dealer sending a self addressed envelope.

**EASTERN REPAIR SCHEDULE**

Moderate Charges for Repair Work Adopted in New Jersey Town—Terms Strictly Cash.

Brighton, N. J., -March 6.—The cycle dealers of this city have adopted the following schedule of prices for repairs, which is printed on a card 22x12 inches and accompanied by the intimation, boldly printed, that the terms are strictly cash:

New rims, plain .....	\$1.50
Spokes in wheel.....	10@15
Cleaning and adjusting.....	1.00
Link in chain.....	10
Chain bolt and burr.....	10
Chain adjusters, per pair.....	25
Repairing inner tube of tire.....	35
Repairing single tube tire.....	25
Cementing tire on rim.....	10
New valve .....	25
Valve stem .....	25
Metal valve .....	50
Vulcanizing tire .....	50 up
Fork ends, each.....	50
Fork sides, plain.....	1.50
Fork sides, nickeled.....	2.00
Fork crown, plain.....	1.50
Fork stem.....	1.50
Cones and cups, each.....	75 up
Cotter pins, pair.....	26
Nickeled burr .....	10
Rear sprocket .....	1.25 up
Front sprocket, plain.....	1.50 up
Cutting down frame and enameling..	5.00
Plain enamel, three coats.....	2.50
Enameling and striping rims.....	1.00
Stained rims .....	50
Cranks, per pair.....	1.50
Axle for wheel.....	75 up

**Special Prices for Winter Work.**

A Massachusetts dealer and repairman makes a practice every winter of issuing the following special offers to his customers:

No. 1. For \$1 I will send for your bicycle and carefully store it all winter.

No. 2. For \$1.50 I will send for your bicycle, clean, oil and adjust all the bearings and store all winter.

No. 3. For \$4.50 I will send for your bicycle, clean, oil and adjust, enamel the frame and fork black or maroon and make no charge for storage.

No. 4. For \$6 I will send for your bicycle, clean, oil, adjust, enamel black or maroon, true both wheels, true frame, forks and cranks, repair tires if worth repairing, and make no charge for storage.

No. 5. For \$8 I will send for bicycle, clean, oil, adjust, enamel black or maroon, true both wheels, true frame, forks and cranks, repair tires if worth repairing, nickel plate all parts except spokes and hubs, and make no charge for storage.

No. 6. For \$10 I will send for bicycle, clean, oil, adjust, enamel black or maroon, true both wheels, true frame, forks and cranks, repair tires as above, nickel all parts, put all new spokes in both wheels, and make no charge for storage.

The bicycle dealers of Salem, Mass., at a recent meeting decided to close their stores three evenings each week during the approaching season.

## COMMERCE IN FOREIGN MARKETS

CYCLE FACTORY  
FOR  
SOUTH AFRICA

An attempt is being made to start a cycle factory in Port Elizabeth, South Africa, but judging from the following criticism with which one of the local papers greeted the venture, it is highly improbable that success will wait upon the effort:

During the past few weeks a circular letter has been distributed broadcast throughout South Africa by a firm styling itself "Tarry & Co., general merchants," whose address is given as Box 339, Port Elizabeth. The prospectus goes on to state:

"This company is formed for the purpose of establishing a cycle factory in Cape Colony, with branch depots (and subsequently factories) in Natal and the Transvaal, to make and place upon the South African markets good, reliable bicycles at a much cheaper figure than imported machines are, or can be, sold at. The sale of bicycles in South Africa has already assumed very large proportions, but the present high prices debar many from indulging in this most healthful, invigorating, and delightful exercise. The object of this company will be to manufacture in South Africa a machine the price of which shall be within the reach of all."

We are indisposed to occupy space with the absurd claims put forward in the prospectus of the South Africa Cycle Manufacturing Company, Limited, promoted by Tarry & Co. Bearing in mind that the raw material would have to be imported from Europe; that skilled labor in South Africa is only obtainable at a high salary as compared with rates paid in other countries; and that the laying down of mechanical appliances and their working, for the production of all or any of the multifarious parts of a cycle, would entail an outlay many times in excess of that in England, where wages are notoriously high, it is obvious that the capital of the proposed company is not only absurdly small for the purpose, even if it be all called up, but is barely sufficient to cover the expenses of the voyage of a staff of competent and skilled workmen and the purchase and laying down of the necessary machinery with which to commence operations. How, then, can the company claim to manufacture in South Africa a machine the price of which shall be within the reach of all at a much cheaper figure than imported machines are, or can be, sold at? Parts can, it is true, be imported and put together at probably less cost than a complete bicycle of repute; but, as the word "manufacture" is especially emphasized in the prospectus, we have only concerned ourselves with the literal interpretation which the word conveys. In our opinion, if the whole or any part of the money asked for has been subscribed by a confiding public, all the return they will get for their investment will be the winding up of the company almost as soon as it has commenced operations.

BICYCLE  
SALES IN  
SUMATRA

Cycling on the west coast of the island of Sumatra is principally confined to a small percentage of Europeans who are resident there. Some of the Chinamen born in Sumatra, however, are riding bicycles. There are perhaps seventy-five machines in use. An increase in the number is not probable until the price is considerably reduced.

The condition of the roads is good throughout the year. They are macadamized. There are no native bicycle makers or repairers. Most of the bicycles in use were brought to Sumatra by people employed in the government service or by passengers returning from Europe. Many varieties of machines are to be found. The number imported by shopkeepers will not exceed a dozen. Their sale is exceedingly slow. Some which were imported for sale were of Austrian manufacture, one of the retailing stores being a branch of a Vienna firm.

The duty on bicycles is 10 per cent. of the appraised valuation. The receiving port for the west coast of Sumatra is Padang, where every week a steamer from Holland arrives carrying the Dutch

mails. The only charge on inward goods is the landing tax. Goods not cleared by importers are stored in the bonded warehouses of the government and can be re-exported free of duty. There are six importing firms which might be induced to handle bicycles.

AMERICAN  
BICYCLES IN  
FRANCE

Bicycles are in general use in the department of Marne, which ranks third in France in the number of bicycles used in proportion to inhabitants. The first is Paris and the second Gironde. The roads are very good and are kept in good repair, but are rather hilly. There is only one local factory, and its product is not important. Three machines of American make are now sold to one of English. Bicycles enter this district from Havre and Calais. The best communication with the United States is via Havre. The freight by the Transatlantique Line, New York to Havre, is \$6 to \$8 per 40 cubic feet, in proportion to the importance of the invoice.

CYCLING  
IN THE  
TRANSVAAL

Johannesburg is the headquarters of the South African bicycle trade. The city is not really adapted for cycling, as the roads (and the word road in South Africa is largely a figure of speech) are extremely bad, the sandy soil making pedaling more a matter of undoubted exercise than of pleasure; but such a little detail as this does not damp the ardor of lovers of the wheel, and pedestrians are beginning to complain that the cyclists are taking up all the roadway to the exclusion of all else.

A Johannesburg peculiarity is the "bicycle raffle," which takes place every Saturday evening. The machines put up as prizes embrace all varieties, and are as a rule second-hand goods. These raffles are conducted fairly enough, but the legitimate business men naturally do not view them with favor.

Very few women ride in the Transvaal, and few of the cycle stores exhibit ladies' machines, though they of course keep them in stock.

Cycle stealing in the Transvaal has developed into a fine art of late, and it is an unusual occurrence for a week to pass without three or four convictions being recorded against these scoundrels.

The bicycle has also been put to use by highwaymen, two cyclists having held up the secretary of a mine and robbed him of several hundred pounds. In this case the thieves were captured before they had had time to get rid of much of their plunder, and they are now serving a long sentence in the Johannesburg jail.

The Boers in the up-country districts will not countenance the bicycle, and, in fact, many of them look upon it as an invention of the evil one; but the Dutch residents in the immediate neighborhood of Johannesburg and Pretoria have during the last three years taken to it, and the streets of Pretoria on a Sunday are simply crowded with young Boers, who have discarded the horse for the more handy bicycle.

At present the cycle trade in the Transvaal, in common with all others, is not flourishing, but the depression is of a temporary nature and when good times once more return, as they must before long, the cycle trade will be one of the first to experience the effects of the boom.

HIGHWAYS AND  
TRADE OF  
NEW ZEALAND

Nearly all the New Zealand roads are composed of shingle, which is obtained from river beds, but this has proved very unsatisfactory in the past, as these stones being water worn do not bind well, and this shows very much after any lengthy spell of dry weather. Then, again, cyclists in Canterbury province cannot undertake a ride of any length without having to cross water races, as there are almost innumerable in that country. They are supplied with snow water from the mountains and range on an average about seven to ten feet wide, and wherever you go you find these races crossing your road.

So far, this has been the worst winter for cycling since the pastime caught on with New Zealanders. The pastime is exceedingly popular, especially in Christchurch, where level roads are to be found in abundance and were the surfaces somewhat better, this town would be virtually a cyclist's paradise. It also boasts of having the largest number of cyclists in proportion to its population of any city in the world, but that is a matter not easily proved. All kinds and conditions of machines are represented, and the same can be said of tires.

Riding is practiced to a considerable extent in Dunedin, where the roads are of fine quality, but exceedingly hilly. One cannot ride out of Dunedin for two miles without encountering some very stiff grades. The other towns of importance are Wellington and Auckland, the first named of which has more dealers than any other town in the colony. Butchers, tobacconists, hardware dealers, dry goods stores and wholesale warehouses all represent an agency and in consequence the trade has been very much cut up, and exclusive cycle dealers have had a rough time in competition. The roads in the neighborhood of Wellington as well as the streets in the city itself are very poor.

There is a splendid touring country along the west coast of the north island. Along this route one strikes the most beautiful country in New Zealand. Somehow droughts never seem to affect this part of the colony. The roads are hilly and the scenery is singularly attractive.

The last town in New Zealand to take to the bicycle was Auckland, but it is by no means least in the point of the trade. Cycle stores are springing into existence like mushrooms.

IN SINGAPORE  
BICYCLES  
ARE COMMON

Bicycles are in general use amongst Europeans in Singapore, and even natives use them so far as their means will allow. The roads are fairly level and smooth, with few hills of little height. Most strangers declare they are ideal for the bicycle. There are no manufacturers. Bicycles are imported mostly from the United Kingdom, the United States, and a few from Germany. There is no duty on bicycles or on any other article entering Singapore from any part of the world, the port being free.

Singapore and Penang are the receiving ports in the Straits Settlements. Port charges are nil, as affecting importers. There are no bonded warehouses. Goods should be carefully packed in cases lined with pitch paper. Plated parts should be well coated with vaseline, and cases should not be stowed close to boilers.

## BASE AND SIZE OF WHEEL

### English Constructor Argues for Small Drive Wheel and Lengthened Base—Tall Riders' Machines

In regard to relative sizes of front and rear wheels on bicycles the well-known English bicycle constructor, P. L. Renouf, writes in *Bicycling News*: In the diagrams we will suppose a given load to be resting on the middle of a beam supported by a pair of wheels, of which the one towards the right-hand side is a driving-wheel, and the wheel on the left-hand side is opposed by an obstruction; the facility with which the front wheel will be pushed over this obstruction will depend on several circumstances: one is the relative size of the wheel to the obstruction, and another is the size of the driven wheel to that of the driving wheel. It is obvious, as the rate of rise will be in the ratio of the distance of the obstruction to the point of contact of the wheel with ground, the larger the wheel is the more easily will it surmount the obstruction; but on inspection of the diagrams, which represent an ordinary brick in contact with a 24-in., a 28-in., and a 30-in. wheel respectively, it will appear that there is not so much advantage with the larger wheel as might be thought. Though bricks have to be encountered sometimes, they are about the highest obstacles a machine may be fairly expected to deal with; in the case of lower articles the advantage of the large wheel is of course still less. We can therefore safely assume that our present standard size of steering wheel—28 or 30-inch—is quite large enough for a machine for one rider; a much larger front wheel entails bringing the head or steering socket out of reach, unless the angle and pitch of steering is made so violent as to more than counteract the advantage otherwise gained.

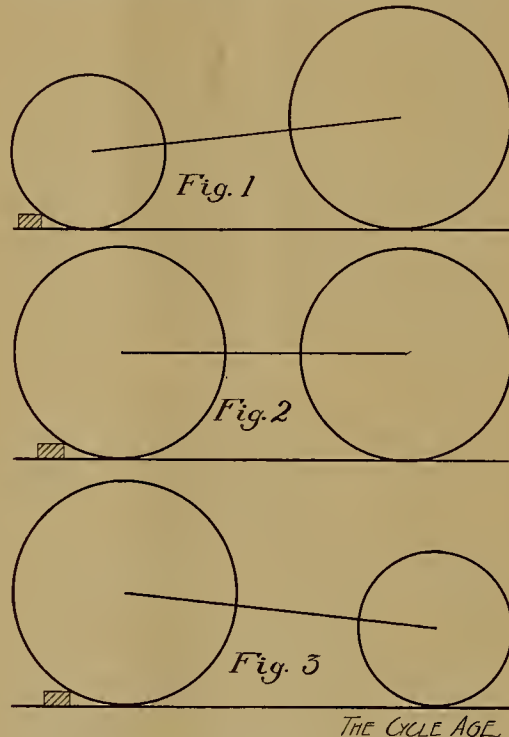
#### The Front Wheel's Resistance.

If we consider the sizes of the wheels relatively to each other, where the front wheel is lower than the driving rear wheel, the effect of resistance to the front wheel to the impetus of the beam is to make the beam and the back wheel tend to pivot on the front axle and jump up, or else, if kept down by the load, tend to buckle up the beam or frame—in both cases the obstruction will be pushed harder towards the ground.

Where the wheels are equal the tendency is to check the forward flight of the beam and compress it—on our cycles to push the front forks back, and create vibration by the reaction. But when the rear wheel is the smaller, and the front one is resisted, the beam will be driven forwards and upwards, with the result of lifting the front of the machine over the obstacle. Nor need the driving wheel be much smaller than the front one to produce this effect. We can ourselves experience similar effects by pushing an ordinary two wheeled (or even a one-wheeled) barrow, and letting our hands take the place of the axle of the driving wheels of our diagram: if the barrow is to be pushed up a curb, for instance, the hands are instinctively dropped below the level of the wheel centres: if the handles be held higher and not gripped tightly, they will rise up sharply when the obstacle is struck; if they are brought to the same level as the wheel centres, the shock will be perceptibly greater than in the first one.

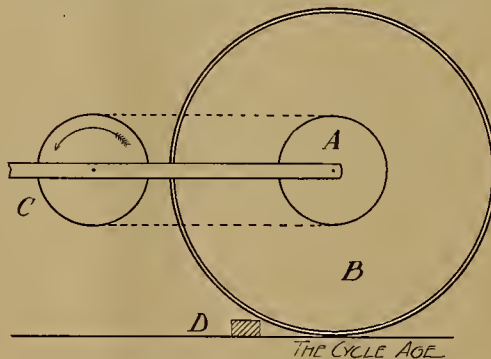
For road work, therefore, there is unquestionably an advantage in having the

driving wheel slightly smaller than the steering wheel, as a succession of small obstacles are being constantly encountered; besides this, the friction of the ground itself, which causes the front wheel to turn round, offers resistance in a small degree. I believe that the resistance as compared with the grip of the driving wheel is even on a smooth



racing track sufficient to render, if not an increase in the size of the steering wheel, a decrease in the size of the driving wheel of use.

The same writer discusses the position of the saddle and of the crank hanger in relation to the rear wheel axle. In former days, he says, the preconceived idea prevailed that the weight of the rider should be well over the driving wheel, but experience proved this to be wrong. Mr. Renouf holds that the weight of a rider must be well in front of the rear wheel center and his reasoning is given with reference to the illustration as follows: A wheel B is furnished with a pulley A keyed to it; a framework capable of motion about the centre of the wheel carries a pulley C (by



chain or otherwise in gear with the pulley B) and a motion (human or otherwise) rotating the pulley C. The rotation is productive of relative motion between the rim of B and the framework supporting C; that is while C revolves and the framework remains horizontal, as in the diagram, B must revolve; but it follows that if C revolve and B cannot move across the framework,

the latter must move across B, which it can only do by rising to a horizontal position. In other words, the action of pedalling on a rear-driving cycle tends to wind the framework and the rider up and over the top of the rear wheel. Supposing the weight of the rider and framework to be nearly balanced over the axle, the friction of the rear wheel on the ground would cause it to remain stationary, and the rider instead of propelling the driving wheel forward, would undoubtedly wind the framework backwards on its pivot. If a block D be held in front of the driving wheel, B will only surmount the resistance if the power on C is sufficiently strong, and if the weight on C is sufficient to prevent the overwinding before mentioned. And there can be no question that the best means of keeping the framework down is by bringing the load on it forward and as far from the rear axle as practicable.

The higher the speed at which a machine is propelled, the greater is the resistance to the driving wheel, and the greater the tendency to take weight off the steering wheel—and this is one of the several reasons why the racing men—to counteract this effect of speed—instinctively throw their weight forward as the speed increases.

#### Vibration By Unbalanced Design.

I feel pretty well convinced that the present tendency of bringing the saddle forward is largely due to the want of proportion in the average cycle frame of the day.

Supposing on anything else but a cycle a load were to be carried on a set of wheels. No one would ever dream of placing the support of the weight anywhere else than in the center of the carriage, and it is evident that if the center of gravity is raised above the supporting base, the latter—in this case the wheelbase—should be lengthened both fore and aft. If this is not done, the base will become more and more unstable, and this will induce vibration.

#### Renouf's Preferred Construction.

Now if we examine the standard machines of a standard manufacturer we are pretty sure to find three or more frames listed for riders of varying heights, but all with the same distance from bottom bracket to front and to rear axle—whether the rider be five feet or six feet high. The angle of the seat mast is the same and the result is that the tall rider has his weight nearer over the rear wheel axle than the short rider, and the burden and drag on the rear wheel are unduly increased.

The epitome of Mr. Renouf's reasoning is that standard frames of today are too short, and that a combination of 28-inch rear wheel with 30-inch front wheel over a wheel base graduated in length by the height of the frame would be preferable to a standard wheel base and 28-inch wheels fore and aft.

#### Bicycles Facilitate Mail Service.

In Germany, and especially in Berlin, the mail deliveries are made by postmen mounted on bicycles. The use of bicycles has enabled the city postoffice to make twenty-seven deliveries daily. A letter mailed in the city is frequently delivered to the addressee in the same city from forty-five to fifty-five minutes after having been posted.

Some of the employes of the National American Cycle Works Co. of Akron, O., have quit work because they were put on piece work instead of being paid for day work, and were unable to make more than about half as much as formerly.

Three thousand bicycles were stolen in England during 1898.

# WHAT WOULD YOU DO?

The only sensible way to coast is the safe way. The safe way is possible only with perfect control of the bicycle. The minute the feet are off the pedals the control is lost—coasting then becomes a danger.

Eclipse Cycles Fitted with

The Morrow Automatic Coaster and Brake

Make coasting a safe pleasure. It enables riders to hold the



pedals stationary while coasting. A slight back pressure of the pedals applies the brake. The bicycle can be stopped on the steepest hill in the shortest time and smallest space. Any wheel thus equipped can be sold—easily. All the particulars if you want them.

Eclipse Bicycle Co., ELMIRA, N. Y.

# Plain Talks on ANDRAE Tandems

XI.

Four years ago Andrae Tandems were like other tandems are to-day.

This is a strong statement—but we can back it up.

Take an Andrae catalogue of '95 (4 years ago) and a '99 catalogue of any other make, turn to tandems and you will see that—

The Andrae '95 Tandem has the Design the Other '99 Tandem is Copied from.

This proves without a doubt that others are four years behind us in tandem building.

But their tandem costs only \$75 while the Andrae costs \$85.

If a '95 tandem can be sold for \$75 a '99 tandem ought to be easy to sell at \$85.

Write for our paper, "The Andrae Agent."

Julius Andrae & Sons Co.

MILWAUKEE, WIS.

They Never Disappoint . . . .

## What the Sporting Editor of the New York Journal Says



GENTLEMEN :

After having used the '99 Olive for some time on country roads, park boulevards, asphalt and cobblestone pavements, I am forced to pronounce it the staunchest and easiest running wheel I have ever mounted.

As an all around machine it could not be more satisfactory, and its simplicity of construction is a feature that must commend itself to all.

Yours very truly,

HARRY BEECHER,  
Sporting Editor New York Journal.

AGENTS AND RIDERS ALIKE ARE ENTHUSIASTIC OVER THE '99 OLIVE WHEEL

The Olive Wheel Co., Syracuse, N. Y.



# The Watson Automatic Seat Post

The only PATENTED Automatic Seat Post in the world. Convertible to front or rear L. Locks and unlocks automatically and instantly. Made on the wedge principle, therefore binds equally its whole length, and can't bulge the tubing. Fits any wheel made. Our customers will confer a favor by informing us of any bona fide sale and delivery of a seat post similar to ours, as we shall positively prosecute any infringement on this post. In the United States we have two patents issued July 12th, 1898, February 28th, 1899, the third allowed and the fourth pending. Outside of the United States our post is patented in every country where bicycles are made. We have doubled the capacity of our factory and from this time on will be able to fill all orders promptly. We manufacture a Handle Bar on the same principle as the Seat Post, but are sold ahead until April 1st. Orders will be received for delivery after that date. Send for circulars and price lists of Seat Post and Handle Bar.

THE WATSON AUTOMATIC SEAT POST CO.,  
7 & 9 WARREN ST., NEW YORK. Factory: Bridgeport, Conn.

Hibbard, Spencer, Bartlett & Co., Chicago. Western Distributing Agents. Canadian Office, 19 Toronto Arcade, Toronto, Ont. European Office, No. 1 St. Swithen's Lane, London, England. Cable Address, Dactiifias.

# The American Saddle Co.

OPERATING THE FORMER  
FACTORIES OF

GARFORD MFG. CO.

OF ELYRIA, OHIO

HUNT MFG. CO.

OF WESTBORO, MASS.

WHEELER SADDLE CO.

OF DETROIT, MICH.

WHEELER SADDLE CO.

OF TORONTO, ONT.

GILLIAM MFG. CO.

OF CANTON, OHIO

P. & F. MFG. CO.

OF READING, PA.



Offices: 608-613 American Trust Building

• • • Cleveland, Ohio • • •



# The Types That Will Live

**W**E refer to saddles. What will they be? Do they now exist? These are questions that interest every manufacturer, dealer and rider.

There is no doubt that saddles, like watches, wagons, or washboards, will settle down to a few standard types. The freaks and follies of saddle invention have had their day and served the purpose of proving and accentuating the value of real saddles—the solid, straight-out, every-day-in-the-year saddles, such as we make.

The American Saddle Co. has no use for monstrosities. Its mission is, in part, to crystallize the sentiment of the public upon standard models, and to eliminate the multitudinous, and (many of them) useless styles now annoying the manufacturers of wheels and confusing the judgment of riders.

Our concentration process has begun, and instead of fifty or a hundred styles heretofore offered by our several companies, the number will be materially reduced, always having due regard for existing contracts.

It is our purpose to have comparatively few models, and those, such as have demonstrated their right to live.



## The American Saddle Company

AMERICAN TRUST BUILDING

Cleveland, Ohio

## CUSHION EFFECTS IN CYCLING

### Spring Devices—Relations Between Speed and Comfort— Pneumatic Hub Wheels

Pneumatic hubs for bicycle wheels are looked upon with a good deal of derision by most bicycle riders. So are spring suspension of the wheel axles, spring frames and cushioning devices, except saddle springs. A minority, however, want something besides pneumatic tires to rely on for comfort in riding on rough ground; and a still smaller minority want something to replace pneumatic tires. In regard to spring devices it is now by most riders accepted as axiomatic truth that the three points of support for the rider, the saddle, the handlebar and the pedal shaft (crank shaft) should remain under all circumstances in fixed relations to each other, and spring devices which affect these relations are considered as inferior. The reason advanced for this view has reference to lost motion in the leg action, as between saddle and pedal, and insecurity of steering arising from springy action of the handlebar.

#### The Three Fixed Points.

The fact that the rider on an unyielding machine saves himself from jolts by throwing his weight on the pedal and partly rising from the saddle, thereby stretching his legs and practically changing the relations between the three supposedly fixed points, is usually not considered. If it were, it would, however, be shown that the rider's opinion is not so far from being right as it is insufficiently reasoned. For when the rider takes up a jolt by rising on the pedal he still has the choice of throwing his weight on one or the other pedal, and by throwing it on the pedal that descends he may utilize the shift of weight for propulsion. This he practically does. With many spring devices, saddle springs included, he has not this choice, but the saddle bobs up and down independently of the motion of the legs, neutralizing it as often as it helps it. To those who care for speed more in theory than in practice the spring devices retain their usefulness, only slightly handicapped by this shortcoming, which is offset by the great simplicity of the devices. In the spring frames which have gained most popularity in United States the invariable relations between the three fixed points are maintained and the absorption of jolts is effected either by shifting the point of ground support to a trailing wheel as in the Rex pattern of cycles or by allowing the rear quadrant of the frame a vibrating motion with the crank hanger as a pivot as in the spring frames built by several firms under Travis' patents.

#### Wood Frames Are Spring Frames.

In wood frame bicycles the springy action is evenly distributed throughout the frame and front forks, but the steering head is rigid. The peculiarity by which they recommend themselves is that the natural rigidity of wood of the dimensions necessary for strength excludes large vibrations, which might cause noticeable loss of propelling power, while its fibrous character admits of ready yielding within narrow limits. In this respect the action of wood frames has points in common with a hard-blown pneumatic tire, so far as the effect on the rider is concerned. The small shocks which in steel structures, as usually designed, take effect in that kind of internal, molecular vibration, that numbs hands or feet, is suppressed in wood. Whether it is pos-

sible to produce a similar effect in steel without sacrificing strength has not yet been sufficiently demonstrated, but steel on the other hand has the paramount advantage of producing uniform results and of being plastic in nature, so that it holds any form given to it. This makes it indispensable for joints. Its indifference to climatic changes makes it preferable for front forks and any other parts of a bicycle in which a definite curve must be maintained as the normal shape. For wheel rims steel would be preferable if steel rims could be made to yield so readily to small shocks as to save the spokes from sudden stresses and vibrations. The main advantage of the wood rim is in the fibrous nature of wood which allows it to conform to stresses over a comparatively large arc thereby distributing the stresses on many spokes and preventing molecular vibrations which with a steel rim would be communicated through front forks to the handlebar.

#### Public's Bias Only Skin Deep.

It is probably due to the influence of the racing game that the general riding

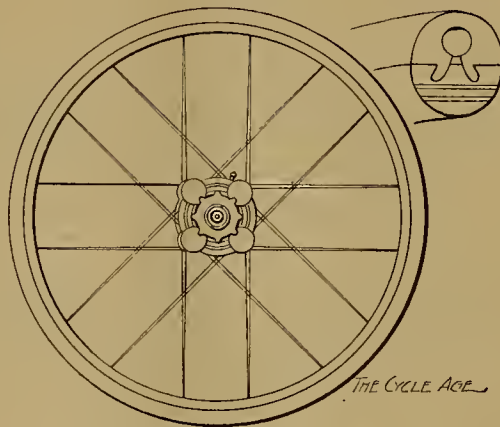


FIG. 1. WHEEL AND TIRE.

public has come to look askance at cushioning devices which are proclaimed as such. For it is noticed that the prejudice—if prejudice it is—is directed more against the word than against the reality, more against any definite appliance which is marketed as a cushioning device than against the cushioning effect obtained by a form of construction which passes current without mentioning the tabooed word. Were it otherwise, a large portion of the public would insist on hollow steel rims instead of wood rims, on rigid saddles instead of yielding ones, on small rake and curvature of front forks instead of the twenty degrees of rake and liberal curvature at the tips which is favored by many makers.

#### Spring Frames Unwittingly Favored.

A good deal of the charm of tandem riding is due to the softly undulating motion of this style of cycle and this motion, again, is not all or principally caused by the long wheel base but chiefly by the small rigidity of the long frame which yields almost four times as much under the rider's weight as the single diamond frame and responds to jolts much less sharply.

The small wave of popularity for round front forks made of taper gauge tubing, which is apparently spreading from England to this country, has no other foundation than the ease of riding and the

saving of shocks to the frame which are traceable to the springiness of such forks.

The public are more in favor of spring devices than they know. What they ask is such forms of construction as will give them easy riding without suggesting a charge of effeminacy and without sacrificing the possibilities of speed. And the construction must, of course, be sightly. They want proof on the race track and from road races and those manufacturers are therefore on the right trail who endeavor to prove that their cushioning devices or spring construction—under some other more attractive name—are speed producers and superior to those excellent natural springs, the rider's legs and feet.

#### Auxiliaries, Not Substitutes.

These natural springs of flesh and sinew have their highest efficacy only at high speeds when a comparatively small portion of the weight rests on the saddle. They are at a disadvantage if a jolt is received when the pedals are at dead centers or when the roughness of the ground is of that peculiar character that shock follows shock in quick succession, as on a frozen road or over cobble stones. Then the fastest riding is the easiest on man and machine, both; partly because the machine drops less deeply between the inequalities of the surface and partly because the rider is compelled to get above the saddle.

It is required of spring constructions that they shall permit the rider to pass easily over such ground at slow speed, and also that they shall not interfere with his riding fast over it if he chooses.

They must be auxiliaries to the springs in the rider's anatomy, not substitutes.

#### Springiness Without Vibration.

With this condition pneumatic tires and wood rims comply—largely because they are revolving parts of the construction—and this may be assigned as the main reason why they have been generally approved. Whether spring frames and springy front forks comply with the condition seems much more questionable. A tuning fork produces the same tone whether struck smartly or lightly. Spring frames respond to jolts with a resiliency which is determined by their own constitution and which does not necessarily correspond to the nature of the road surface over which the rider travels. Their resiliency may help or oppose propulsion as the case may be, because the spring—whatever its nature, if it always operates in the same direction—is not brought quickly enough to rest to be ready to receive the next jolt under the most favorable circumstances.

It is at this point that the rider's natural springs operated by muscular contraction and air confined in a circular form and receiving its impulses now at one point and again at another, have an advantage which riders have recognized by instinct or experience.

Producers of spring devices who can prove that their constructions have the same adaptability to all road surfaces will have a great advantage in the market, or, even if they may only prove that a portion of the speed check which a jolt ordinarily involves, is transformed by their devices into increased power for propulsion (as when the rider steps harder on the descending pedal at a jolt) their chances of convincing the public will be much increased.

#### The Pneumatic Hub.

Among the radical means for increasing the comfort of riding the pneumatic hub is probably as near to the mechanical requirements as anything else produced. It has taken commercial form in this country through the establishment of the Collins Pneumatic Hub and Wheel Works of Sayre, Pa., where wheels with

pneumatic hubs are manufactured for use in "bicycles and all other vehicles" on such a scale that the question of the fitness of the device is placed directly before the trade for its consideration.

The pneumatic hub wheel has against it that it differs in appearance from the usual style and that it is offered as a substitute for and improvement over pneumatic tires which hold a strongly entrenched position in the public opinion. Its makers must therefore produce a flawless argument for it before the public at large may be expected to give serious thought to the innovation, and this they are attempting to do in very excellent style in their illustrated catalogue in which the construction and its object are well described in general and in detail.

The principal claim advanced is, of course, that the use of pneumatic hub wheels obviates all the inconveniences resulting from punctures or other injuries of pneumatic tires, but this would be worthless unless the device at the same time offered the rider all the comfort in riding that is derived from pneumatic tires. The company contends that the pneumatic hub wheel is superior also in this respect and will endure much more wear and tear.

**Description of Tire and Hub.**

The general remarks on the requirements of spring devices in this article may enable readers of Cycle Age to form

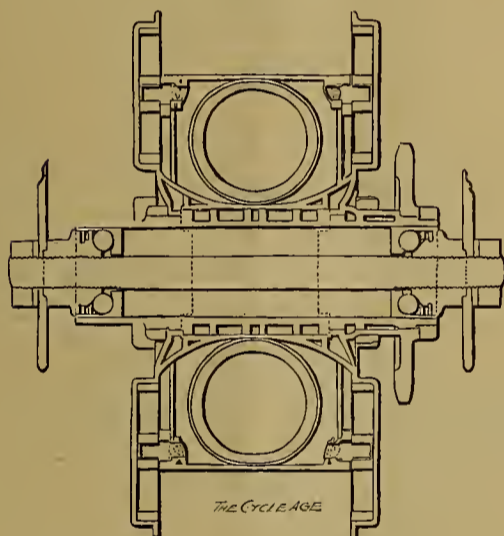


FIG. 2. SECTION OF HUB.

their opinion in regard to the speed qualities and comfort-giving properties that may be expected of pneumatic hub wheels under all conditions of road surface and style of riding, with some degree of accuracy without actual trial of the wheels, but ultimately the tests of road and race track must, of course, determine their fitness for the average bicycle rider.

The tires used on the Collins wheels are of the hollow rubber cushion variety, forming, in cross section, a complete circle in conjunction with the rim, the meeting edges being flush. Fig. 1 shows the style and also the general outlines of the complete wheel.

The hub construction is approximately shown in Fig. 2, and is described by the company as follows:

"An inner hub, turned from the best bar steel, is mounted on ball bearings. Surrounding this hub are steel-lined aluminum cones, termed the thimble. This thimble carries the pneumatic hub tube, which in general appearance resembles a miniature air tire. An aluminum ring, known as the drum, surrounds the tube, and attached to the drum are the spokes. To prevent the introduction of grit and road dust, and to properly strengthen and stiffen the wheel as a whole, there are side plates stamped from high-grade and finely-finished nickel steel. On the rear wheels these side

plates are also used to transmit the driving power."

**Where Friction is Needed.**

For this purpose four circular depressions or cups are pressed in the side-plates and into each of these cups extends a short cylindrical lug coated with indurated fiber. These four lugs are secured to the drum portion of the mechanism and have a motion limited by the circumference of the cups. When riding is hard, as when climbing grades, the lugs will naturally be against the edges of the cup and will bear the strain of propulsion, but during ordinary riding they will play in any direction within the cups according to circumstances. Their friction against the bottoms of the cups, which is considerable, will not increase the labor of propelling the machine when the movement of the lugs is vertical—in response to a jolt—and when it is horizontal it only lasts for a moment.

**OPENING DAY IN DETROIT**

**Dealers Surprised By Sales Made—Spectacular Features Absent—Interest in Chainless.**

The Detroit cycle board of trade opened the season of '99 with a general opening of the several stores of the members last Wednesday. The weather was propitious and the season opened under conditions that were as favorable as could have been desired. Sightseers began flocking to the stores early in the day. In the afternoon the stores were thronged and many of the visitors made purchases on the spot. Few if any of the dealers had expected to make many sales during the opening, so the number of sales was a gratifying surprise.

The stores of the board of trade members were attractively decorated with flags and palms and pictures, and many of them had orchestras. The enthusiasm spread to dealers outside of the board and they got in line and threw their doors wide open during the remaining three days of the week.

Freaks and curiosities were scarce, the object of the dealers being to centralize the attention of their visitors in the quality of material and workmanship and finish of their bicycles rather than in unusual constructional features. Some demand is still expected for the bicycles that have been thrown from the top of a fourteen-story building without the bending of a tube, that have been ridden by champions of the track, or that have passed unscathed through a hail of Mauser bullets, and for tires that have been ridden for a year without a single puncture by the boy who delivers goods at tack and glass factories. Souvenirs were also conspicuous by their absence and few of the dealers were giving away anything except catalogues and information.

Inquiries largely centered in the chainless machines because, while riders are familiar with the standard chain type of machine, the chainless is the newest form of construction which has given satisfactory proof of speed and durability. Knowledge of the inner workings of its driving and transmitting mechanism was eagerly sought last week at the Detroit stores. The great deduction in price of the chainless bicycles appears to have been the move most needed to interest the public.

**No General Opening in Toledo.**

Toledo, March 6.—The bicycle dealers of this city are divided on the subject of holding a general opening, some of them believing that all would be losers thereby. It is contended by the few dealers who were in favor of holding a joint opening that the whole trade would be benefited, since the daily papers would

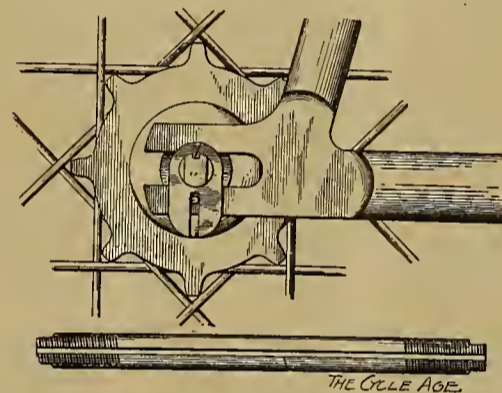
be interested and would inform the public of the affair. While it is conceded that the newspapers would give much free advertising, the manufacturers could not be interested in the project. Accordingly, announcements are made of individual openings.

**Marked Success of Washington Show.**

Washington, March 6.—The cycle show which closed Saturday night after running a week was the most successful affair of the kind ever held in Washington, and it will undoubtedly have a very beneficial effect upon the local trade. This is evident from the interest displayed and from the number of sales already made, many of which can be traced directly to the show. The attendance throughout the week exceeded the most sanguine expectations of the management. A down-pour of rain marked the closing night, but this seemed to have no effect upon the attendance, which was the largest of the week. The show was promoted by the Bicycle Show Co., an organization of leading bicycle dealers, and was such an unqualified success that the company will continue in existence for the purpose of giving a local show annually.

**Equalizing Chain Adjustment.**

H. W. Lloyd of Williamsport, Pa., is the inventor and patentee of the chain adjustment illustrated herewith which aims at the oft-attempted object of permitting uniform adjustment of both ends of the rear wheel axle. The axle is slot-



ted longitudinally along what becomes, when the parts are assembled, the upper side and is flattened on two sides at each end to allow turning of the axle with a wrench or spanner. An elongated washer is slipped over each end of the axle, engaging the slot in the axle by means of a small lug projecting into its central opening. The lower end of the washer is slotted radially toward the central opening and a pin projecting from the outer face of the lower jaw of the rear fork end fitting engages this slot. When it is desired to adjust the chain the axle nuts are loosened and one, at least, removed to allow placing a wrench upon the end of the axle. By turning the axle the elongated washer is compelled to turn with it and being stopped from pure rotation by the pin engaging the slot in its under portion it must incline one way or the other according to the direction of rotation given the axle, and thus carry the axle and consequently the rear wheel and sprocket either one way or the other along the slot in the rear fork end of the frame.

**Novel Method of Dunning.**

An original method of drawing the attention of delinquent debtors to overdue accounts has been hit upon by an Ohio retailer. To such as are slow in making payments he encloses the statement of account in a registered letter. The debtor in course of time receives a notice from the postmaster that a registered letter is waiting for him, and as such letters are

rare in his experience he hastens to the postoffice expecting to get a remittance from somebody who may happen to owe him money. His surprise upon finding that he is the victim of a conspiracy usually leads to a settlement of the account. This method offends some, it is true, but the dealer who practices it finds that the man who is offended is usually one whose patronage he can well afford to lose.

**AMERICAN AND ENGLISH EXPORTS**

**Shipments from New York Exceed Those from England By More Than Two-Thirds.**

The exports of bicycles and materials from the port of New York for the week ending February 28 are recorded as follows:

	Bicycles.	Mat'l.
Germany .. .	\$28,382	\$3,254
France .. .	18,357	9,845
Argentina .. .	11,574	1,860
New Zealand .. .	7,965	2,985
Holland .. .	6,628	464
England .. .	2,962	4,120
Russia .. .	4,031	75
Africa .. .	2,039	355
Denmark .. .	1,600	6
Italy .. .	1,143	221
British West Indies .. .	9494	335
Sweden .. .	1,171	25
Belgium .. .	200	736
British West Indies .. .	9,494	335
Switzerland .. .	.....	423
Portugal .. .	348	40
Cuba .. .	244	86
Dutch Guiana .. .	275	.....
Uruguay .. .	225	.....
Central America .. .	102	100
Porto Rico .. .	193	22
Scotland .. .	70	55
Prussia .. .	25	.....
Totals .. .	\$88,898	\$25,007

The total exports of cycles and materials from England for the week ending February 17 are recorded as follows:

Adelaide .. .	\$ 2,430
Alexandria .. .	35
Amsterdam .. .	1,000
Bombay .. .	2,230
Boulogne .. .	1,590
Buenos Ayres .. .	1,365
Calcutta .. .	2,305
Cape Town .. .	1,740
Christchurch .. .	1,515
Colombo, Ceylon .. .	545
Durban, South Africa .. .	3,145
East London, South Africa .. .	250
Freemantle, Australia .. .	100
Galatz, Roumania .. .	60
Ghent .. .	2,040
Gibraltar .. .	150
Hobart, Tasmania .. .	60
Hong Kong .. .	235
Launceston, Tasmania .. .	135
Lisbon .. .	1,250
Lyttleton .. .	175
Mackay .. .	65
Madras .. .	100
Malta .. .	185
Melbourne .. .	8,105
Nelson, New Zealand .. .	590
New York .. .	30
Port Elizabeth, South Africa .. .	340
Shanghai .. .	275
Singapore .. .	160
Sydney .. .	2,465
Trinidad .. .	75
Varma .. .	30
Wellington .. .	2,010
Total .. .	\$36,785

**Original Advertising.**

Original advertising by cycle dealers is cropping to the surface this year in many parts of the country. The value of such work is problematical. A Providence, R. I., specimen of it is herewith presented:

This — "ad" — was — written — while riding — a — Tribune — bicycle. The Tribune — travels — so — fast — that there — was — a — space — of — nearly — 42 — feet covered — from the — time — the — pencil — left — one — word — and — commenced — the — next. FRASER BROS. Co., 297-299 Weybosset street.

The factories of Coventry, England, shipped 35,300 bicycles last year, as against 41,300 in 1897 and 42,700 in 1896.

The automobile industry in France is paying nearly \$15,000,000 annually in salaries.

**CAB SERVICE STILL DOUBTFUL**

**PARISIANS ARE DISAPPOINTED**

**Electric Vehicle Company Cannot Secure Practical Light Accumulators—The Re-charging Problem.**

Paris, Feb. 15.—Much disappointment is felt in Paris over the fact that the electric cabs, so long promised and finally definitely announced to be ready for public service on the first of the present year, have not yet materialized. A very few of them have been seen about the streets from time to time, but they have not distinguished themselves, and have been speedily suppressed. The time when they will begin their work in earnest is now harder than ever to prophesy. The several companies which have undertaken the enterprise have all met with the same difficulties and disappointment. There have been impediments in the way of manufacturing just the kind of cabs best suited to the Paris streets; the training of the "coachers," and even their recruitment in sufficient numbers have not been such easy matters as they at first appeared, and the accumulators can not yet be made at once light and practical.

**Inconvenience of Re-charging Batteries.**

Locomotion is possible, but not under the conditions that would warrant the companies taking the risk of putting their vehicles on the streets. The most important problem which remains unsolved is how to recharge the batteries conveniently. With only a few cabs in service this would not be a perplexing matter, since the electric plants in various parts of the city would suffice, but when there are several hundred or a thousand of the cabs in use the difficulty will be considerably increased. It has been suggested that a number of "postes de secours," where the carriages may replenish their charges of electricity, might be built at short intervals along the boulevards; but loss of time and the inconvenience to the public make this ingenious plan impractical.

In short, the electric companies are confronted with a very knotty problem, and the inventor or engineer who will help them out has fame and fortune ahead.

**Automobile Fire Engines.**

The success of the recent experiments with automobile fire engines has induced the Paris municipal council to consider the question of introducing automobile machines for watering and sweeping the streets. They would do the work much more quickly than it can be done under the present system and a much smaller staff would be necessary.

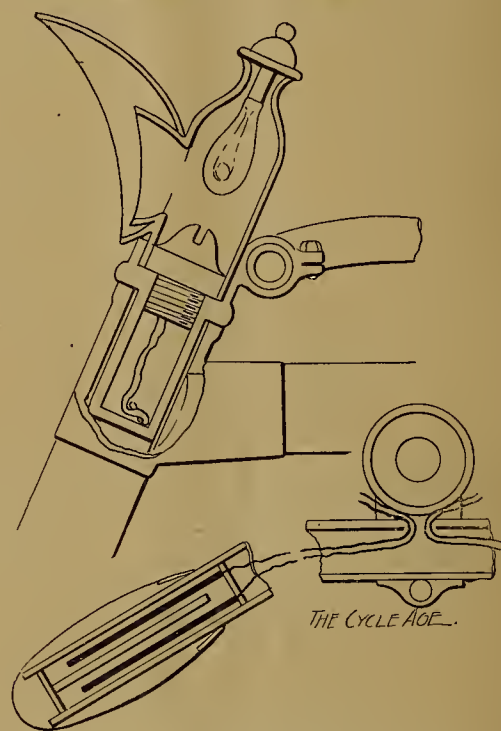
**COMBINATION HEADLIGHT**

**Incandescent Electric Lamp Having Attached Oil Burner for Use When Batteries Fail.**

With a multiplicity of objects rarely found in so simple a thing as a lamp one John Washington Eisenhuth of New York city invents, and is allowed a patent on, a cycle lantern which is built into and becomes a part of the bicycle, which illuminates the pathway of the rider either by an oil or an incandescent electric light or both, which obtains its electrical power from batteries carried inside the handle bars and which is fitted with an improved hood shaped reflector placed in front of and above the lens. The bottom part of the lamp is in the form of a hollow body which also serves as handle bar stem and fits into the head of the bicycle. How it is fitted is not a part of the invention which the patentee finds it needful to explain;

neither does the patent drawing herewith reproduced—in which the fork stem is simply omitted—give any clue to the nature of the proposed arrangement.

The hollow cylinder has at its upper end a cup shaped mouth which receives by a snap catch the combustion chamber of the lamp and carries the handle bars on its rear side, these latter being attached by means of a split cross sleeve. The oil for the oil burner of the lamp is carried in the hollow body and the incandescent globe is hung from the top piece of the lamp body which also carries at its bottom the oil wick holder. Any simple form of electric battery, according to the inventor, may be carried in the handle bar tube, a cell of the battery being in each side of the bar. Interior wires from the poles of the battery lead to the incandescent globe. The assumption is that when the electric light proves to be the one that failed the rider can borrow a match and light up the oil burner, or the two lights may be burned interchangeably to suit.



Whether the electric light bulb is to be removed when the oil lamp is to be used, deponent sayeth not.

The patent gives the impression of being one of those in which the patentee reveals only a part of the idea which it is his intention to carry out—a precaution against imitators which frequently makes a patent appear absurd at first glance.

**Chain Infringement Suit Withdrawn.**

The suit of the Ewart Mfg. Co., or as it is perhaps better known, the Link Belt Machinery Co., of Chicago, against the Baldwin Cycle Chain Co., of Worcester, Mass., for \$20,000 damages on a purported infringement of a chain patent is settled, the suit having been withdrawn at the request of the prosecution.

**Chainless Models in Canada.**

Even in Canada the trade is giving serious attention to chainless machines. The Welland-Vale Mfg. Co., of Toronto, is the first among the Dominion makers to openly advocate the use of such machines.

Daimler, of Cannstadt, has built a motor carriage which can travel forty-seven miles an hour on the road and mount gradients of 11 in 100 at nineteen miles per hour. It is of sixteen horse power.

The Automobile Club of France has now 1,650 members.

DES MOINES, IOWA, Feb. 9, 1899.  
 NATIONAL CYCLE MANUFACTURING CO.,  
 Bay City, Mich.

Dear Sirs:

Will you please send me the price of a pair of No. 5 or 6 adjustable handle bars for my 1897 National?

The little racer Van had with him on the 29th is a beauty.

1899 makes my sixth year on a National and I will ride it 6 years more. Mr. \_\_\_\_\_ wants me to ride a \_\_\_\_\_ but I told him I had ordered a National.

A National rider never changes his mount. Please let me know as soon as possible about the handle bars.

Yours truly,  
 HARRY BURGER.



# Waverley

The Finest Bicycle Ever Built

## \$40

We mean just what we say—The Waverley for 1899 is the handsomest, strongest and most perfectly finished bicycle we have yet constructed, and if that doesn't mean the finest bicycle yet built then the testimony of Waverley agents and riders goes for naught.

We are making the best sort of everyday bicycles, too—Ivanhoe Specials at \$35.00 and Ivanhoes at \$25.00 and \$26.00—but in a separate part of the factories. Can't make two grades with the same workmen.

The combined line promises rich profits to wide-awake dealers where Waverleys are not already properly represented.

## ELECTRIC MOTOR CARRIAGES

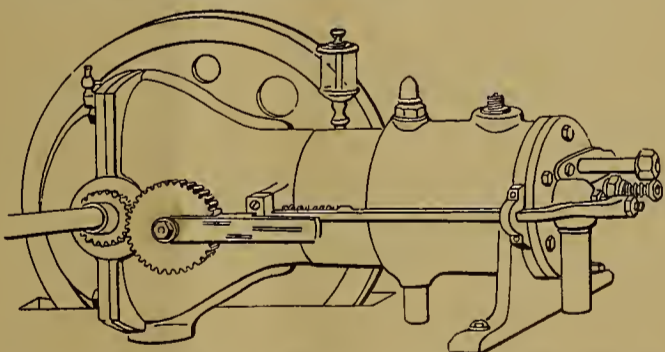
We are rapidly arranging representation for our new Electric Carriages, which are thoroughly tested and perfected machines, stylish and elegant in appearance, free from trouble and annoyance and sold at reasonable prices.

INDIANA BICYCLE CO.  
 INDIANAPOLIS, IND.

# GASOLINE MOTORS

THE ONLY RELIABLE MOTOR FOR HORSELESS VEHICLES.

OURS can be run at cost of less than 1-2 cent per hour (2 horse power—larger ones same ratio). SPECIAL MOTORS and TRANSMISSION GEARS for Carriagemen and others to construct THEIR OWN VEHICLES.



WE believe this to be the very best Gasoline Motor ever placed on the market for simplicity, durability, more power and less weight than anything ever produced. Especially adapted for Motor Wagons, Boats, Small Electrical Plants, Elevators, Machine Shops, Optical Works, Printing Presses, Feed Cutters, Carpenter Shops, Lathes, Emery Wheels, Corn Shellers, Laundry Machines, Pumping Water, Ice Cream Freezers, Irrigation Machinery, Ventilating Fans, Hay Presses, Cream Separator, Sewing Machines, Mining Machinery, Sawing Wood, etc., etc.

These Motors are manufactured horizontal or upright. They are absolutely safe, and cannot explode or cause damage, and are always ready for instant service. They require no mechanical experience or licensed engineer.

Our 2-horse-power Motor weighs but 89 pounds, and occupies a space 24x11 inches; runs at high speed and high compression.

Working parts are all tightly enclosed; one sight feed oil cup lubricates all bearings. Our ignition device is perfect, and all wearing parts are especially strong and substantial.

—WRITE FOR PRICES—

THE ST. LOUIS GASOLINE MOTOR CO.

822 CLARK AVE., - ST. LOUIS, MO., U. S. A.

# Current Cycle Manufacture

In the following table, which will be continued in subsequent numbers of THE CYCLE AGE, will be found an amplification of that class of information which is customarily given in catalogues issued by makers of bicycles, saddles, bells, lamps, chains, rims, cyclometers, etc. It will serve as a handy reference for dealers.

Firm Name	Model	List Price	Weight (all on)	Depths of Frame	Width of Tread	Form of Joints	Form of Front Crown	Drop of Hanger	Rear Fork Tubing	Rear Stay Tubing	Lugs at Bottom Bracket	Lugs at Seat-Post Cluster	Crank Hanger Form
W. R. ROLLINS MFG. CO.....	Bird	\$35	24 lbs.	22, 24, 26	5 in.	Flush	Oval	3 in.	Comb.	Comb.	3	3	Two Piece
	Bird 30-in. Wheel	35	24 lbs.	22, 24, 26	5 in.	Flush	Oval	4 in.	Comb.	Comb.	3	3	Two Piece
	Crusader	50	24 1/2 "	22, 24, 26	5 in.	Flush	Oval	3 in.	Comb.	Comb.	3	3	Two Piece
	Crusad'r 30-in Wh'l	50	24 1/2 "	22, 24, 26	5 in.	Flush	Oval	4 in.	Comb.	Comb.	3	3	Two Piece
POPE MFG. CO.....	Columbia 50		26 lbs.	24	4 3/4 in.	Outside	Special		Round	Round	4	4	Two Piece
	Columbia 51		26 lbs.	22	4 3/4 in.	Outside	Special		Round	Round	4	4	Two Piece
	Columbia 57	50	23 1/2 "	22	4 1/4 in.	Flush	Special	2 3/4 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Columbia 58	50	23 1/2 "	22	4 1/4 in.	Flush	Special	2 3/4 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Columbia 49	40	22 lbs.	22	4 1/2 in.	Flush	Special	2 3/4 in.	Round	Round	4	4	Two Piece
	Tandem 47	75		23		Outside	Special		Round	Round	4, 5	4	Two Piece
	Tandem 48	75		21		Outside	Special		Round	Round	4, 5	4	Two Piece
	Hartford 19	35	24 lbs.	22	4 1/2 in.	Flush	Special	2 3/4 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Hartford 20	35	24 lbs.	22	4 1/2 in.	Flush	Special	2 3/4 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Vedette 21	25	25 lbs.	22	2 1/2 in.	Flush	Oval	2 3/4 in.	D sh'pe	D sh'pe	4	4	Two Piece
Vedette 22	25	25 lbs.	22	2 1/2 in.	Flush	Oval	2 3/4 in.	D sh'pe	D sh'pe	4	4	Two Piece	
E. C. STEARNS & CO.....	Model E Men	50	24 lbs.	21, 23, 25	4 5/8 in.	Flush	Square	2 3/4 in.	Oval	Round			Two Piece
	Model F Women	50	24 1/2 "	19, 21, 23	5 in.	Flush	Square	2 3/4 in.	Oval	Round			Two Piece
	Special	60	21 1/2 "	21, 23, 25	4 in.	Flush	Square	2 3/4 in.	Flat	Round			Two Piece
	Ladies' Special	60	23 1/2 "	19, 21, 23	4 3/8 in.	Flush	Square	2 3/4 in.	Fiat	Round			Two Piece
	Diamond Tandem	75	43 lbs.	21, 23	4 1/4 and 4 3/4 in.	Flush	Square	2 1/2 in.	Flat	Round			Two Piece
	Comb'n. Tandem	75	45 lbs.	23,	4 1/4 and 4 3/8 in.	Flush	Square	2 1/2 in.	Flat	Round			Two Piece
	Racer	60	20 lbs.	22, 24	4 in.	Flush	Square	3 1/2 in.	Flat	Round			Two Piece
	Chainless	75	26 1/2 "	21, 23, 25	5 in.	Flush	Square	2 3/4 in.	Comb.	Round			Two Piece
	Chainless, Women	75	27 1/2 "	19, 21, 23	5 in.	Flush	Square	2 3/4 in.	Comb.	Round			Two Piece
	Cushion	65	23 3/4 "	21, 23, 25	4 in.	Flush	Square	2 3/4 in.	Oval	Round			Two Piece
Cushion, Women	65	25 3/4 "	19, 21, 23	4 3/8 in.	Flush	Square	3/4 in.	Oval	Round			Two Piece	
SNELL CYCLE FITTINGS CO.....	Model 32	40		22, 24, 26	4 7/8 in.	Flush	Oval	3 in.	Round	Comb.	4	4	Two Piece
	Model 33	40		22, 24,	4 7/8 in.	Flush	Oval	3 in.	Round	Comb.	4	4	Two Piece
	Model 34	45		22, 24,	4 7/8 in.	Flush	Oval	2 1/2 in.	Round	Comb.	4	4	Two Piece
	Model 35	45		21, 23,	4 7/8 in.	Flush	Oval	2 1/2 in.	Round	Comb.	4	4	Two Piece
	Model 36	50		22, 24, 26	4 7/8 in.	Flush	Oval	3 in.	Oval	Oval	4	3	One Piece
	Model 37	50		22, 24,	4 7/8 in.	Flush	Oval	3 in.	Oval	Oval	4	3	One Piece
	Model 38	60		23, 25,	4 7/8 in.	Flush	Oval	3 1/2 in.	Oval	Oval	4	3	One Piece
	Model 39	60		23, 25,	4 7/8 in.	Flush	Oval	3 1/2 in.	Oval	Oval	4	3	One Piece
DAVIS SEWING MACHINE CO.....	Roadster, 30	75	25 lbs.	22, 24, 26	4 3/4 in.	Outside	Double	2 1/2 in.	D sh'pe	Round	3	3	Two Piece
	Women, 31	75	25 lbs.	20, 22,	5 in.	Outside	Double	2 1/2 in.	D sh'pe	Round	3	3	Two Piece
	Road Racer, 32	75	23 lbs.	20, 22, 26	4 3/4 in.	Outside	Double	3 in.	D sh'pe	Round	3	3	Two Piece
	Track Racer, 33	75	21 1/2 "	22,	4 3/4 in.	Outside	Double	3 in.	D sh'pe	Round	3	3	Two Piece
	Roadster, 35	50	24 lbs.	22, 24, 26	4 3/4 in.	Flush	Double	2 1/2 in.	Comb.	Round	4	3	Two Piece
	Women, 36	50	25 lbs.	20, 22,	5 in.	Flush	Double	2 1/2 in.	Comb.	Round	4	3	Two Piece
	Light Roadster, 22	60	23 lbs.	22, 24,	4 3/4 in.	Outside	Double	3 in.	Comb.	Round	4	3	Two Piece
MIAMI CYCLE MFG. CO.....	Model R	75		22, 24,	4 5/8 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe	3	4	Two Piece
	Model S	75		22, 24,	4 5/8 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe	3	4	Two Piece
	Model T	50		22, 24,	4 5/8 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Model U	40		22, 24,	4 5/8 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Model W	50		21, 23,	4 2/3 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Model X	50		22, 24,	4 8/8 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Model Y	40		21, 23,	4 5/8 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe	4	4	Two Piece
	Model C	65		22, 24,	4 5/8 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe	4	4	Two Piece
DAVID BRADLEY MFG. CO.....	D. D. Tandem	100	45 lbs.	21, 22, 23	5 in.	Flush	Oval	2 in.	Comb.	Round			Two Piece
	Comb. Tandem	100	45 lbs.	21, 22, 23	5 in.	Flush	Oval	2 in.	Comb.	Round			Two Piece
	Men's America	50	24 lbs.	22, 24, 26	5 in.	Flush	Oval	2 5/8 in.	D sh'pe	D sh'pe			One Piece
	Women's America	50	25 lbs.	20, 22,	5 in.	Flush	Oval	2 5/8 in.	D sh'pe	D sh'pe			One Piece
	Men's Oriole	35	24 lbs.	22, 23 1/2	4 3/4 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe			Two Piece
	Women's Oriole	35	25 lbs.	21, 23,	4 3/4 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe			Two Piece
	Men's Bradley	40	24 lbs.	22, 23 1/2	4 3/4 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe			One Piece
	Women's Bradley	40	25 lbs.	21, 23,	4 3/4 in.	Flush	Oval	2 1/2 in.	D sh'pe	D sh'pe			One Piece
	Bradley Special	45	24 lbs.	2, 23	4 3/4 in.	Flush	Oval	3 1/2 in.	D'mn'd	D'mn'd			One Piece
BUDD BROTHERS MFG. CO.....	Men's 30	35	24 lbs.	22, 24,	4 7/8 in.	Flush	Oval	2 7/8 in.	Comb.	Round		4	Two Piece
	Women's 31	35	24 lbs.	21,	4 7/8 in.	Flush	Oval	2 7/8 in.	Comb.	Round		4	Two Piece
	Men's 35	50	24 lbs.	22, 24,	4 7/8 in.	Flush	Oval	2 7/8 in.	Comb.	Round		4	Two Piece
	Women's 36	50	24 lbs.	21,	4 7/8 in.	Flush	Oval	2 7/8 in.	Comb.	Round		4	Two Piece

# and Regular Equipment.

EQUIPMENT.

Handle Bar Fast'g	Seat Post Fast'g	Chain Adjust-ment	Form of Crank	Chain-less Gear	Crank Len'ths	Chain	Pedals	Rims	Saddles	Tires	Frame Colors	Front Sprocket	Rear Sprocket
Clamp	Expand'r	Oblique	Comb		6½ in.				Gilliam	Any standard	Bl'k. Gr'n, Maroon	24 to 30	8 to 12
Clamp	Expand'r	Oblique	Comb		6½ in.				Gilliam	Any standard	" " "	24 to 30	8 to 12
Expand'r	Expand'r	Eccentric	Comb		7 in.				Gilliam	Any standard	" " "	24 to 30	8 to 12
Expand'r	Expand'r	Eccentric	Comb		7 in.				Gilliam	Any standard	" " "	24 to 30	8 to 12
External	External		Round	Bevel	7 in.				Optional	Hartford	Black		
External	External		Round	Bevel	6½ in.				Optional	Hartford	Black		
Internal	Internal		Round		7 in.				Optional	Hartford	Black		
Internal	Internal		Round		6½ in.				Optional	Hartford	Black		
External	External		Round		7 in.				Garford, Brown	Hartford	Black		
External	External		Round		7 in.				Garford, Brown	Hartford	Black		
External	External		Round		6½ in.				Garford, Brown	Hartford	Black		
Internal	Internal		Round		7 in.				Garford, Brown	Hartford	Black		
Internal	Internal		Round		6½ in.				Garford, Brown	Hartford	Black		
Internal	Internal		Round		7 in.				Garford, Brown	Hartford	Black		
Internal	Internal		Round		6½ in.				Garford, Brown	Hartford	Black		
External	External		Diamond		7 in.				P. & F.	Hartford	Black		
External	External		Diamond		6½ in.				P. & F.	Hartford	Black		
Internal	Internal	Oblique	Flat		7 in.				Garford	Kang., Hartf'd, M. & W.	Orange, Black	22 to 25	7 to 9
Internal	Internal	Oblique	Flat		6½ in.				Garford	Kang., Hartf'd, M. & W.	" "	21 to 23	7 to 9
Internal	Internal		Flat		7 in.				Stearns	Palm'r-Options	" "	22 to 30	7 to 10
Internal	Internal		Flat		6½ in.				Sager	Palm'r-Options	" "	21 to 23	7 to 9
Internal	Internal		Fiat		7 in.				Rawhide	Palm'r-Options	" "	25	9
Internal	Internal		Flat		6½ & 7				Garford	Palm'r-Options	" "	22 to 25	7 to 9
Internal	Internal		Flat		6½ in.				Rawhide	Palm'r-Options	" "	22 to 30	7 to 10
Internal	Internal		Flat	Bevel	7 in.				Rawhide	Palm'r-Options	" "		
Internal	Internal		Flat	Bevel	6½ in.				Sager	Palm'r-Options	" "		
Internal	Internal		Flat		7 in.				Rawhide	Palm'r-Options	" "	22 to 30	7 to 10
Internal	Internal		Flat		6½ in.				Sager	Palm'r-Options	" "	21 to 23	9
Clamp	Clamp	Oblique	Oval		6¾ in.	Indianapl's	Snell		B & W		Blk., Gre'n, Mar'n	22 to 26	8 to 10
Clamp	Clamp	Oblique	Oval		6¼ in.	Indianapl's	Snell		B & W		" " "	22 to 26	7 to 8
Clamp	Clamp	Oblique	Square		6¾ in.	Indianapl's	Snell		Garford		" " "	22 to 26	7 to 8
Clamp	Clamp	Oblique	Square		6¼ in.	Indianapl's	Snell		Garford		" " "	22 to 28	7 to 8
External	Expand'r	Oblique	Diamond		7 in.	Indianapl's	Snell		Wheeler, Sager		" " "	24 to 28	7 to 8
External	Expand'r	Oblique	Diamond		6½ in.	Indianapl's	Snell		Wheeler, Sager		" " "	24 to 28	7 to 8
External	Expand'r	Oblique	Diamond		7 in.	Indianapl's	Snell		Wheeler, Sager		" " "	24 to 28	7 to 8
Clamp	Clamp	Horizontal	Oval		6½ in.	Baldwin	Dayton	Kundtz			Carmine	22 to 30	7 to 12
Clamp	Clamp	Horizontal	Oval		6½ in.	Baldwin	Dayton	Kundtz			Carmine	22,	7 to 12
Clamp	Clamp	Horizontal	Oval		6½ in.	Baldwin	Dayton	Kundtz			Carmine	22 to 30	7 to 12
Clamp	Clamp	Horizontal	Oval		6½ in.	Baldwin	Dayton	Kundtz			Carmine	22 to 30	7 to 12
Clamp	Clamp	Oblique	Oval		6½ in.	Baldwin	Dayton	Kundtz			Carmine	20 to 26	7 to 12
Clamp	Clamp	Oblique	Oval		6½ in.	Baldwin	Dayton	Kundtz			Carmine	19 to 22	7 to 12
Clamp	Clamp	Horizontal	Oval		6½ in.	Baldwin	Dayton	Kundtz			Carmine	22 to 30	7 to 12
Internal	Special	Oblique	Square		7 in.	Indianapl's	Record	Kundtz	Wheeler, Gilliam	Optional	Black, Green	40	8 to 16
Internal	Special	Oblique	Square		7 in.	Indianapl's	Record	Kundtz	Wheeler, Gilliam	Optional	" "	30	8 to 16
Internal	Special	Oblique	Oval		7 in.	Indianapl's	Bridgeport	Kundtz	Wheeler, Gilliam	Optional	" "	30	8 to 12
Internal	Special	Oblique	Round		7 in.	Indianapl's	Star	Rastetter	Wheeler, Gilliam	Optional	" "	24	8, 9,
Internal	Special	Oblique	Oval		6½ in.	Indianapl's	Bridgeport	Kundtz	Wheeler, Gilliam	Optional	" "	24	8, 9, 10
Internal	Special	Oblique	Comb		7 in.	Indianapl's	Niagara	Keene	Wheeler, Gilliam	Optional	" "	24	8, 9,
Internal	Special	Oblique	Round		6½ in.	Indianapl's	Star	Rastetter	Wheeler, Gilliam	Optional	" "	24	8, 9,
Internal	Special	Oblique	Square		7 in.	Indianapl's	Record	Kundtz	Wheeler, Gilliam	Optional	Carmine	29	8 to 12
Internal	Clamp	Oblique & Eccentric	Round		6½ in.	Lefever	Advance	Laminated	Wheeler	M. & W.	Black, Blue, Green, Maroon	25,	8, 9, 10
Internal	Clamp	Oblique & Eccentric	Round		6½ in.	Lefever	Advance	Laminated	Wheeler	M. & W.	Black, Blue, Green, Maroon	25,	8, 9, 10
Internal	Internal	Oblique	Round		6½ in.	Lefever	Advance	Laminated	Wheeler	M. & W., Dunlop, Kokomo	Black, Blue, Green, Maroon	22 to 28	8, 9, 10
Internal	Internal	Oblique	Round		6½ in.	Lefever	Advance	Laminated	Wheeler	M. & W., Dunlop, Kokomo	Black, Blue, Green, Maroon	18 to 22	7, 8, 9
Internal	Internal	Oblique	Diamond		6½ in.	Lefever	Arrow		Bunker	Oxford	Black, Blue, Green, Maroon	26, 28,	7 to 10
Internal	Internal	Oblique	Diamond		6½ in.	Lefever	Arrow		Bunker	Oxford	Black, Blue, Green, Maroon	20, 22,	8, 9,
Internal	Internal	Oblique	Round		6½ in.	Lefever	Arrow		Bunker	M. & W., Kokomo	Black, Blue, Green, Maroon	20 to 28	7 to 10
Internal	Internal	Oblique	Round		6½ in.	Lefever	Arrow		Bunker	M. & W., Kokomo	Black, Blue, Green, Maroon	20, 22,	8, 9,
Internal	Internal	Oblique	Round		6½ in.	Lefever	Advance		Wheeler	M. & W., Kokomo	Black, Blue, Green, Maroon	20 to 28	8, 9, 10
Clamp	Clamp	Horizontal	Comb.		6½ & 7	Thames, Torrington	Forsyth		Garford	Hartford	Black	22 to 26	7 to 10
Clamp	Clamp	Horizontal	Comb.		6½ & 7	Thames, Torrington	Forsyth		Cutting	Hartford	Black	22 to 26	7 to 10
Expand'r	Expand'r	Oblique	Comb.		6½ & 7	Thames, Torrington	Forsyth		Garford	Hartford	Black	22 to 28	7 to 10
Expand'r	Expand'r	Oblique	Comb.		6½ & 7	Thames, Torrington	Forsyth		Cutting	Hartford	Black	22 to 28	7 to 10

# THE PASTIME AND SPORT

## GERLACH GIVEN CHAIRMANSHIP

How Selection Was Made—Must Spend Much Time in the East—Other Racing Board Members.

Philadelphia, March 6.—The make-up of the L. A. W. racing board must have given President Keenan many a bad half hour during the past fortnight, judging from the delay in the announcement of its personnel. However, the greater portion of this task, the selection of a chairman, has been performed without antagonizing any particular section. Fred Gerlach, who was tendered the position last week, is popular with the racing element in the east, his recent efforts in behalf of the admission of professionals to membership in the League having in nowise tended to lessen his popularity.

### How it Came About.

The chain of circumstances which led up to Gerlach's selection were as follows: Keenan had a strong leaning toward Mott when his own election first became practically assured; but it needed only a few minutes' work on the part of some of the local League lights to convince the Pittsburger that Uncle Jerry wasn't in the running. The next possibility to loom up on the horizon was Mears, of Cleveland. When the Assembly met in Providence the Ohioan's chances were of the best, but the Pennsylvanians had an idea that they could induce Gideon, in view of the crisis in League racing affairs, to once more assume his old place at the head of the board. Keenan was convinced that if "Old Eagle Eye" could be induced to re-enter the field the most difficult portion of a difficult problem would be solved. Mears was therefore dropped for awhile, and, as the result shows, was never again seriously considered.

### Offers Place to Gideon.

Keenan came to Philadelphia last Monday and after a long consultation with Gideon became satisfied that "Old Eagle Eye's" business interests would not allow him to accept the post and the candidacy of Gerlach was so eloquently urged by Gideon that within an hour a long telegram was dispatched to Chicago tendering the place to Gerlach, the only string to the offer being a request that the Chicagoan spend the early part of the racing season in the East, in order to be near the scene of the coming conflict with the outlaws.

Gerlach replied the following day accepting conditionally, with the intimation that his law practice in Chicago needed his attention at intervals and that he would be compelled to be in that city for a number of weeks during the next six months. No objection being made to this, the deal was consummated. Gerlach will establish headquarters in Philadelphia, where he will have the invaluable assistance of Gideon in mastering the details of the office.

### Territory Assigned to Appointees.

Philadelphia, March 7.—President Keenan today definitely announced the following racing board appointments: Fred Gerlach, of Chicago, chairman, in charge of the district embracing Illinois, Missouri, Iowa, Minnesota, Wisconsin, Michigan, Indiana, Ohio; Arthur W. Robinson, of Boston, assigned to the charge of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecti-

cut; C. A. Dimon, of Philadelphia, to have control of Pennsylvania, New Jersey, Delaware, District of Columbia, Maryland, West Virginia, North Carolina and South Carolina; J. W. Brigman, of Louisville, assigned Kentucky, Tennessee, Arkansas, Louisiana, Mississippi, Alabama, Georgia and Florida; W. I. Doty, of Denver, in charge of Colorado, Kansas, Indian Territory, Oklahoma, Texas, New Mexico, Arizona, California, Nevada, Oregon, Washington, Idaho, Montana, Wyoming, North and South Dakota and Nebraska.

## CHICAGO SEASON OPENED

Annual Run to Michigan City Brings Out Some Hardy Has-Beens—A Hard Ride.

The ninth annual club run of the Chicago C. C. to Michigan City, which formally opens the riding season in the Windy city, was made last Sunday by the baker's dozen of hardy road riders who were the only ones in town who sufficiently spurned the epithet of "butterfly" to make the notoriously hard trip over the fifty odd miles of Michigan Central railroad boulevard, with dismounts at every wagon road and switch for cattle guards and frogs. It was an admirable day so far as wind and weather were concerned, but the warmth thawed the frost out of the cinders and gravel and left the path mushy. The party that left the city was composed of Arthur Gardiner, James Levy, Orlando Adams, C. G. Sinsabaugh, Fred Nelson, and two members of the Cycle Age editorial staff. Frank Hovey and a stranger were picked up a few miles from the start and at Kensington J. P. Bliss, Arthur Lumsden and C. P. Root, who had made an earlier start, were overhauled. Lumsden quit at Hammond where a stop was made at Dave Shafer's hotel for a light meal. The Age representatives stopped before reaching Pullman to re-cement a loose tire and mend a slow leak and lost the bunch. Six miles out from Hammond there was a general spill and Nelson's front wheel went to pieces. He walked back to Hammond, secured another wheel and pushed on after the others, whom he failed to catch.

The first bunch to arrive at the destination included Bliss, Root, Hovey and Sinsabaugh, all pumped out from pushing through the soft going. Gardiner, who rode a racing machine geared to 112, and Levy finished three-quarters of an hour later, "Chicago's Pride" asserting it was the hardest ride of his life. Then Nelson rode into the Indiana town and two hours later the Age men finished after a disagreeable series of tire troubles.

### Motocyclist Breaks Elkes' Record.

The motorcycle hour record was successively broken in France on February 16 and 18. On the first of these days Marcellin rode 55 kilometers 50 meters (34 miles 860 yards) with flying start, breaking the record of 32 miles 131 yards made by Vigneaux February 11. Two days later Vigneaux again went after the record and covered 58 kilometers 623 meters with standing start, thus adding 1 mile 859 yards to the record made by Marcellin with flying start and nearly 1¾ miles to Harry Elkes' hour record. Vigneaux therefore holds the record at practically 36 miles.

## "PLUGGER BILL" IN AFRICA

Martin Writes of Cycling in the Dark Continent—His Defeat of Champion Van Heerden.

This is a great bicycle place, writes "Plugger Bill" Martin from Cape Town, South Africa, where he has been racing the past winter. I am told there are more riders in proportion to the number of people than in any other town in South Africa. They go in for American machines, with bright colors. The streets are broad, and the buildings fairly respectable. Outside, the roads are level and well made. Touring is all the go. There are lots of negros, and they are terrors to follow you about. I have several times taken long rides into the country for training, and I can't go out on my machine without a dozen or so young bucks, who run like deer, following, whooping and yelling, "Martin comes! Martin comes!" I can tell you it's a bit riling, and I often feel inclined to belt them. When I get out of town I usually put down my head and shake them off, but it is not for long, as they track my wheel marks, and when I stop to take pictures they catch up and amuse themselves by feeling the tires and spinning the pedals. One fellow seems never to get tired; he has several times chased me for fifteen or sixteen miles, and then waited for my return to chase me home again.

### Wants to go to Brazil.

South America is not half a bad territory, and I have so far spent money, and had a good time at Cape Town and Johannesburg. I had intended to proceed at once to Brazil, where I am told things are pretty slick in cycle racing, especially round and about Rio Janeiro where they have recently opened a splendid speed path. I would like to have Walne or Jackson of Australia go over with me. We could do well in Brazil, I feel certain.

### Forces Match With the Champion.

At Cape Town I "nosed" about for a try at promoting a race meeting, but it seemed to fall flat for a while, as the people here are sticklers for excitement, and cycle events don't seem to fill the bill. However, I succeeded in getting a match on with the South African champion, Van Heerden, who, until I came, was considered by the folks here as a human express engine whom nobody dare tackle. The date was late in December and the contest took place at Green Point. The idea of a match caught on, as the local sports opined that dollars were to be got out of it by backing their man. The distances were one, five and ten miles, which, as you know, just suit me. Alas, the books here are not very strong. I and my friends pretty well cornered the market.

### Like Giant and Dwarf.

This, you must know, is an amateur loving city, and the papers do not puff professional races. So the meeting got up on the day of the match was called a "semi-professional carnival," rather a hair-splitting device. The attendance was good, however, and there was much yahooping for the popular favorite. When we appeared on the track for the first "go" I couldn't help laughing as we rode round. Van Heerden is 6 feet 4 inches, and sits almost bolt upright on his bi-



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cycle, while I, as you know, get down to my work. I looked like a "kid" beside the giant.

#### Wins All Three Races.

The mile race was "dead easy." In the last lap Heerden, who has no head for tactics, led all the way until at the bend into the winning straight, when he ran wide. I just hit her up and ran in with three lengths to give away. The time was 2:22.

The five-mile event was a pursuit race. Van Heerden was slow off the mark, and I gained on him during the first two miles. Two miles from home I let out for a few laps, and kept up the pace until I got near enough to make things safe, when I eased and played follow my leader about a dozen yards behind. Van Heerden, I must say, put in real good work, and the gait was very fast. At the bell I jumped out and moved up alongside him, and waited for the last turn, when I sprinted and won by fifteen yards. This secured me the match. The time was 11:09 1-5 for the full distance, which is world's record for pursuit racing.

The ten-mile was a scratch contest. We paced each other until the bell at a fair pace. I followed Van Heerden until the far turn for home, when I ran up the bank and tried to run down so as to jump him, but just as I did so he jumped, and as I came to the pole I cut it rather fine and his front wheel, so they say, touched my hind one. I won easily, but was disqualified for the event on protest. I knew I was in the wrong, although it was unintentional, and apologized to Heerden, although it didn't make any difference to the result of the match. The time was 27:26 1-5.

#### N. C. A. to Incorporate.

The National Cycling Association has issued its first bulletin. It hails from the offices of the board of control at 150 Nassau street, New York city, and states that the association will file papers of incorporation with the secretary of state of New Jersey this week. Under the incorporation provisions members will be liable for only the amount of their membership fees.

Professional riders and their trainers and amateurs can now apply for registration to the board of control for the season of '99, the fees being \$2 each for professionals and trainers and \$1 for amateur racing men.

Applications for places in the N. C. A. "grand circuit" can be filed with the chairman of the board of control. This circuit will start in the West, July 8, and end in the East early in September. A series of races on this circuit will decide the championship of the year. A New York state circuit will be arranged for the month of June.

#### Courting Modest Kansas City.

Kansas City is overwhelmed with the attentions of race meet promoters just now. Brady has applied to the managers of Convention hall asking for the use of that building for the purpose of running a six-day race to be contested by his aggregation now on the coast; Jack Prince offers to bring the men under his charge now in Texas and give a meet, while the manager of the female aggregation would like to give a long race between the women riders.

#### New York A. C. C. Opposes Tax Bill.

The bill which has been introduced in the New York legislature to tax bicycles and apply the funds to the construction and shading of bicycle paths is being opposed by the Associated Cycling Clubs of New York city, on the ground that it will be an entering wedge for the enactment

of a general tax on bicycles; that it will hinder and delay the cause of good roads and in some sections smother the good roads agitation entirely; that it will give rise to much dissatisfaction and discontent among wheelmen, who in order to use side paths will have to take out licenses in all counties where there are such paths; that it will increase dangers of collision between cyclists and pedestrians, since both may use the paths, and that it will give special privileges that will create opposition from residents adjoining the paths.

#### SURPRISE PARTY BY LAWSON

"Terrible Swede" Wins 100-Mile Open—Fournier and His Motorcycle Pace Stevens to Victory.

San Jose, March 6.—A 100-mile open track race was run Sunday under the auspices of the Garden City Wheelmen and was won by John Lawson. The event was unpaced, and special lap prizes drew the field into a sprint for lap after lap. Charles Wells, who entered at the last moment and without training, gained the special prize for leading at the laps. He fought for and gained 87, while Barnaby had but 70. Fredericks, Ashinger, Iver Lawson and Clem Turville, of the field of fifteen that started, quit. Lawson, the last man expected to win, shot out of the bunch in the stretch, and in a hard fight with John Chapman, Teddy Goodman, Earl Stevens, Charles Turville, Charles Wells, Oscar Julius, Tom Barnaby, and Nawn, won the contest, the finish being in the order named, and the riders being closely bunched at the tape.

Last Saturday Henri Fournier rode a mile on his petroleum tandem, with Tom Barnaby steering, in 1:35. The machine was so constructed that the riders could assist the motor by pedaling. Fournier believes he can reduce his time to 1:30.

At the same meet Orlando Stevens defeated Harry Gibson in a ten-mile match by one and three-quarter laps on the third-mile track. Stevens was paced by Fournier with his "infernal machine," while Gibson had two triplets and three tandems.

#### Chicago Organizations Unite.

The Associated Cycling Clubs of Chicago met Monday night and voted to amalgamate with the Cook County Cyclists' Association and the Northwest Cyclists' Association and to hold the Decoration Day road race as usual. By the union of the three organizations twenty-six new cycling clubs are added to the roster of the A. C. C.

#### NEWS IN BRIEF.

C. W. Miller has canceled his coast engagements and returned to Chicago.

Wridgway, the former English stayer, has entered the motor vehicle business in Manchester.

Detroit road riders have almost entirely abandoned century riding and the enthusiastic centurion is a person hard to find in that city.

Floyd McFarland has decided to begin training for middle distance racing the coming season.

Statistics show that in England 100 cyclists and 200 drivers of horses are fined weekly for exceeding the speed limit and violating the lamp laws.

C. W. Parkins, of the Century Wheelmen of New York city, won first prize in the club competition mileage by riding 28,883 miles during 1898. During the year he made 105 centuries.

The Intercollegiate Bicycling Association, which was organized recently for the purpose of giving an impetus to cycle racing among college men, and which came into existence as a result of the movement of the Intercollegiate A. A. U. to curtail bicycle events, has decided to hold an annual championship event. The competitors for

this championship must abide by the regulations of the I. A. A. U. regarding the eligibility of college students for any of the intercollegiate championships.

Cycling enthusiasts in St. Louis are endeavoring to revive the annual Forest Park road race, which has been run for several years up to '98, when it was dropped through lack of encouragement from parties solicited for the donation of prizes.

The recent six-day race in San Francisco was a losing proposition for the promoters, for while large crowds were attracted to the pavillion during the last few days of the week, the attendance during the first three days was so light that the loss sustained then could not be made up.

Arrangements are being made for a series of match races between the three Butler boys and Gougoltz, Lamberjack and Eden, to include contests on singles, tandems and triplets. The Waltham track will probably be the scene of the performances, but the dates have not as yet been decided.

Cape Girardeau, Mo., is said to have been selected by several of the racing men as their training ground this spring. The accommodations there seem to be more to the liking of the riders than those at the Fountain Ferry track, where much of the early spring training in past years has been done.

According to all reports, extensive improvements are contemplated at the Waltham track. It is the intention to increase the banking two and one-half feet. The first event of the season at the track will be on April 19, when Harry Elkes will appear, but his opponent has not been announced.

The following prizes are offered in the 100-hour race to be run in Roubaix, France, May 7 to 11 next: First prize, \$600, and \$100 extra if the San Francisco 100-hour record is broken; second, \$300, and \$40 if the San Francisco record is broken; third, \$300, and \$20 if inside former record; fourth, \$160; fifth, \$120; sixth, \$80.

Plans are afoot for the construction of a ten-lap inclosed track in Tacoma, Wash., near the center of the city, with the object of securing the presence of the eastern racing men who have been making matters lively on the Pacific slope this winter. The promoters are prominent cycle dealers and riders, who are enthusiastic over the scheme.

The May carnival to be held in Birmingham, Ala., will doubtless be given a livelier interest than usual by the introduction of bicycle racing. The Birmingham Cycle Racing Association is taking steps toward promoting a week's race meet to be held at the new Coliseum track during the festivities and an endeavor will be made to attract the best talent in the country.

Club spirit is at such a low ebb among the members of the St. Louis Cycling Club that the club house of the organization has been abandoned and from now on the existence of the oldest and what was at one time the most prominent cycling club in St. Louis will be merely a matter of sentiment, some of the members not having the heart to disband entirely.

Tourists with bicycles traveling in Germany will be much inconvenienced by a law recently enacted which compels all bicycles to be carried on slow trains. No machines will be allowed on the passenger express trains, and owners of bicycles will often be compelled to wait at their destination a half a day or an entire night for the arrival of their machines before they can proceed further.

The respective directors of the Chicago Cycling Club and the South Side Cycling Club of Chicago held a joint meeting last Saturday and brought about the consolidation of the two clubs. The South Side Club will abandon its club house and move over to the Michigan avenue home of the Chicagos. The combined strength of the two clubs aggregates about 400 members, making the new body one of the strongest in Chicago.

When Tom Cooper began racing he had been a drug clerk at a salary of about \$5 a week. Money commenced to come his way when he won, and he knew enough to save it. He had friends in his home city who put him next to some good things and now Tom has \$22,000 in Detroit telephone stock, which nets him \$1,600 annually. Some time last fall five wealthy Detroit men started a lime company, each putting in \$50,000. One of them was a friend of Cooper's and he offered to let Tom put up \$10,000. The racing man did not have that much ready money, but produced \$7,000, his friend giving him plenty of time to pay the balance. One month after the company was organized Tom was offered \$20,000 for his interest, but he refused, and is now thankful, as the stock has since grown still more valuable. In all it is calculated that Cooper is worth nearly \$40,000, not bad for four years of racing.

## SUBJECTS OF GENERAL INTEREST

SEASONING  
WOOD BY  
ELECTRICITY

A model plant for seasoning wood by means of electricity is now in operation in London. The timber to be seasoned is placed in a large tank and immersed, all but an inch or two, in a solution containing 10 per cent of borax, 5 of resin, and  $\frac{3}{4}$  of carbonate of soda. The lead plate upon which it rests is connected to the positive pole of a dynamo, and the negative pole being attached to a similar plate arranged on its upper surface so as to give good electrical contact, the circuit is completed through the wood. Under the influence of the current the sap appears to rise to the surface of the bath, while the borax and resin solution takes its place in the pores of the wood. This part of the process requires from five to eight hours for its completion, and then the wood is removed and dried either by artificial or natural means. In the latter case a fortnight's exposure in summer weather is said to render it as well seasoned as storage in the usual way for five years.

The current employed has a potential of 110 volts, the consumption of energy being about 1 kilowatt per hour for each cubic meter of timber, and the greener the wood the better, because its electrical resistance is less. The liquid in the bath is kept at a temperature of from 90 to 100 degrees F.

Those who are introducing the process into this country from France do not profess to be able to give a complete explanation of it, though they describe it generally as a case of electro-capillary attraction, but they claim that its results are satisfactory, however surprising they may seem. They even state that some woods, such as the "maritime pine" of the south coast of France, which cannot now be properly dried, will, after their treatment, be found useful and serviceable for practical purposes.

ARTIFICIAL  
SILK  
MANUFACTURE

An artificial silk is manufactured from gelatin. A reservoir containing gelatin is kept heated at a certain temperature, to keep the gelatin in liquid form continuously. The top of the reservoir contains numberless small openings through which the gelatin oozes in very fine streams. An endless chain of a strip of linen cloth running over pulleys receives this liquid; and before the chain has traveled far, it is dry and presents a fine thread of uniform thickness and brilliant surface, ready to be wound upon spools.

The whole apparatus requires little attention; the only thing to be looked after is to change the fully wound spools for empty ones. A single workman can oversee ten apparatuses as described, which will produce about 470,000 yards of threads per day—equal to a silk production of 24,000 cocoons. To make the gelatin threads proof against being dissolved in warm water, they are lightly wound on drums and submitted to the fumes of formaldehyde in a closed room for several hours. The result is not only their power of resistance to water, but also to any other solution.

The coloring, if wanted, is added to the liquid gelatin at the beginning. It absorbs dye readily and the brilliancy of the thread is not affected. The proportion of dyestuff is stated to be 15 ounces in 330 pounds of liquid gelatin, if a bright color is wanted; but for the present fash-

ionable pale colors, the 15 ounces would do in 6,600 pounds of liquid. A drawback against the usefulness of the gelatin silk would be its low degree of firmness in the thread, but in a mixture with real silk or fine linen or cotton thread, a durable tissue could be produced. It is estimated that the gelatin silk could be produced at about \$1.15 per pound. Collodion silk costs at present from \$2.25 to \$2.85 per pound, while natural silk reaches \$6.25 per pound.

NEW PROCESS  
COLOR  
PHOTOGRAPH

Prof. Wood, of the University of Wisconsin, the originator of the electrical thaw has a new method of photographing in natural color. He reproduces the colors by diffraction, a method not hitherto tried, and though at present the production of the first finished picture is a somewhat tedious though not difficult process, when it is once made duplicates can be printed from it as easily as ordinary photographs are made.

The pictures are on glass and are not only colorless, but almost invisible when viewed in ordinary lights, but when placed in a viewing apparatus, consisting of a convex lens on a light frame, show the colors of nature with great brilliancy.

The finished picture is simply a diffraction grating of variable spacing. In other words, it is a transparent film of gelatin with fine parallel and equidistant lines on it—about 2,000 to the inch on the average. The colors depend solely on the spacing between the lines and are pure spectrum colors, or mixtures of such, the necessity of colored screens, or pigments, used in all other processes except that of Lippman, having been overcome.

The pictures can be projected on a screen by employing a suitable lantern, or can be viewed individually with a very simple piece of apparatus consisting of a lens and perforated screen mounted on a frame. The present process can be greatly simplified, and it will be possible to expose a plate in the camera under three-color fillers on the surfaces of which diffraction gratings have been impressed by photography, and develop it at once into a colored photograph, which, strange to say, will be a positive when seen in the viewing apparatus, or projected.

A peculiarity of the process is that there is no such thing as a negative in it.

ENGLISH  
CYCLE FACTORY  
WORKERS

Though at first sight it would appear the English cycle trade had nothing in common with that phase of industrial life known as trade unionism, and is not, therefore, called upon to take more than a passing interest in the affairs of labor, the fact is that, as an important branch of the engineering industry, the affinity between the two may lead at some future time to the introduction of labor questions into its own province. At present the great body of cycle workers are not affiliated with trade unions, and it is the earnest wish of the trade that this Utopian condition of things may continue to reign. At the present time, however, the trade unionism of the country is assuming a somewhat aggressive attitude, and it is feared that a revival of enthusiasm for organization among the workmen of the country would result in the formation of a well-organized cycle workers' union, and perhaps the federation of such a union to some larger body.

WHAT IF  
THE BIG TRUSTS  
FAILED?

Considering the uncertainty that attends the stupendous experiment of consolidating three-fourths of our industries into "trust" organizations, it is not surprising that some people should be asking—what will happen in the event of the monopolies failing of their purpose and therefore becoming disintegrated and desiring to revert to the former individuality of their component parts? The following gives pointed expression to that contingency:

If one of the numerous trusts now forming should become bankrupt through mismanagement or overcapitalization or any other cause or the trust should be declared illegal by the courts and dissolved, what would become of the capital invested in the trust enterprise?

If a trust should become bankrupt the property of the constituent corporations would be absorbed in the payment of debts. The trust, whether it is itself a corporation, a mere committee or an unincorporated association, is an agent of the corporations and is authorized to bind them by contract, and these corporations cannot be heard to plead the illegality of the combination for the purpose of evading a loss which they have brought upon themselves, and throwing it upon their creditors. An action quo warranto to put an end to the existence of a trust may be brought either against the trust itself or against any one of the constituent corporations. If it is brought against the trust, and is successful, the combination will simply be dissolved and each of the integers will be compelled to take its property back under its own control and manage it through its own officers. If the proceeding is against one of the corporations forming the trust, and is successful, that corporation will be dissolved, its property will be sold, and the proceeds will be distributed among its creditors and stockholders. Such was the decision of the New York courts in the proceedings brought by the Attorney-General against a member of the trust known as the Sugar Refineries' Company. The courts held that by so doing it had forfeited its right to exist as a corporation.

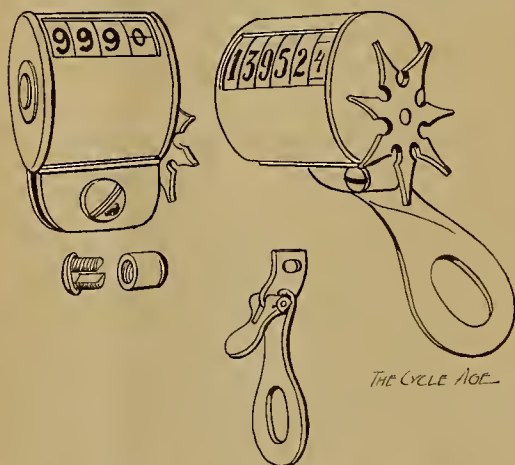
It will thus be seen that there is little reason for the very grave apprehensions entertained by some that, in the event of the breakdown of the monopolist principle, from any of the dangers its application has yet to encounter, there must be a destructive catastrophe arising from the insolvency of these mammoth institutions. There appears to be no reason for contemplating the possibility of any such outcome. Should the original individual firms or corporations, included in a trust desire to revert to their former separate identity, there is nothing to legally prevent their doing so. There is nothing in the nature of a legal finality in the forms of organization adopted in these amalgamations; the whole system may, with comparative ease, return to the old regime of competition between disassociated producers when they have become convinced from experience that a permanent organization of monopoly is an impossibility. There is some considerable satisfaction in this view of the new industrial situation.

The Russian minister of the interior has submitted to the council of the empire a proposition to tax bicycles \$5.13 each, the funds to be used by the cities.

# INFORMATION FOR BUYERS

## SHEPARD BEVEL-GEAR CYCLOMETER.

A. G. Spalding & Bros. of New York city and Chicago are pushing energetically two sundries, one the Christy saddle and the other the Shepard bevel gear cyclometer. The manufacturers of the Shepard cyclometers claim that the same grade of workmanship enters into their construction as is employed in the manufacture of watches. The cyclometer is but 11-16 of an inch in diameter and without the bracket weighs but 1 1/4 ounces. Every part is made either from hardened brass or bronze and all exterior parts are nicked. No lubricant is required and no springs are used. The operating mechanism being on the bevel gear plan, there is a positive motion at each revolution of the bicycle wheel. With the detachable holder or bracket the cyclometer can be readily removed and carried in the



pocket, a convenience which will be easily appreciated by those riders who have experienced the breaking of cyclometers on bicycles transported in railway baggage cars. Besides the regular bevel gear style, the Shepard cyclometer is made in a small trip pattern which weighs only three-fourths of an ounce. This cyclometer registers to 100 miles and repeats. The register can be set back to nothing from any point by turning the outside knurled end plate to the left. All Shepard cyclometers are made to attach on the left side of the bicycle, the mounting and dismounting side.

## BIG PURCHASE BY NATIONAL CEMENT CO.

Toledo, O., March 6.—A deal has just been consummated that will prove somewhat startling in the trade and will perhaps not be especially relished by trade competitors. The National Cement & Rubber Mfg. Co., of this city, has just absorbed by purchase the Red Cross Cement & Rubber Co., of Rochester, N. Y.

This deal, which includes all names, trade marks, good will, patents, patterns, etc., has been pending ever since the big cycle show in New York, when it was first broached. The purchase price has not been made public, but is well up in the five figure column. It will be recalled that Arlington U. Betts & Co. first manufactured the Red Cross brand of goods in this city, and built up an enormous trade both in this country and on export lines. Betts sold out to F. W. France & Co., of Rochester, and afterwards the business was conducted under the name Red Cross Cement & Rubber Co. Upwards of \$50,000 have been spent in advertising that name, "Red Cross," in connection with these goods.

Only two years ago a company was organized here with E. P. Hubbell (who had for years been identified with the ranking national bank of the state), as one of the main factors in the new firm. With him were associated a number of aggressive business men of the city. Mr. Bancroft, who was the right hand man for the Betts people, was one of the head men in connection with the new firm; in fact, he was at once made its superintendent. The growth of this firm, which fixed upon the name "High Pressure" as its trade mark, has been most remarkable. It spread out in every direction, until it has agencies in every city and town of any consequence in this country, while it has numerous general agencies in South America, England, Germany, France, Australia and Canada. Its goods have been shipped during the past year to practically every civilized country on the face of the earth.

Mr. Hubbell, who became its general manager, soon found it necessary to resign his position with the bank and devote all his time to the National Cement & Rubber Co. Only two weeks ago it completed arrange-

ments for trebling its shipping and manufacturing capacity. Now it has absorbed the entire Red Cross business.

Hereafter, beginning with next week, all shipments of Red Cross goods will be made from the Toledo plant, and all mail and orders will be received by the National company.

It is not disparaging the merits nor the extent of business of any other concerns to say that by this purchase the Toledo company is now the largest and most completely equipped of its character in the world.

## SAGER GEARS AND SADDLES.

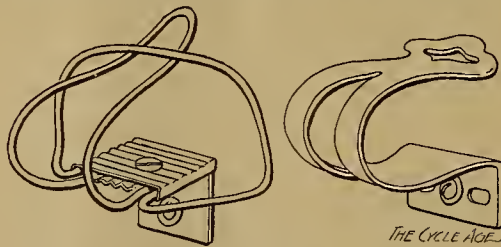
The Sager Gear Co., of Rochester, N. Y., is practically ready to start its plant for the manufacture of chainless gears and will be able to fill orders for these roller pin gears promptly after March 10. The demand for them has surprised the makers themselves and is growing rapidly.

In addition to its gear business, the Sager company states that it has more orders for its saddles than at any previous time in its history. It is making special efforts to push its Flexible saddles and the guarantee offered is evidence of the company's faith in the goods. These saddles are made in a peculiar manner, having no wood cantle or wood tree, no set screws, bolts or nuts, and being composed of fewer parts, it is claimed, than any saddle ever offered to the trade. The steel spring forms a supporting base and yields with every motion of the body, but at no time throws the rider violently from the seat. Only an exceptionally fine grade of leather is used. Flexible saddles are given as regular equipment or option upon the bicycles of such representative manufacturers as Pope Mfg. Co., E. C. Stearns & Co., Waltham Mfg. Co., Iver Johnson's Arms & Cycle Works, Davis Sewing Machine Co., R. H. Wolff & Co., Geo. N. Pierce & Co., Packer Cycle Co., Relay Mfg. Co., Light Cycle Co., Geneva Cycle Co., Speeder Cycle Co. and Bean Chamberlin Mfg. Co.

In addition to the Flexible saddles the Sager company is also making a complete line of other styles, the principal one being the hair padded type which is used exclusively by the Lozier Mfg. Co. The Sager Gear Co. claims to be more than holding its own in the saddle business and an inspection of the shipping room seems to bear out the assertion.

## BAGLEY TOE CLIPS SELL WELL.

A. G. Bagley & Co., 172 South Clinton street, Chicago, are enjoying constantly increasing sales on their various patterns of toe clips and other cycle sundries, among which are lamp brackets and coasters. Two popular patterns of toe clips manufactured by this firm are shown herewith. The clip at the left in the illustration is the new "Chicago" adjustable clip, which may, by loosening the countersunk bolt in the corrugated plate, be extended or reduced to suit the foot and the fancy of the rider. The



clip at the right is very rigid, the front loop being stiffened by forming the straps into curved sectional shape.

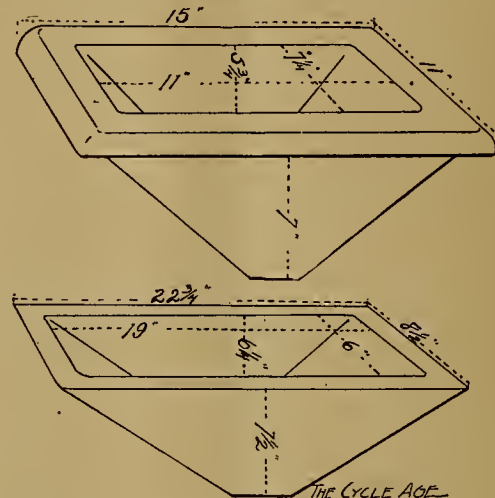
## BROAD PATENT ON PUNCTURE COMPOUND.

The Buffalo Specialty Mfg. Co. of Buffalo, which makes the Neverleak puncture healing fluid, has by purchase from the Indiana Rubber & Insulated Wire Co. of Marion, Ind., become sole owner of the patent granted to Charles E. Duryea, covering the use of liquid or semi-liquid compounds in tires for the purpose of curing leaks in the latter. The Duryea patent does not specify any particular kind of puncture healing mixture, but broadly covers the use of any such compound in pneumatic tires. The Buffalo Specialty Mfg. Co., in obtaining possession of these patent rights, purposes to vigorously defend itself against all infringers and to protect dealers selling Neverleak against unlicensed competition from infringers. While the patent covers the use of such compounds in combination with pneumatic tires and does not directly claim the manu-

facture of the compounds, the owners state that there are several court decisions which may be taken as precedents showing that persons making anti-leak compounds can be held as contributory infringers even though they do not put it into the tires themselves.

## CRUCIBLES FOR IMMERSION BRAZING.

The general introduction of immersion brazing has created a widespread demand for plumbago crucibles to be used in dip brazing furnaces, and since the experimenters with the process have been learning new points concerning its economical and systematic use this demand has broadened into one requiring crucibles of different sizes and shapes. The Bridgeport Crucible Co. of



Bridgeport, Conn., meets the varying demands for crucibles by placing in the market several stock patterns and offering to make to order other special designs at the request of patrons. The crucibles here shown are two of the popular stock patterns. The flanged crucible is small compared with the general run of crucibles now in use and is intended for use in brazing small parts and such frame joints as do not require much surface area in dipping. The flangeless crucible is somewhat of an innovation, most of the crucibles used in the past having had flanges. Where the flangeless crucible has been properly used in immersion brazing furnaces, however, it has proven a decided success, and some brazers are now using it entirely in preference to the flanged crucible. The Bridgeport Crucible Co. will mail upon request from interested parties full size blue prints giving complete dimensions, together with prices, of the various patterns it makes.

## IDE FACTORY AGAIN RUNNING.

The factory of the Ide Mfg. Co., of Peoria, Ill., is again in operation, the plant having been opened by a company mainly consisting of employees of the old Ide company, who will conduct the business on a co-operative plan. F. F. Ide has retired from the business and the future welfare of the company will be under the care of R. M. Roberts. Economy in manufacture will be the watchword of the new company and a systematic course of selection of manufacturing methods will be undertaken, the outcome of which will be that those parts and fittings which it is found can be purchased cheaper than they can be made in the Ide factory will be obtained directly from the parts manufacturers.

## UNITED STATES BICYCLES.

Frank Sturges, 227 South Green street, Chicago, has issued his catalogue of United States bicycles. The line shown comprises ten models. Models 0 and 1 sell at \$35 each, Models 2, 3, 4, 5, 6, and 7, which are three pairs of men's and women's machines, at \$40 each, and Models 8 and 9, which are the leaders, at \$50 each. One of the strongest claims of the manufacturer for these bicycles is that all of the metal parts with the exception of the chains are made in his own factory. Some of the distinctive features of United States bicycles are the outside fish-mouth reinforcements, the chain adjustments, the special two-part hanger group, the disk adjusting, direct tangent spoke hub and the felt lined dress guard for the ladies' machines.

## AMERICAN MACHINE CO.'S LINE.

Grasping the fact that the ability to meet the popular desire for color and boldness in illustrative work generally constitutes good

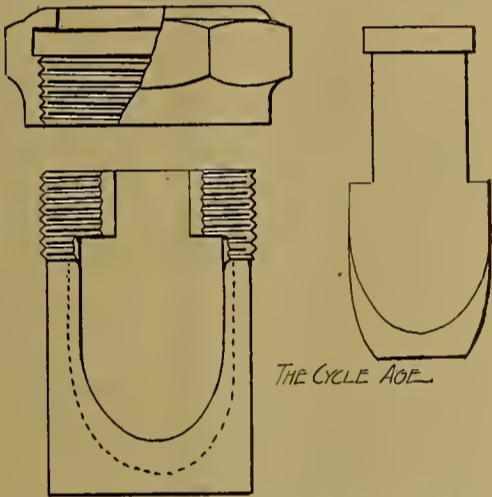
advertising, the American Machine Co. of Flint, Mich., has shown in its recently issued catalogue the various models of bicycles in its line in striking colored illustrations by the three-colored process. The recipient of the catalogue is thus given a graphic idea of the exact appearance of the machines. The company's leader is a 30-inch wheel model named the American Standard and listed at \$50. The American Special, at \$40 is made in both men's and women's patterns and is the firm's standard machine. The American Banner lists at \$25 and the American Diamond, built on the same general lines as the Banner but with flush joints, sells at \$35.

**ELECTRICALLY WELDED FITTINGS.**

The Standard Tool Co. of Cleveland, O., which is well known as being the sole firm in this country that does electric welding on bicycle parts and fittings, is sending out an advance runner for its complete catalogue in the form of a four-page folder illustrating two of its entirely flush electrically welded seat posts. These are furnished with stems ranging in size from 3/4 inch to 1-1/16 inch and each post is guaranteed to be of uniform diameter for the entire length of the stem. They are sold plain or nickel plated, and the highest possible finish is assured in either case. The stock angle on the latest patterns of these posts is 70 degrees, which, being standard angle, permits the use of the stock posts on almost any bicycle.

**BERKEY & GAY'S EXPANDER.**

The expander shown in the accompanying illustration is made by Berkey & Gay, of Grand Rapids, Mich., and has extremely simple action combined with a large and yet almost positive gripping face formed by the edges of the wedge piece. It does not require so much exertion of force to operate as the expanders which depend upon the enlargement or contraction of the



entire sleeve surrounding the seat post or handle bar stem. The wedge has only a vertical motion, causing the chamfered outer edges of the wedge to slide inwardly and downwardly upon the inner chamfered edges of the split sleeve. With the screw threading at the upper end of the sleeve and in the nut slightly oiled, this expander should operate very easily for either tightening or loosening, while also presenting a neatly finished appearance.

**HANNA CYCLE MATERIAL CO.'S LINE.**

A complete catalogue of bicycle sundries and fittings has been issued by the Hanna Cycle Material Co., 120 East Genesee street, Buffalo, successor to the Strauss-Hanna Cycle Material Co. The materials catalogued embrace the usual articles handled by firms catering to the trade of dealers, repairers and assemblers, as well as to that of manufacturers. The line of hubs shown is large and includes hubs at all prices, and in order to attract and maintain a good trade in these products the firm makes a specialty of being able to supply separate parts for all of the hubs listed. The frame sets and parts are sold at very reasonable prices and are up-to-date in character. The Hanna Cycle Material Co. acts as selling agent for the Thames Chain & Stamping Co., Duthie Chain Co., Mossberg Wrench Co., Brennan Handle Bar Co., Stockton Mfg. Co., Grand Rapids Bicycle Grip Co., Excelsior Needle Co. and the National Forge & Machine Screw Co.

**EUROPEAN AGENTS FOR GRANT TOOLS.**

The Grant Machine Tool Works, of Cleveland, is completing negotiations with Chas. Churchill & Co., Ltd., of London, whereby the latter will act as European agents for the product of the Grant factory.

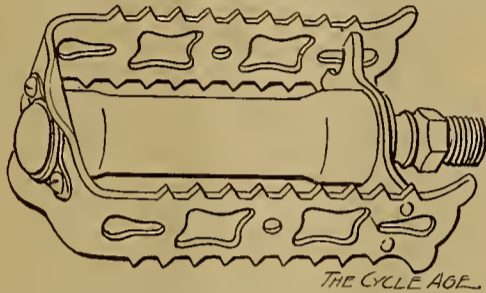
**FAY & BOWEN RUSHED WITH WORK.**

Under date of February 20 the Auburn (N. Y.) Daily Advertiser says that one of the

busiest places in Auburn is the bicycle spoke and nipple factory of Fay & Bowen. This firm has found it necessary to their constantly increasing business to have the factory overhauled and enlarged, and even with these improvements they are now using every available inch of space, and recent additions to their machinery have compelled them to install an electric motor, which nearly doubles the motive power. They state they have been running night and day since September 1, and during December it was found necessary to run Saturday evenings until midnight to keep pace with orders. They have already booked contracts which call for nearly their entire estimated output for the season, and although their present production is about double that of a year ago, they report themselves unable to accumulate any stock ahead, immediate orders taking the goods as fast as finished.

**"INTERNATIONAL" CYCLE FITTINGS.**

In publishing the latest edition of its catalogue the International Cycle Fittings Co., 74 Reade street, New York city, calls atten-

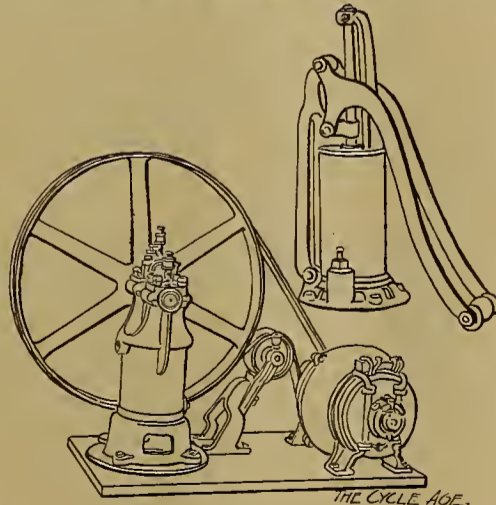


tion to the fact that it continues its old policy of "cataloguing what it has and having what it catalogues." The line of goods handled by this firm is broad, including as stated in the advertising catch phrase employed, "Everything for bicycles." Specialties on which a vigorous hunt for business is being made are the Criterion and International hubs, Sandow tires, Oaks saddles and the "'99" and National pedals. The general construction and form of the last named is shown in the illustration herewith. The firm is also doing a first class business in frames and frame parts and is gaining no mean popularity for its Romeo and Juliet bicycles, which received much favorable comment at the recent New York cycle show as being high types of grace and structural merit for the prices at which they are sold.

**GOULDS AIR PUMPS FOR SHOPS.**

Air pumps are coming into more common use every day. A few years ago the use of compressed air pumps or anything of the kind was looked upon with considerable disfavor, and it was difficult to induce the ordinary business man to consider the use of compressed air. But now the use of air pumps is common in the dentist's office, where they play an important part; for the spraying of whitewash on tall buildings, etc., and the ordinary little air pump is even employed for many purposes in connection with large paintings, decorative work and the like.

The large illustration herewith shows one type of water jacketed air pump connected to and driven by an electric motor. This



outfit may be operated continuously, the water jacket preventing any possibility of the overheating of the cylinder, and the pump is strong enough to work against a pressure of 125 pounds. Such an outfit has been installed in some of the largest bicycle stores and shops, where it has not only served a most useful purpose but also attracts considerable attention, being something new.

Another type of air pump for hand use is shown in the smaller drawing. This is of course a smaller pump designed to work

against a pressure of not more than 100 pounds. Its long stroke and the compound lever render the work of operation comparatively easy.

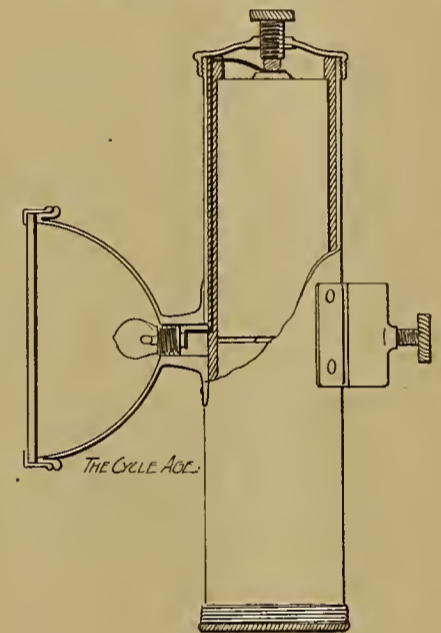
These and many other styles of air pumps are built by the Goulds Mfg. Co., of Seneca Falls, N. Y., which has issued a very attractive and complete brochure on the subject.

**RACYCLE CATALOGUE UNIQUE.**

The Miami Cycle & Mfg. Co. of Middletown, O., has adopted a catalogue whose cover forms the mailing envelope and which shows marked originality in design. The cover is in imitation of a United States gold bond with the word Racycle worked into the scrolls and the Racycle trade mark displayed in the tinted open center. The corners of the imitated bond bear in the circles in which the valuation of the bond is commonly printed the prices of four of the leading Racycle models and at the bottom it is stated that "Gold bonds of the U. S. government pay interest semi-annually. The special Racycle narrow tread will pay you interest daily." The inner pages of the catalogue are devoted to illustrations and brief, simple descriptions of the important and distinctive mechanical features of the Racycle models and of the well known Racycle hanger. Short equipment specifications accompany the half-tone illustrations of the different patterns shown.

**U. S. BATTERY CO.'S ELECTRIC LAMP.**

The illustration below shows the construction and design of the new electric cycle lamp being manufactured by the United States Battery Co., having offices at 256 Dearborn street, Chicago, and 253 Broadway, New York city. The lamp is quite simple in construction and being self contained there are no outside wires or attachments for the



user to bother with. The storage battery is made in two parts, is small and comparatively light, and is incased in the vertical hollow shell, one section above the other. The batteries are kept from contact with the lamp body by the fiber lining of the latter but the lower section makes a direct connection with the lamp globe through the bottom screw cap and lamp shell, so that when the small fiber tipped button at the top is screwed down and the point of the incased wire leading to the carbon filament brought in contact with the upper battery section a complete current through the lamp is formed. It makes no difference which of the batteries is inserted first into the shell, the only caution being to keep the lamp upright. When the batteries have become exhausted they may be exchanged for freshly charged ones for a nominal cost.

The U. S. Battery Co. is rapidly establishing agencies in all cities so that users of the lamp may obtain charged batteries as readily as any standard cycle sundry. There are at this time more than sixty such agencies in New York city.

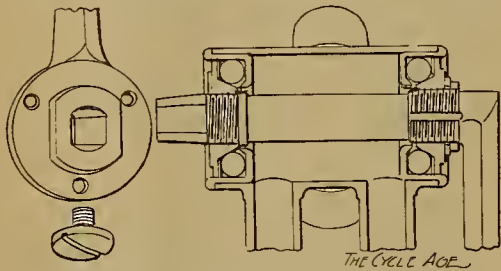
**INDEPENDENT SUPPLY CO.'S CATALOGUE.**

A complete catalogue of bicycle fittings and sundries has just been issued by the Independent Supply Co., 154 Lake street, Chicago. The material listed is representative stock of various well known and standard makes and the range of parts offered in frame building sets is so broad that the assembler purchasing from this house may erect almost any desired form of frame. It has always been the policy of the Independent Supply Co. to have in stock the goods which its patrons want and it has accordingly studied the market closely for several years with view to keeping in as close touch

as possible with the repairers and other small buyers. As a result, while the company has made no spectacular jumps toward prominence, it has enjoyed a steady increase in business ever since its birth and now it does not only a profitable business with small lot purchasers but in some lines of goods is favored with no small amount of large factory patronage. In this line the Independent expander is a notable example for which, it is stated, many large orders have been booked and which is meeting with great favor wherever it is introduced. The expander is familiar to the trade generally. It has but three distinct parts and when in place in the bicycle frame is entirely invisible with the exception of the operating nut.

#### VIM BICYCLES AT MODERATE PRICES.

The Vim Bicycle Co., 56 Fifth avenue, Chicago, which was one of the earliest advocates of popular prices, has issued a catalogue showing the nine patterns which compose the Vim line. All superfluous matter



has been eliminated from the catalogue and the reading matter has been confined strictly to brief, intelligent and honest descriptions of the bicycles. All of the patterns with the exceptions of Models B and D list at \$35 each. Model B is a man's road machine and sells at \$25 and Model D is the corresponding drop frame roadster. It sells at \$26. Of the \$35 machines Models 30 and 31 are catalogued as the leaders. They have Fauber hangers and flush joints and are equipped with such fittings as Baldwin chains, Brown and Gilliam saddles, etc. Models A and C have frames made from 1/4-inch tubing and are fitted with the Vim two-piece hanger shown in the accompanying illustration. Models 10 and 11 are three-crown frame machines and Model E is a 30-incher. In general construction and equipment these last three patterns are similar to Models A and C. On the last five machines Shirk pattern disk adjusting hubs are used. The regular tire equipment on the various models is the company's own single tube tire, which is fully guaranteed for one year and will be repaired free of charge during that time regardless of the cause of the trouble.

#### ACME MFG. CO. PROSPEROUS.

So busy is the factory of the Acme Mfg. Co. of Reading, Pa., turning out Stormer and Pennant bicycles, that the management states that the old time cycling spirit and selling vigor must have been revived. Some of the departments in this plant are running twenty-four hours a day. The Acme company also reports that it is both surprised and gratified to find that its orders are running very largely toward the stormer models rather than toward the cheaper patterns, thus showing that there will be plenty of buyers who are not looking for \$25 and \$35 machines. The Acme Mfg. Co.'s catalogue is a concise, tastily printed affair. It contains illustrations and specifications of two Stormer models at \$40 each, two Pennants at \$35 each, two Mars at \$25 each, a Stormer tandem at \$75 and juvenile Stormers ranging in price from \$20 to \$25 according to the size.

#### STRIPPED BICYCLES AT LOW PRICES.

The Wellington Wheel Works, 35 Randolph street, Chicago, which is managed by Charles L. Thayer, is offering the dealers of the country staunch, reliable cycles built on popular lines at exceptionally low prices, the machines being sold stripped, to be equipped with saddles, tires, pedals and tool bags to suit the purchasers. The machines bear the name plates of the manufacturers and are sold to but one dealer in each city or town. The different models are named the Atlas, Greenwood, Wellington and Hamilton. The Hamilton is the highest priced pattern and has a three-crown frame. The Wellington is made with either 28 or 30-inch wheels. A slight additional charge is made for ladies' machines. If desired the Wellington company will sell equipments of different grades at the lowest cash prices possible to purchasers of the stripped machines.

#### ADDITION TO WATERS PLANT.

F. S. Waters & Co., of Chicago, are building a two-story addition covering 80 by 50 feet of ground space in the rear of their present factory at 155 West Washington street. So pressed has the firm

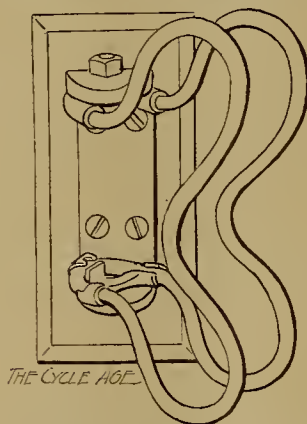
been for room that it has been compelled to lease temporary quarters across the street from its plant, the rented building being used for shipping purposes. The new building when completed will be devoted to the interests of country trade with the purpose of enabling the company to make prompt shipments on all orders coming from its out of town patrons.

#### AMERICAN PIONEER IN TIRE MAKING.

One of the oldest manufacturers in point of experience in the tire business in this country is J. P. Langdon, president of the New Brunswick Rubber Co., who has been a rubber manufacturer for more than fifty years. The company was founded in 1839, and Mr. Langdon, entering its employ while a young man, has been continuously with the company for half a century. He has been its president for a number of years. Four years ago the company began making tires, and met with such success that it soon devoted its entire plant to this branch of manufacture. It is now making a very complete line of tires, in several different grades, with corrugated, rough and smooth tread. Its Regal tire, now in its third year, and its new Raritan tire, just brought out this year, have proved extremely popular.

#### SNOW WIRE WORKS' BIG PURCHASE.

The entire stock, dies, tools, goodwill, etc., of the Butler Mfg. Co. of Rochester, N. Y., have been purchased by the Snow Wire Works of the same city. The line of cycle sundries and bicycle holders made by the Butler Mfg. Co. has in the past been well received by the trade and in acquiring this business the Snow Wire Works adds greatly to the strength of its position among the manufacturers of wire and kindred sundries. One of the most popular articles in the Butler line is the adjustable wall cycle

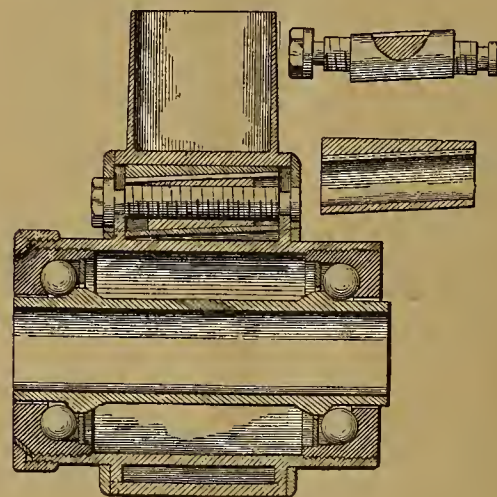


holder. This holder is for general use, being very convenient in churches, stores, factories, halls and residences. It can be swung to any desired angle to the wall and is very small and light. Two finishes are furnished, the holders being either entirely japanned or made with a japanned back and nicked wire. The price is low and liberal discounts

are offered the trade, for whom the brackets are put up in display boxes holding one dozen.

#### THOR ECCENTRIC HANGER PATENTED.

The illustration below is a sectional view of the eccentric crank hanger manufactured by the Aurora Automatic Machinery Co. of Aurora, Ill., and marketed by the Iven-Brandenburg Co. of Chicago, a patent on which was last week allowed to Alex Levadahl of Aurora. The distinctive point in the bracket is the securing of the eccentric barrel. This is accomplished by an inclined cross bolt and sleeve which renders the exterior appearance of the complete hanger neater than it would be were the eccentric clamped by large exterior lugs and screws on



the bottom of the bracket. The inner sleeve is fitted with the regular Thor two-piece crank and axle group.

#### SELLING AGENTS FOR IMPERIAL FIXTURES.

The Iven-Brandenburg Co., with offices in New York, Chicago and Rochester, has the selling agency for the Imperial Co.'s entire output of Imperial Fixtures. All Iven-Brandenburg salesmen carry samples with them and a full stock of fixtures is carried in the company's stores in New York and Chicago, where all requests for prices, etc., should be sent to the Iven-Brandenburg Co.

#### FOOT CYCLING POPULAR IN ENGLAND.

W. S. Cleveland, manager of the Buffalo Foot Cycle Co., 985 Ellicott Square, Buffalo, reports that foot cycling as a pastime for men, women and children has become popular in England and that it is no rare sight over there to see persons gliding smoothly along prominent highways on the foot cycles. While the Buffalo Foot Cycle Co. advocates the establishment of foot cycling academies as profitable investments, it calls attention to the fact that its cycle skates



#### BICYCLE FITTED WITH BULLIS BALL-AND-CONE GEAR.

The illustration shows the outward appearance of the style of chainless bicycle which may be produced by fitting the gear marketed by the Bullis Ball Gear Company, of Rochester, N. Y. The gear as furnished to the manufacturing trade includes the one-piece hanger mechanism, the bracket encasing the front part of the gear and ready to be brazed to seat mast and lower front frame tube, the lower rear fork, the transmission shaft, the rear hub and complete sets of gears and pinions. The company states it has just completed a series of tests in regard to the running and wearing qualities of the gear in its latest form, in which the ball-rollers mesh with adjustable hollow cones on the engaging pinion. "A set of gears was run under normal load such as would be exerted upon it by a rider in climbing a 10 per cent grade at a speed of one mile per minute, for 100 miles continuously and at the expiration of that time the gears showed absolutely no heating and no wear that could be detected by use of a micrometer gauge. The gear was then run continuously for 1000 miles under the same load, and at a speed of 50 miles per hour with absolutely no further wear that could be detected." The method of taking up the wear between the pin and the roller is performed by tapering the pin and also the hole through the ball or cone, threading the ends of the pin in the supporting flanges; and by the simple act of tightening the pin with a screw driver, all wear at this important point is taken up.

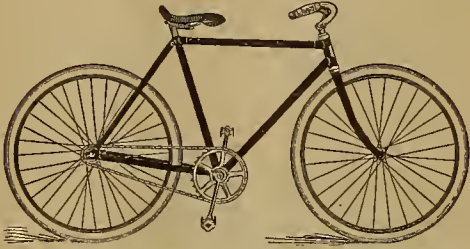


must not be confounded with the old wooden roller skate. The company's "Cleveland" pattern cycle skate has but two wheels, which are each about two inches in diameter, mounted on ball bearings and fitted with rubber tires. The wheels being in line like those of a bicycle, propulsion on these skates is said to be delightful and convenient.

#### THE HENLEY LINE.

The Henley Bicycle & Roller Skate Works of Richmond, Ind., offer eleven models, as shown and described in their catalogue just issued, including the six patterns here illustrated.

Models 122, 124 and 126 are the company's standard road machines, and while embracing



Model 122—Standard roadster. Price, \$50.



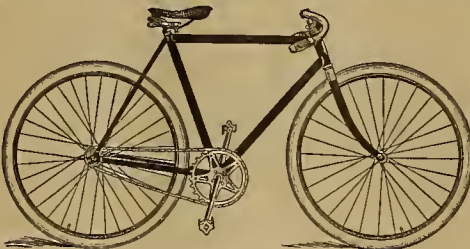
Model 133—30-inch wheels. Price, \$50.

ing new points, still embody the valuable features which have heretofore been characteristic of Henley bicycles and especially of the men's high grade roadster. Frames are on the most approved, up-to-date lines. List price is \$50.

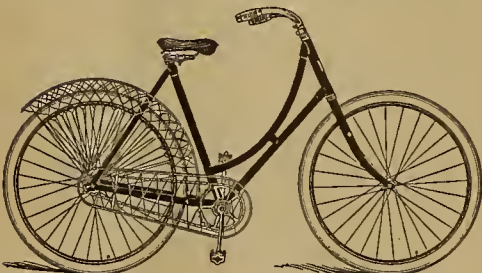
Model 133 is the medium grade men's roadster, with 30-inch wheels, two-piece crank axle and detachable sprockets. It lists at \$50.

Models 143 and 145 also belong to the medium grade line and list at \$45, but are fitted with 28-inch wheels. Otherwise they are the same as Model 133.

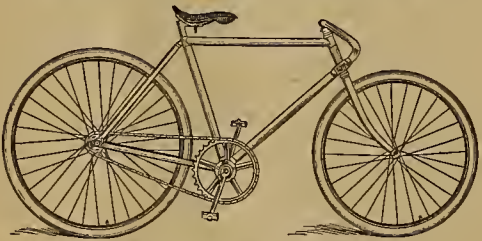
Models 150, 152 and 154 are ladies' machines, listing at \$50. These belong to the Standard



Model 143—Roadster. Price, \$45.



Model 152—Standard roadster. Price, \$50.



Model 172—Racer. Price, \$60.

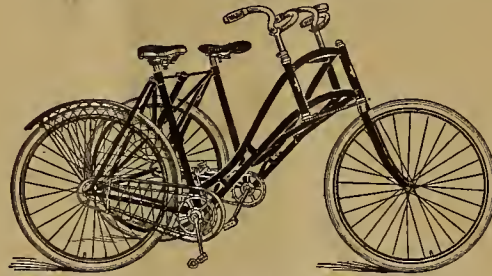
roadster line and have improved lines. They are finely finished, elegant and graceful of pattern, and the only women's patterns made by the Henley works.

Models 172 and 173 are racing machines, listed at \$60. They have a new pattern, square drop forged fork crowns, 28-inch rear and 26-inch front wheels, with option on 30-inch rear and 26-inch front, and are claimed by the manufacturers to be constructed on perfect and practical racing lines.

The Duplex is built of the very best materials, in a substantial manner, and is sym-

metrical and elegant in appearance. As shown by the illustration, it is of entirely new design, thoroughly practical for the purposes intended, and has double drop frame, suitable for either men or women.

The cuts herewith show only six of the ten models which appear in the Henley catalogue, and these, with the other models, including diamond, combination and racing



The Henley Duplex.

tandems, form a most complete and desirable line of machines, most of them on new lines, and all with very best equipment, as shown in catalogue. Fairbanks-Boston rims and Indianapolis chains are used on all models, together with the latest patterns of Henley adjustable handlebars, except on racing machines, on which there is an option on fixed bars. As there is an imperative demand this season for square fork crowns, the Henley people have adopted a very desirable pattern, drop forged, but also give an option on arched crowns. All Henley bicycles have detachable sprockets.

#### CUPS AND CONES WELL LISTED.

One of the distinctive features of the catalogue of John R. Keim, of Buffalo, successor to the Spaulding Machine Screw Co., is the manner in which the various stock hub, hanger and head ball cups are illustrated and marked with dimension figures. So thoroughly and uniformly has the work been done that the manufacturer can tell without the slightest difficulty just what shells to order for his purpose. The same care is displayed in the illustration and description of the other stamped parts made by Mr. Keim, plain outline drawings which show the detailed construction of each part being used instead of pretty but less useful half-tones or wood cuts. The last few pages of the catalogue contain several tables intended to save purchasers of steel product much tiresome figuring. The tables include decimal equivalents of fractions of an inch; sizes and weights of flat rolled steel; weights of steel; bottom, pitch and outside diameters of sprocket wheels, and bicycle gears for 24, 26, 28 and 30-inch wheels and all combinations of sprockets.

#### MEYERCORD TRANSFERS LIKED.

As an instance of the approbation with which the Meyercord line of designs is being favored, it is only necessary to mention a few of the numerous testimonials received daily from the trade all over this country and from foreign lands by the company. Chas. L. Razoux, of Boston, writes: "Your new line of patterns I like first rate." Hull Brothers, of Gasport, N. Y., write: "Please send your new catalogue of transfer ornaments. We used your goods last year and liked them very much."

Any user of transfer ornaments—and almost every bicycle repairman and finisher has use for them—will find the Meyercord line of guaranteed transfers equal to, and the company positively claims better than, any other on the market. The main offices and factory of the Meyercord Co. are both located in Chicago, the former in the Chamber of Commerce building.

#### TOE CLIP BUYERS TO BE PROTECTED.

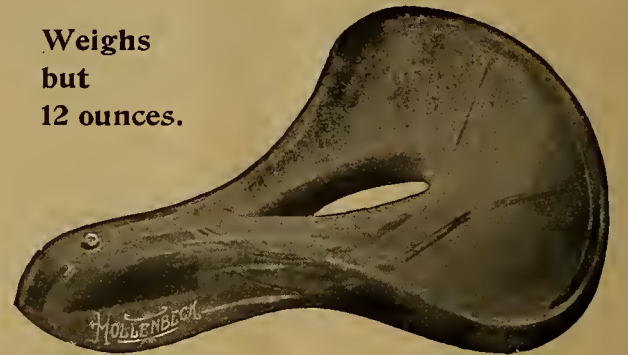
The Whaley-Dwyer Co., 108 South Robert street, St. Paul, Minn., believes that long controversy on the subject of the conflicting patent rights and privileges in the matter of the stirrup form of toe clip would be valueless to all parties concerned, and is willing to let the matter rest with the courts. In the meantime, however, the company assures all dealers that it will protect its customers against any loss occasioned by handling the Whaley stirrup toe clip, and at the proper time and in the proper place will take the necessary steps toward fully protecting its manufacturing rights.

#### EXCELSIOR SUPPLY CO.'S CATALOGUE.

The newly issued catalogue of the Excelsior Supply Co., 88 Lake street, Chicago, contains one hundred pages of carefully compiled illustrated matter descriptive of the line of cycle fittings and parts which the company keeps in stock with a view to maintaining its original intention of supplying everything for bicycle builders and dealers. Patrons of the house not finding desired articles catalogued are requested to

# The Hollenbeck Rawhide Saddle

Weights  
but  
12 ounces.



Price, \$2.00.

Will be furnished upon any of the high-class wheels when requested.

## LIGHT, PRETTY, COMFORTABLE.

MR DEALER:—Let us send you the name of your nearest jobber. You want these saddles in stock.

MAKERS,

## Hollenbeck Saddle Co.,

SYRACUSE, N. Y.



... Distributers ...

C. K. Anderson, 164 La Salle St., Chicago, Ill.  
Chicago Tube Co., Chicago, Ill.  
Eugene Arnstein, Chicago, Ill.  
Von Lengerke & Antoine, Chicago, Ill.  
B. E. Harris & Co., Chicago, Ill.  
Armstrong Bros. Tool Co., Chicago, Ill.  
A. F. Shapleigh Hardware Co., St. Louis, Mo.  
Colorado Cycle Supply Co., Denver, Col.  
Great Western Cycle Co., Minneapolis, Minn.  
Deere & Webber Co., Minneapolis, Minn.  
Andrae Cycle Supply Co., Milwaukee, Wis.  
C. J. & F. E. Smith Cycle Supply Co., St. Paul, Minn.  
Baker & Hamilton, San Francisco, Cal.



# CYCLE AGE ADVERTISES

## PROFITABLE ADVERTISING

Continuous versus Spasmodic Effort Discussed by an Expert.

The following advice is tendered by Charles Austin Bates, one of the best of advertising experts:

Don't try to make a man preserve your ad. Send him one today for the impression that it will make on him today. Let him throw it into the waste basket as quickly as he pleases. If you want to make an impression on him tomorrow send him another, and don't tie a chromo on it to make him preserve it. Stick to business. Talk about your business to the exclusion of everything else. Tell a little illustrative story if you want to, put in a pretty picture

if you want to, but make it all about your business, and don't add expense to it in the effort to get it preserved.

A man told me some time ago that a series of circulars he had been receiving didn't stand very high in his estimation. He said that as soon as he read them he threw them all into the waste basket!

Why not?

The business of a circular is to get itself read. After that its proper place is in the waste basket.

I don't want anybody to save my circulars. There's no necessity for it. If I really want a man's business I will send him another circular, and another, and another.

Make an advertisement or a circular striking enough to get attention at the time it is received. If you get it read once, that's all you can expect, and all you ought to expect.

You don't expect people to frame the letters you write them and use them for deco-

orative purposes. Why should you expect them to be more considerate of a piece of printed matter?

If you talk business to a man over the telephone, you don't expect him to receive your remarks into a phonograph and use it to talk to himself for a year or two.

No, sir, you telephone the man today and talk to him, and if you don't get him, you telephone him again tomorrow, or next week.

Just the same with newspaper advertising. Tell the buyers your tale today and impress with what you have to say. They won't all come and weigh in with the orders within seven days, that's certain. Therefore tell them your story again next week. Vary it a little and make it attractive, but, above all, be business-like and make an impression.

## The Value of Originality.

It is a well-known fact that most of the circulars sent to busy men nowadays are consigned immediately to the waste basket, without so much as a hasty perusal. A London firm, realizing this, got around the difficulty by printing the following on the envelope: "Caution: Remove the envelope carefully and exercise still greater care in handling the enclosed circular. Don't throw it in the waste paper basket or give it to the servant to light the fires with, as the most disastrous results will follow, inasmuch as the circular is dipped in a solution of dynamite, the most powerful explosive known. Hang it up in a cool, dry place, and, after a few days' exposure, its dangerous properties will disappear and it can be burned like any other circular." Then, at the lower edge of the envelope, was printed: "N. B.—Most firms do their heavy lying in the circulars; we alone do all of ours on the envelope."

## A SAMPLE PAGE FROM "MODERN CYCLE REPAIRS."

It will be ready on Thursday, March 16. 160 pages and 100 Illustrations, handsomely bound. To Cycle Age subscribers, \$1.00. To others, \$2.00. Cycle Age one year and Modern Cycle Repairs, \$3.00.

Smashed and broken tubes may be mended in three ways. The common and simplest way is to cut out the smashed place and splice the tube by inserting a solid plug or a piece of tubing as shown at A in Fig. 14. This is a very quick way of doing the work and one which requires no expense but that of labor. It has its disadvantage, however, in that it sometimes casts a reflection upon the repairer's mechanical ability.

If the frame in building has been sprung into line, or if any of the tubes in any way have an irregular tension, the result shown at B in Fig. 14 is liable to follow the splicing of a tube. The plug may be put in all right, and to all appearances the splice looks as if it would be a success, but when the brazing is being done the tube may spring out of line at the splice. It is of course possible to pull the tube straight after it has been cooled, but in nine cases out of ten when such a course is followed the first heavy shock given the frame by the rider will cause it to spring out again. This means that the bicycle will be brought to the shop with a complaint, or that the owner will forever after shun the shop.

The second way of repairing an injured tube is to replace it. This is the most expensive way, but it leaves the frame as good if not better than it was before the injury took place. It costs the price of a new tube, and requires some work in removing the old tubes from the lugs. So another way has been tried by repairmen.

This third method is shown in Fig. 15. It calls for the use of some new tubing, but the work of putting it in is lessened. The old tubing is cut off close to the joint, the stubs being marked a in the illustration. The new length of tubing, c, is cut to fit in between these stubs. Plugs of solid iron rod or of tubing are then driven inside the old tubing stubs and pretty well into the connecting lugs. These plugs, b, project as shown. The tube, c, is then slipped on over them and brazed in place.

Splicing of Tubing

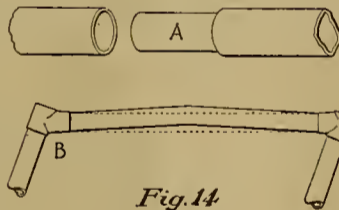


Fig. 14

To Avoid Springing Tubes

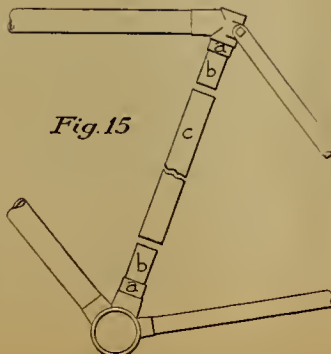
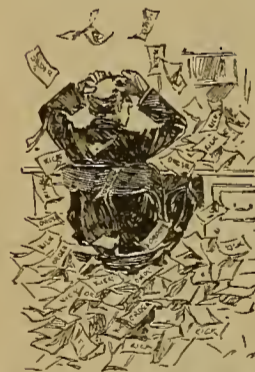


Fig. 15



## THIS POOR MAN

was selected to get at the ins and outs of the "KICKS" resulting from our offer of \$25 to the subscriber who furnished the best reply to our questions concerning the improvement of CYCLE AGE.

The prize has been awarded to Mr. H. P. Winn, of Boston, to whom check has been forwarded.

The CYCLE AGE tenders thanks to all the subscribers who took advantage of the opportunity to offer suggestions, the value of which is freely acknowledged.

If an anonymous correspondent at Cleveland will send his name and address it will give us pleasure to reply to his question.

## SATISFIED ADVERTISERS.

After considering all the trade journals on the market we have come to the conclusion that your paper reaches the best class of trade in the United States.

THE CARLISLE MFG. CO.,  
69-71 W. Jackson Boul., Chicago.

order materials needed, and the order will be filled even if the company is compelled "to make the articles."

#### GREAT ACTIVITY AT POPE'S.

All departments of the Pope Mfg. Co.'s factories are now running twenty-two hours daily and the combined Pope interests are furnishing employment to about 4,000 men. Word comes direct from the company that the demand for its bicycles at the 1899 prices is unprecedentedly large and for weeks close to 1,000 machines have been shipped per day. Many orders are being received for the chainless.

All rumors to the effect that the Pope company will employ a racing team this year are contradicted at the offices of the company.

#### PRACTICAL TRIBUTES TO MERIT.

One of the best proofs of excellence of a firm's product is the retention of old trade. Continued selling to new buyers often yields good financial results, but manufacturers are generally better satisfied when their old buyers place second and third orders on the same products. Such is the experience of the Cycle Components Co., 13 Maiden Lane, New York city, which states that with hardly an exception early purchasers of its C. C. C. and Alvin pedals are placing repeated re-orders for the goods.

#### CONQUEROR WALL HANGER.

The Mechanical Fabric Co. of Providence, R. I., which makes the well known Conqueror single tube tire, is sending out to the trade copies of a highly artistic wall hanger, the distinctive illustrative feature of which represents the entrance to the harbor of Santiago de Cuba. The illustration is a reproduction from a drawing made from an original photograph, bringing out vividly the exact detail of the defences at the harbor entrance, where several of the most prominent scenes in our late war with Spain were enacted.

#### BRISTOL BELL CO.'S NEW DESIGN.

The Bristol Bell Co. of Bristol, Conn. has recently produced a new bell top design which is styled the Berlin. The upper of the



two illustrations herewith is a direct top view showing the richly ornamental relief work in the design. The finish is a new silver effect, as an aid in attaining which the sand blast is used. The finish obtained is not only very rich, but is lasting. The lower illustration shows a complete Peerless pattern bell finished in the Berlin design.

Another new feature of the Bristol company's bells is the adjustable lever applied



to the Peerless and Corbin patterns. It obviates the necessity of an awkward location of the bell on the handle bar in order to bring the thumb lever within easy reach of the hand. The lever is adjustable to any position without the use of tools. The convenience of this will be appreciated by those who have tried to fit bells to handle bars having unusual curves.

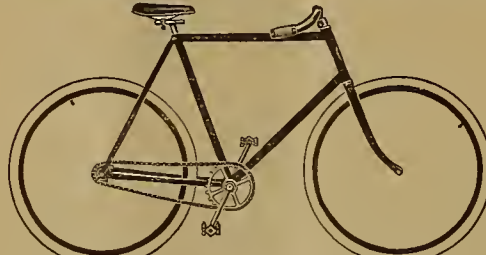
#### WORKING DAY AND NIGHT ON CHAINS.

For the last four months the plant of the Indiana Chain Co. in Indianapolis has been

running full time on the production of its well known and popular Indiana chains. The company states that it has all the business it can take care of for the present and that it is running the factory nights to keep abreast of the tide of orders. A heavy call for its No. 4 Baldwin pattern chain has set in and this style bids fair to eclipse all of its other patterns.

#### EXTENSIVE CRAWFORD LINE.

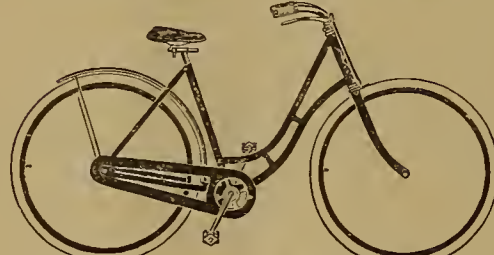
The Crawford Mfg. Co. of Hagerstown, Md., is adhering to its well tried policy of producing a large line of bicycles in order to meet all of the different demands of pur-



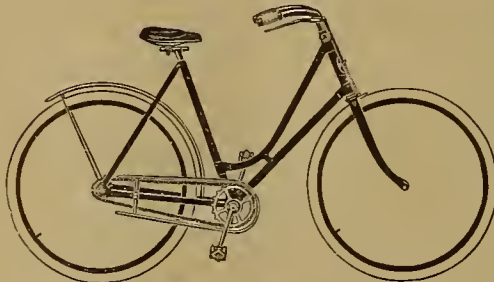
Model 53—Weight, 25 lbs. Price, \$25



Model 49—Weight, 23½ lbs. Price, \$30.



Model 58—Weight, 25 lbs. Price, \$50.



Model 54—Weight, 26 lbs. Price, \$25.

chasers and to thus enable its agents to sell Crawfords exclusively without having to fill in their lines with machines of other makes.

Models 58 and 59 are respectively the women's and men's \$50 road machines, and embrace those structural points held in highest esteem in the Crawford factory. Model 57 is a road racer selling at \$50. The machine is distinctively for the scorching fraternity and no women's model to match it is made. In Models 69 and 70 the dealer is offered a pair of staunch, reliable \$35 bicycles which have the style of the times. With the purpose of supplying a machine of the road racing type which will still sell at a popular price, Model 67 is added to the line. It lists at \$35. The \$25 patterns are Models 53 and 54, and while the Crawford company does not claim broadly that they are the acme of cycle building, it states that for the price the machines are the best which the long experience and ample facilities of the firm enable it to produce.

Besides these regular models, the Crawford Mfg. Co. builds two tandems listing at \$75 each, a pair of bevel gear chainless machines at \$65 each, two road machines at \$30 each, and several cheaper models more or less similar to different ones of the models mentioned. The policy of this firm is too broadly known to make it necessary to mention that the options in fittings and equipments on the various patterns are as liberal as can be consistently offered.

#### PARTRIDGE & CO. RE-LOCATE.

Horace Partridge & Co., of Boston, makers and importers of athletic goods, will move on or about March 10 from their present location, 55 Hanover street, to the corner of Franklin and Arch streets, where commodious quarters have been secured. They expect to have an opening about the middle

of March and will give their undivided attention to the sale of bicycles, sundries and athletic goods.

#### MAKES FULL LINE OF JUVENILE CYCLES.

Boys' and girls' bicycles in four sizes each, selling at moderate prices, are now being manufactured by the Speed Mfg. Co., 71 West Jackson street, Chicago. The machines are made with 16, 20, 24 and 26-inch wheels and list respectively at \$19, \$20, \$22 and \$23. The frames are built from 1½-inch tubing with flush joints and oval fork crowns. Standard fittings in proportion with the sizes of the models are used and each pattern has the appearance of a thoroughbred cycle for young America.

#### COASTER-BRAKE INFRINGEMENT SUIT.

To the Editor:—The Eclipse Bicycle Co. have filed a suit against the Globe Cycle Works, of Buffalo, for infringing their patents of the Morrow coaster and brake. This suit will be prosecuted with vigor, and the Eclipse Bicycle Co. are confident that an early decision will be rendered in their favor, as the patents on the Morrow coaster and brake are very strong. The trade will please take notice.

ECLIPSE BICYCLE CO.

#### WATSON POST PATENTS ALLOWED.

L. E. Crandall of New York city has been granted a patent on the automatically adjustable seat post manufactured by the Watson Automatic Seat Post Co. of the same place. The construction specified in the patent is substantially that of the Watson post now in the market. The patent is of course assigned to the Watson company.

The Ellwood Ivins Tube Co.'s plant at Oak Lane Station, Philadelphia, is running twenty-fours a day or cold drawn seamless steel tubing. This company is said to be the first in America to produce such tubing.

F. A. Hastings & Co., manufacturers' agents, have removed from 195 to 205 Lake street, Chicago.

K. Franklin Peterson, manufacturers' agent, has removed from 195 Lake street, Chicago, to 205 same street.

#### MADE FOR ALL DEALERS.

The Associated Merchants Journal and Dealer's Review of Reviews, Chicago, introduces something new to trade journalism. It is to the business world exactly what Albert Shaw's Review of Reviews is to the literary world—brisk, concise reviews of the best articles of brilliant writers in the leading trade publications. To the general merchant the journal presents the broadest field of observation in the business world. Recognized leaders in their special lines are in charge of the several departments, the directory being Charles S. Powell of Boston, president; W. G. Watkins, vice-president and treasurer; C. Franklin Davis, secretary of The Research Publishing Association, publishers; Porter D. Breed, editor and manager. The Research, Purchasing and Collection Departments especially interest subscribers, being a source of revenue and saving to all subscribers. Sample copy mailed upon application.

## MISCELLANEOUS.

Advertisements under this head 5 cents per word first insertion, 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders, or stamps received.

### WANTED.

WANTED—Good agents in all parts of the United States and Canada to sell our contracts. We are the oldest bicycle protective company in the world. Our contracts sell easily. Write at once for particulars and territory. Liberal commission. UNION WHEELMEN'S PROTECTIVE COMPANY, 618-630 The Temple, Chicago, Ill.

### FOR SALE.

NICKEL PLATING PLANT FOR SALE—Complete nickel and copper plating plant, with capacity 100 bicycles per day; in perfect running order; solutions A1; for sale at a bargain. Address H. G. R., care Cycle Age.

FOR SALE—A large, old, and well-established component parts factory, with trade covering the entire United States and all export markets. Goods are well advertised and have the highest reputation in all markets. Best of reasons for selling can be given a genuine purchaser and investigation will prove the value of the plant, business, and bargain offered. Address H., care of Cycle Age.

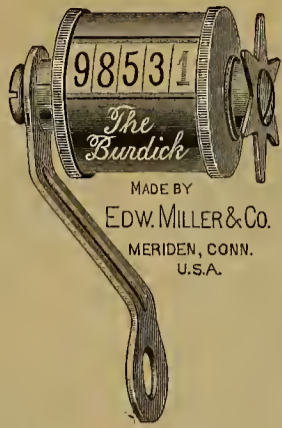
[Additional Wants and For Sale on page 596.]

"True as the Greenwich Time Ball."

# The Burdick Cyclometer

SIMPLE, ACCURATE, BEAUTIFUL. We Guarantee It.

REGISTERS 10,000 MILES.



MADE BY  
EDW. MILLER & CO.  
MERIDEN, CONN.  
U.S.A.



## Gas Bicycle Lamp

It Burns All Right and Gives Big Light.

SAFETY,  
SIMPLICITY,  
HONEST WORK,  
Chock Full of Merit.

Do you prefer Oil? Our "EVERLIT" is said to be the best at any price.

"ROYAL" Bells have a fine tone and don't rattle.

EDW. MILLER & CO., - Meriden, Conn.

# SOUTHERN

DEALERS  
REPAIRMEN  
RIDERS

... OUR ...

## '99 CATALOGUE

IS READY.

Biggest line of Cycles and Sundries to be found in the Gulf States. Are you on our mailing list?

Abbott Cycle Company, Ltd. WHOLESALE DEALERS  
NEW ORLEANS, LOUISIANA.

You can't prove

## "QUALITY"

with printer's ink.

Our practical men have had twelve years' experience in steel ball manufacturing. We make no extravagant claims—

## It Doesn't Pay.

Our aim is to make "Quality" the most attractive feature of our goods. Think it over. Give us a trial.

## It Pays.

THE GRANT BALL CO., 66-72 Clarkwood Ave., CLEVELAND, O., U. S. A.



# NO YES

It costs nothing to maintain and is always ready for use. It cannot be blown or jarred out, and does not smoke or smell. It is not affected by rain, wind or mud, and will last forever. It does not require matches, oil or carbide.

It is a dynamo, complete and requires no attention whatever. It throws a bright light, the brightest of all bicycle lamps. It overcomes all objectionable features of other types of lamps.

Write for Descriptive Circular and Prices.

FARNHAM ELECTRIC CO., 616 Ashland Block, Chicago, Ill., U. S. A.



## The CANTON REPAIR TOOL...

is a hollow steel needle with open slot at piercing end. The neatest, the smallest. Put in fancy decorated boxes with large vial of best plugging cement and rubber bands. For small punctures use cement alone; if large, use rubber bands and cement. Send 35 cents in postage stamps or order, for sample, post paid; or \$2.00 a dozen; \$15.00 a gross. Traveling men and agents wanted to take orders.

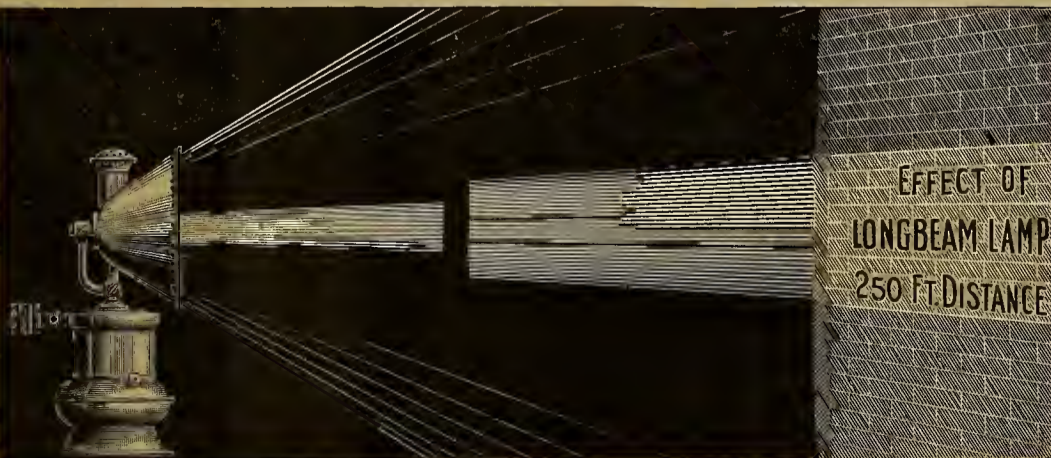


Cement Vial Attached to Tool.

Patd. April 12, 1898.

... ADDRESS ...

CHAS. A. BRAUCHLER, Mfr. of Repair Tools and Small Steel Tubing, Canton, Ohio.



# THE LONG BEAM BICYCLE LAMP

Has a reflector built on same principle as a locomotive headlight.  
Result—throws light 300 feet.  
Feeds by capillary attraction.  
Result—not affected by jolts and jars.  
The burner will not clog as in other acetylene lamps.

SUMMARY: The first gas lamp to give absolute satisfaction.

JOBBER: Write us before cataloging inferior lamps.

THE LONG BEAM LAMP CO. - HILLSBORO, OHIO, U. S. A.

OUR CATALOGUE

...OF...

# Temple Bicycles

IS READY.

15 Models in all. Chainless, 3-crown machines. 28 and 30-inch wheels.

**PRICES** are made at "Net fixed wholesale prices,"

**LESS** Saddle, Pedals, Tires and Tools....

Fittings are quoted separately at factory cost—Every style and price of Saddle, Pedals and Tires for your choice if you want them  
Quality and PRICE beats anything out.

"GIMME A TRY" 

The Ralph Temple Co.

82 Lake Street, CHICAGO.

## ENAMELING



## OVENS.

A NEW LIGHT ON AN OLD SUBJECT  
It saves from 35 to 50% propelling force.

Notice to...  
**BICYCLE MANUFACTURERS.**

The riders of 1899 will insist upon their wheels being equipped with

"The Star Ball Retainer."

Send us samples of Cups and Cones and write for prices.

THE STAR BALL RETAINER CO. LTD.  
LANCASTER, PA. U.S.A.

"I USE THE STAR BALL RETAINER"  
"I DON'T!"

ALL ROADS ARE EASY WHEN THE STAR BALL RETAINER IS USED

**ADLAKE BICYCLES**  
THE WHEELS OF HIGH DEGREE.  
THE ADAMS & WESTLAKE CO. MAKERS. CHICAGO.

"D. & J."  
Single, Tandem, Triplet, Quad....

**Hangers**

We make Hangers for only high grade wheels.

Park City Mfg. Co.,  
N. W. Cor. Jackson & Clinton Streets, CHICAGO.

Our No. 4 Chain is a world beater for '99.  
No sprocket climbing, and a beauty....

Send 26c. for Aluminum Fob. Gold Plated, \$1.  
Send 25c. for detachable repair. Readily replaces a broken link. No tool bag complete without it.

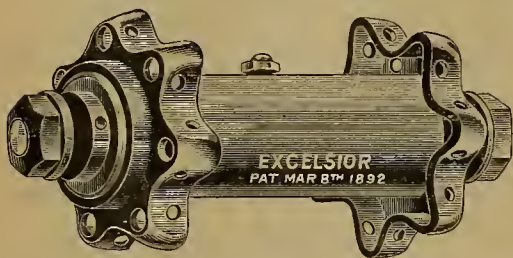
QUALITY, QUANTITY and PRICE.

INDIANA CHAIN COMPANY, - - Indianapolis, Ind.

THE HART & COOLEY MFG. CO., So. Chicago, Ill.

# HOT and COLD ROLLED STEEL

Geo. Nash & Co., General Sales Agents, 35 South Canal Street, CHICAGO.



## EXCELSIOR HUBS

WHEN YOU SEE A BICYCLE EQUIPPED WITH THE DISC ADJUSTING

you can rest assured the wheel bearings are as good as experience and skill can make them. You will not find them on cheap wheels. STRAIGHT TANGENT SPOKES are now used on all High Grade Bicycles. THE EXCELSIOR is the most handsome hub in the world.

CHAS. F. STOKES & SONS, Mfrs.,  
SAMUEL BUCKLEY & CO., New York,  
Eastern Sales Agents.

No. 56 Fifth Avenue, CHICAGO, ILL.  
GUITERMAN, ROSENFELD & CO., New York,  
General Export Agents.

### WANTED

WANTED—Already established wholesale bicycle dealer, in the Netherlands, will take on a few more choice American lines of sundries to job in connection with regular trade. Mail catalog and export quotations. Satisfactory American references given if business results. J. C. VAN OUDENALLEN, Frombergstraat No. 2, Arnhem, Holland. 1

WANTED—A mechanical engineer, having made the horseless carriage a study, desires a position as salesman or mechanical engineer. Has important improvements and inventions he wishes to carry out. Has a good technical and practical training in mechanics; eighteen years' experience with electric, gasoline and steam motors. Address AUTOMOBILE, care Cycle Age.

WANTED—Salesmen and traveling men to take orders. Address CHAS. A. BRAUCHLER, Mr. Hollow Needle Tire Mender, Canton, Ohio

### FOR SALE

FOR SALE—500 up-to-date '98 wheels in lots of 25 or more. Bargain for spot cash buyers. Address Box 472, Canton, Ohio. 1

FOR SALE—At a bargain—Three Commercial Graphophones and complete equipment. GRAPHOPHONE care Cycle Age.

GET THE GENUINE.....

## DIAMOND E Nickeled Spokes...

and you will find this trade mark



on every spoke. It is conceded to be the most important feature of the season.

Western Office....  
204 Lake St., CHICAGO.

EXCELSIOR NEEDLE CO.,

Torrington, Conn.

CLOSING OUT SALE—Until closed out, we shall offer the following: 600 pairs finished, flat cranks, regular thread, rights and lefts, at 20c per pair, 6 in.; 2200 pairs brazed forksides 1 1/2 in., 10c; 350 pairs brazed forksides 7/8 in., 10c; 4360 seat post forgings, 2c each; 630 crown forgings, 2c each; 2700 pairs upper back stay forgings, 1c each; 2200 lower adjustment forgings, 1 1/2c each. CORTLAND CARRIAGE GOODS CO., Cortland, N. Y.

Mail us your Subscription.

## BICYCLES. SUNDRIES.

We have just opened an extensive SUNDRIES DEPARTMENT in connection with our Bicycle Business, and we will issue a BARGAIN LIST every two weeks. Our price on regular lines is 10 per cent lower than others and on Specials often only 10 per cent of the prices charged by others. Send for our latest list of Sundries.

VIM BICYCLE COMPANY,  
Sundries Department, 56 Fifth Ave., CHICAGO.

# THE CYCLE AGE

VOL XXII—No 20.

CHICAGO, MARCH 16, 1899.

NEW SERIES No. 69.

## CUT ON LOW GRADE BICYCLES

### Buffalo Dealers Meet Department House Competition—Wary of Second Hand Machines.

Buffalo, March 13.—A systematic canvass of the cycle trade in Buffalo, which implies a personal visit to every dealer of prominence in the city, leads to the belief that the approaching season will be the greatest in the annals of the local trade. While the margins of profit will be less than last season, it is expected that the deficiency will be more than made up in volume of business.

#### Competition Will Be Sharp.

"Competition," said the head of a prominent firm, "is going to be the sharpest ever experienced by the Buffalo trade. I mean by this that there is a strong likelihood of prices on high grade goods being cut in some quarters. While I do not look for it before the season is well advanced it may come earlier, and when it does come it promises to be a bitter struggle with the odds in favor of the strictly legitimate dealers. Last year many agents dropped out of business through lack of patronage, but others have taken their place and all of the newcomers are out for business. Some of them will have difficulty in weathering the storm of competition and their early downfall is looked for."

#### Advance Sales Are Heavy.

The selling season practically opened the first of the month and the volume of business transacted during the intervening period up to date shows a surprisingly heavy increase over that done in the same period last year.

No general attempt at holding opening days has been made, but those who have had their "shows" report many actual sales to visitors and the booking of orders for delivery at the opening of the riding season. Exceptionally large crowds of sightseers were in constant attendance at these shows and much interest was manifested in the different models. The chainless came in for the greater share of attention. One of the large branch store managers reports having sold over fifty chainless machines since the first of the year, with orders coming in every day. There is a noticeable public desire for the better grades of machines.

#### Low Priced Goods Suffer.

The announcement of the big stores' sale of machines at \$18 and \$25 was the signal for the precipitation of a price war on the medium and lower priced goods which promises to gather energy as the season advances. These prices have been met by a score or more concerns, all of whom put forth the claim that their machines are of superior qualities. Several of these concerns are offering bicycles at prices for which a good set of tires could not be obtained and on terms to fit the buyer. The strictly legitimate

dealers are keeping as far away as possible from this species of warfare, and while everybody is plentifully supplied with stocks that can be sold at a profit and compete with these concerns, no attempt will be made to push sales of low priced goods unless circumstances compel such action.

#### Wary of Second Hand Goods.

The second-hand exchange business will not be carried on as extensively as in former years. Nearly all of the prominent dealers will refuse to take old machines in trade, and those that expect to do business on this line will not allow more than 25 per cent. of the original value of the old machine, providing it is not of too old a date. Others will take old models, place them on the salesroom floor, get what they can for them, and place the amount received to the credit of the customer. This plan is said to be a most satisfactory way out of a bad practice, and one which benefits the dealer and customer alike.

#### Retarded by Municipal Indifference.

St. Louis, March 13.—The large jobbers of bicycles and sundries in this city report that business out through this and the immediately adjoining states is good and that prospects were never better. It is a peculiar fact, however, that retail trade in this city is poor and has been so for a long time. This is generally believed to be due to the poorly paved streets, the indifference of the city officials to sprinkling methods and to the municipal tax on bicycles. Because of these things cycling has for some time been undergoing a retrograde movement here and a number of old bicycle firms have gone out of business. With a more liberal policy on the part of the town council toward cyclists and the inauguration of a movement toward improving the streets, a quick revival in things bicycular is expected.

#### Eager for Dunlop Stock.

The \$300,000 preferred stock of the new Dunlop Tire Co., Ltd., bearing 7 per cent interest, was subscribed ten times over by eager Canadian investors. Its subscriptions actually amounted to \$2,944,300.

## KENTUCKY DEALERS CHEERFUL

### Sales Begin With First Spring Weather—Irresponsible Dealers Out of the Field.

Louisville, Ky., March 13.—Three beautiful spring days last week had the effect here of enticing prospective purchasers to the bicycle stores. It looks very much as if spring trade has opened, as the dealers have all been unusually active for the past week and a number of sales have been made. All are in high glee because everything, they say, points to a highly successful season during 1899, much more so than for several years past.

There is also cause for jubilation in the fact that the number of dealers has been reduced to a minimum, the mushroom stands having been compelled to close their doors, leaving the well established dealers to take care of the trade. It should naturally follow that there will be no rate cutting and that installment sales will be reduced to a point where they can be taken care of without loss of money.

#### Strong Demand for 30-Inchers.

All of the local dealers are well stocked up with new goods, and are ready to fill orders. The 30-inch wheel will play an important part in the sales in this city from the present outlook. One dealer sold six bicycles to six different parties, all of whom selected machines with 30-inch wheels and 26-inch frames.

The usual spring talk of the establishment of a board of trade is being indulged in, but under present conditions there is no need of such a thing. The trade is now in the hands of old reliable dealers while the repair men, though they have not adopted a schedule of prices, yet seem to understand each other, and it is likely that they will continue as they have done heretofore. Just at present the repair shops are full of work, and no doubt they will enjoy a fine season.

A reputable dealer states that there are too many second hand bicycles on hand. A good, serviceable machine can be purchased for \$5, and if a purchaser gets \$15 in a trade for a new machine he will be doing well.

#### Charges on Country Checks.

New York merchants will very soon be compelled to pay a charge of at least 10 cents for every check or draft their bank collects for them, with the exception of items collected in the cities of Boston, Providence, Albany, Troy, Jersey City, Newark, Philadelphia and Baltimore. On items collected in these cities the banks will still have the privilege of making free collections if they so desire. The ten cents charged is the minimum, and the regular charge will be not less than one-tenth of one percent for items collected in nearby states and one-quarter of one percent for items payable in the more remote states. Any bank convicted of making

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free collections after the rules have been regularly promulgated will be fined \$5,000 for the first offense, and in case of a second violation any collecting bank may also be expelled from the Clearing House Association. The plan prepared is modeled very largely after the plan of the St. Louis banks, with such modifications as are necessary to meet the demands of New York city.

**LOOKING FOR \$50 MODELS**

**Binghamton Buyers Do Not Take Kindly to Cheap Machines—Dealers Well Supported.**

Binghamton, N. Y., March 12.—More people hereabouts are looking for bicycles at \$50 than at lower prices. This has never been a good market for cheap machines, the demand having always been confined to high and medium grade models.

That the general local commercial conditions have improved there is no question. The factories are running on full time. Signs are frequently displayed in the factory windows calling for more help. The suburb of Lestershire, just west of the city, is booming in true western style. It now boasts the largest shoe factory in the world, and additions are to be made this spring to the extent of \$150,000 to provide space for the employment of several hundred more operatives. These workmen are excellent bicycle customers, buying close, but demanding a good article. There is no doubt that the purchasing capacity of the public has increased within six months and is vastly better than it was a year ago. It will be a month before the highways are fit to ride, and meanwhile buyers are slow.

The cycle trade of the city is all in the hands of legitimate dealers. The department store problem has not required any discussion here. One dry goods establishment last season secured some machines on which they attempted to cut prices and make trade. Within thirty days after the goods arrived the factory had gone the way of all earth, and the venture fell through. Another concern had a very unsatisfactory experience with some machines without name plates which were sold at a ridiculously low price.

**Union Workers Circularizing the Trade.**

At the last regular meeting of the Toledo Union Label League it was decided to advance the interests of the Bicycle Workers' Union just now when the selling season is opening. With this object the secretary of the International Bicycle Workers' Union is sending copies of the following circular to the trade:

**UNION WORKMEN.**

To the Friends of Organized Labor.  
Greeting:—The Toledo Union Label League desires to call your attention in purchasing a bicycle to the label of the Bicycle Workers' Union, and urge you to buy only wheels bearing said label, and for these reasons:  
The label stands for skill and competency versus penitentiary and child labor.

It means that every part has been handled by a skilled mechanic.  
It means that these workers are receiving a fair division of the wealth they create—the correct foundation of prosperity and happiness.

It means that their employers recognize the equality of bargaining power.

Ask your dealer to supply you with a labeled bicycle, thereby assisting the workers in their efforts to keep women and children out of the shop and factory; to bring about the shorter workday; to maintain a wage scale whereby they can educate their children as befits the coming generation.

Sincerely and fraternally,  
TOLEDO UNION LABEL LEAGUE.

Austrian cycle manufacturers are petitioning their government to increase the existing duty on bicycle parts.

Probably the oldest living cyclist is a woman in Essex, England, aged 93.

**NEW ORLEANS REPAIR PRICES**

**UPHELD BY COMMON CONSENT**

**No Fixed Schedule Adopted But General Adherence to One List Makes It Standard.**

New Orleans, March 14.—Bicycle dealers and repairmen in this city have no fixed schedule of prices for repairs, but by common consent the charges contained in the appended list are recognized as standard.

When it becomes necessary to detach a brazed sprocket and to put it back again, an additional charge is made over that contained in the list.

**Sundry Repairs Charged By Time.**

Repairs to saddles, bells, cyclometers, lamps and pedals are charged according to the time occupied and material used in repairing them and are therefore not listed. In many instances prices on new pedals and saddles are less than repairs to old ones. When tubing or stays are replaced, the prices contained in the list include the cost of material, but where connections, hanger brackets, seat post lugs and rear forks are replaced the prices quoted are for the labor of performing the work and do not include the material used.

**Special Charges for Old Machines.**

When new parts are brazed in frames or forks the nickeling and enamel are damaged, and prices quoted on such work do not include fresh nickel plating or enameling. The prices contained in the appended list are on modern bicycles. An extra charge is made for out-of-date machines or ones of special make that require extra labor or special spokes. Rim cut tires are not repaired.

Following is the schedule of prices:

**Repairs to Frames.**

Replacing top tube.....	\$ 2.50
Lower tube.....	2.50
Top and bottom tubes.....	4.00
One rear fork side.....	2.50
Two rear fork sides.....	4.00
Seat post mast.....	3.50
Head.....	2.50
Head frame connection.....	2.00
Seat post connection.....	3.00
Crank hanger bracket.....	5.00
One rear fork end.....	1.75
Two rear fork ends.....	2.75
Lining up frames.....	\$1.00 to 2.00

**Repairs to Front Forks.**

One new side.....	\$ 1.75
Two new sides.....	3.00
New stem.....	1.75
New arched crown.....	2.75
One new tip on fork end.....	1.25
Two new tips on fork ends.....	2.00
Complete forks to order, arched crown.....	5.00

**Enameling.**

When Machine is "Knocked Down."

Frame and forks (complete) re-enamelled in any dark color.....	\$ 3.00
Frame and forks (complete) re-enamelled in any light color.....	4.00
Frame and forks (complete) re-enamelled in white.....	6.00
Front forks re-enamelled.....	1.00
Front forks nickeled (crown and tips only).....	75
Striping frames, plain (extra).....	50
Striping and decorating frames (extra).....	1.00
Enameling rims, each.....	75
Enameling two rims.....	1.00

**Replacing Rims.**

One wood rim, common, 1 1/2 to 1 3/4 inch.....	\$ 1.50
One wood rim, extra quality.....	2.50
One wood rim, racing or tandem.....	2.75
One wood rim for G. & J. tires.....	3.00
One steel rim for M. & W. tires.....	4.50
One copper rim for G. & J. tires.....	4.50
Truing wheels, each.....	50c to 1.50

**Repairs to Chain and Mud Guards.**

New silk lacing on mud guard or chain guard.....	\$ 1.00
New silk lacing on both guards.....	1.50
New wood mud guard on ladies' bicycles.....	1.00
New wood chain guard on ladies' bicycles.....	1.00

**Sprockets.**

Making new rear sprocket, 7-8-9-10 teeth.....	\$1.25 to \$ 2.00
---	-------------------

**Repairs to Tires.**

Punctures, single tube tires, each.....	\$ 0.25
Punctures, double tube tires, each.....	50

Vulcanizing, small patches.....	50
Vulcanizing, large patches.....	75c to 1.25

**General Repairs.**

Front axles, each, about.....	\$ 0.25
Front wheel cones, each, from.....	50c to 1.00
Front wheel cups, from.....	50c to 1.25
Front or rear wheel nuts, each.....	10
Rear axles, each, about.....	35
Rear wheel cones, from.....	75c to 1.50
Rear wheel cups, from.....	75c to 1.50
Crank hanger cones, from.....	\$1.00 to 2.00
Crank hanger cups, from.....	1.00 to 2.00
Crank hanger axles, from.....	1.75 to 4.00

**Repairs to Chains.**

Putting one link in chain.....	\$ 0.25
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**Prices for Nickel Plating Parts.**

Frame and forks.....	\$12.00
Handle bar.....	1.00
Large sprocket.....	75
Medium sprocket.....	50
Small sprocket.....	25
Fork crown and tips.....	75
Fork crown only.....	50
Spider crank.....	40
Pedal.....	50
Hub.....	40
Crank.....	25
Seat post.....	25
Small parts and fittings, each.....	10c to 25

**DEALERS PROMULGATE POLICIES**

**Massachusetts Agents Will Make No Free Repairs on Guaranteed Machines—Installment Policy.**

There will be no free repairs made on guaranteed machines by the bicycle dealers of Salem, Mass., and vicinity. No matter how trivial the accident to a guaranteed machine in this part of the country a rider will be compelled to ship it to the factory or pay the dealer for his trouble in making the repair.

The dealers have also agreed upon a governing policy in dealing with customers who purchase machines on the installment payment system. First payments will be as follows: \$30 on a \$75 machine, \$25 on a \$60 machine, \$20 on a \$50 or \$45 machine, \$15 on a \$35 or \$40 machine, and \$12 on a \$25 or \$30 machine.

In case of a lapse of payment of installments for two weeks the dealers have agreed to seize leased machines, and if the installment be not paid at the end of fifteen days the machines will be sold.

On repair work it has been decided to charge 25 cents per week storage on repaired articles unclaimed after 30 days. Articles unclaimed after 60 days will be sold for the charges.

**Fixing the Guarantee By Law.**

Consideration was recently given to the bill introduced into the Connecticut legislature which requires bicycle makers and agents to give a written or printed guarantee for two months. A representative of the Pope Mfg. Co. opposed this bill on the ground that it is class legislation. The author of the bill thought that it would have a good effect in requiring the makers of cheap machines to put better material into them. He referred particularly to machines which are made outside of the state of Connecticut and contended that the bill was for the protection of people who, through want of money or ignorance, bought cheap bicycles.

**To Keep Track of Deadbeats.**

At a recent meeting of the organized Boston cycle tradesmen it was decided to revive the system of notifying all members of undesirable credit customers. When the information bureau was in operation before the names of 157 delinquents were sent out to all the members. Over 100 stolen bicycles with full descriptions had also been reported to them. The collection department had also proved effective in many instances when members had been unable to get bills paid through the usual efforts. The secretary of the local board of trade has asked all members to begin sending in names of delinquent customers, and said that the annual dues had been reduced from \$12 to \$3 a year.

## BRAZING BY IMMERSION

### University of Wisconsin Frame Cleaning Process Seriously Affects Brass in Joints

The college professor is no longer limiting his relations with bicycle manufacturers to efficiency tests and opinions upon the mechanical merits of machines forwarded to him for examination and test, but is now taking an active hand in manufacture, his aim being to show the cycle maker how to remove spelter without filing and incidentally to add to his income by selling such information. C. F. Burgess, of the department of applied electro-chemistry and electro-metallurgy at the University of Wisconsin, offers to sell a frame cleaning process to any cycle manufacturer who is willing to rely upon his statement that it is all right. Below is a copy of a letter he recently sent to many prominent manufacturers:

#### Circular Letters Sent to Dealers.

A process has recently been perfected in our laboratories for the removal of superfluous spelter from iron and steel surfaces, whereby the expense of removal, as by grinding and filing, may be greatly reduced.

Our process is especially applicable where the brazing is done by the dipping process, which is coming into such extensive use of late.

Our process has been put into operation by a prominent bicycle manufacturer and has fulfilled expectations completely, not tacking the steel, but in leaving a fine surface for the enamel.

As manufacturers of bicycles, and therefore probably doing considerable brazing, you may be interested in effecting the saving made possible by this process, and if this is the case I shall be glad to hear from you regarding it.

I should also be pleased to receive a sample brazed joint, such as a seat post, which I will have cleaned by this process and returned for your inspection.

C. F. BURGESS.

University of Wisconsin.

#### Only an Acid Cleaning Bath.

The fact that the professor busies himself in an electro-chemical and electro-metallurgical laboratory lends color to the impression that his spelter removing process is strongly aided by electricity. The letter below, however, which was written to a maker who sent a sample dip brazed joint to Mr. Burgess for trial, in response to the first circular letter received, leads one to conclude that the process is nothing more than simple acid cleaning. The professor writes as follows:

Your letter and sample brazed joint have been received, and I am returning by mail this joint which has been subjected to our cleaning process for removing spelter. This will enable you to judge of the efficiency of the process. The results may be even better under more favorable conditions. The length of time which it takes to clean such a joint by our process in the manner shown is less than one hour. Where the coating of brass is even distributed the length of time necessary is from 15 to 30 minutes.

As you will see, the solution has had no bad effect whatever on the iron, nor would this have been the case had the joint been kept in the solution a much longer time. Consequently it is possible to remove every particle of brass from the surface by leaving it in the solution long enough, but this is hardly desirable, for some filing is necessary at any rate to smooth the joints, and the small amount of metal which is left is rendered so soft as to be removed readily.

The basis upon which we propose to dispose of this process is that the manufacturer using it contract to make a payment to us of two and one-half cents for every frame turned out by the factory, the contract to be made to cover one year from date of installation of the process. For this sum the chemicals necessary for removing the spelter will be supplied by us f. o. b. Madison, Wis. Further, the knowledge in regard to the process is to be carefully kept within the works where it is used. The cost of installing the permanent equipment necessary for the operation of this system is to be borne, of course, by the company mak-

ing use of it, but this is merely a nominal amount, depending largely upon local conditions. I will be enabled to make a fair estimate as to this amount upon learning what number of frames you desire to treat per day.

The cost for the operation of this process, aside from the chemicals, is a small amount, consisting almost entirely of labor account. Two attendants with proper conveniences could handle 100 frames per day.

From the above information, and from that derived from inspection of the sample joint, you may be able to calculate what saving this process would be to you, and if there is any further information which you desire, and which I feel that I can give, I shall be most happy to do so.

Trusting that this reply will meet with your approval, and that I may hear from you at an early date, I am,

C. F. BURGESS.

University of Wisconsin.

#### Prospecting for a Gold Mine.

The professor speaks of the spelter removing means as a solution, the chemicals for which he will sell ready compounded for 2½ cents per frame. He states that the cost of operation, outside

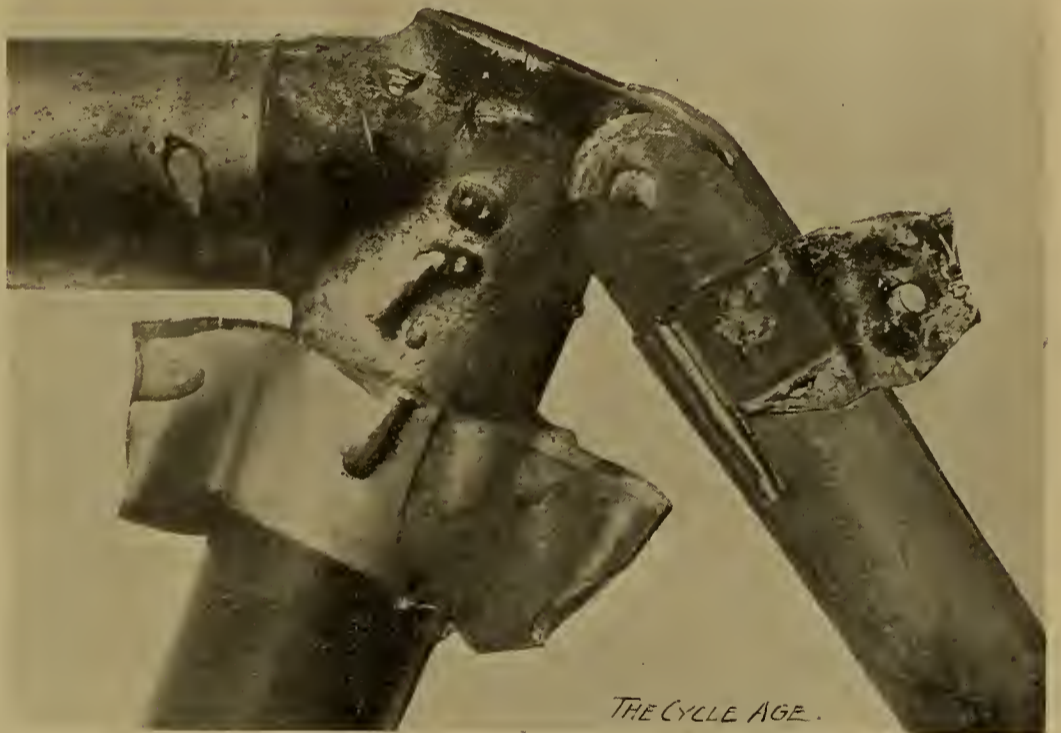
to be well grounded. In every branch of the seat cluster the adhesion between the brass and the steel has been ruined. The brass was not only eaten entirely out of the joints at some of the lug branches, but where brass was left the original alloy of copper and zinc was so affected that practically no union between the spelter and steel remained. In splitting open the joints the brass did not divide as it should, leaving a thin film on each part of the joint, but easily rolled free from either the lug or the tube.

#### Process Shows Nothing New.

Mr. Burgess' statement that the spelter was removed from the outside of the joint and that a good enameling surface was left, is true. With the pickling process others have accomplished the same result. There is nothing but the professor's statement to prove that the steel itself is uninjured. Viewing the subject in its entirety the experimenting of Mr. Burgess is unsatisfactory. Cycle makers will continue to use file and sand blast for the removal of spelter, at least until the latent virtues of anti-flux are more attentively regarded.

#### Rivalry at Cycle Shows.

During the Boston cycle show an exhibitor offered a lamp each evening for the prettiest girl to be found at the show. Judges were appointed, and, with the aid



SEAT CLUSTER SHOWING EFFECT OF BURGESS' CLEANING PROCESS.

of the original expense of the solution, consists almost entirely of labor. Extensive use of an electric current is thus barred. At any rate Mr. Burgess is either asking 2½ cents per frame for the privilege of using a blue vitriol solution in connection with an electric current in a manner similar to ordinary electric decomposition as employed in electroplating, or he is charging 2½ cents per frame for some common acid with which to fill a pickling bath.

#### Well Brazed Joint Entirely Ruined.

Removal of spelter by pickling is a process not held in favor by manufacturers, because of the fear excited that during the pickling the steel will be injured and the brass in the joint affected as well as that on the outside. The illustration accompanying this article shows a joint which has been cleaned by Mr. Burgess and which was afterward cut open to note the effect upon the brass in the joint. The suspicion that the joint would be affected by his process is proven

of a megaphone, all were summoned to draw near and witness the selection. After much elaboration of detail in picking the girl, the award was made. This performance so riled the soul of a rival exhibitor that he decided to give a lamp to the homeliest girl. His scheme gave him all the notoriety he coveted, but did not add much to his popularity. The visitors to the show were given plenty of opportunities to draw a prize or an award of some kind through the many schemes which the exhibitors worked for the purpose of gaining publicity. Tires, saddles, cyclometers, and, in short, almost every species of cycle sundry, were distributed in addition to pound packages of coffee, traveling bags, pairs of shoes, cameras, etc. Each person upon entering the exhibition building was given a blank card upon which to write his or her name. This card was dropped into a box at a certain booth, and later in the evening they were drawn out and the people claiming the lucky numbers were awarded prizes.

# Crescent Material

The *first essential* of a perfect bicycle is the *best material*. Enamel and nickel will cover inferior workmanship for a time only. *Safety and service* demand the *finest material of the highest test*. There is nothing better than the best, so there is no stancher wheel than the

# Crescent

CATALOGUE No. 2 FREE

....Chicago—WESTERN WHEEL WORKS—New York

NEW TESTIMONIALS EACH WEEK.

# MILWAUKEE TIRES

## PUNCTURE PROOF

Pneumatic

Resilient



Single Tube

Easy Riding

COPYRIGHT 1888, BY MILWAUKEE PATENT PUNCTURE PROOF TIRE CO.

PRESENTING TESTIMONIALS.

F. A. COPELAND, President. J. B. BRIGG, Sec'y and Treas.  
LA CROSSE LUMBER CO.,  
Manufacturers of Lumber, Lath and Shingles.

LA CROSSE, WIS., Dec. 15th, 1898.  
MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., Milwaukee, Wis.  
Gentlemen:—I wish to let you know that all during the season of 1898 I used the Milwaukee Patent Puncture-Proof tire on my bicycle, and wish to testify with what a pleasure my bicycle was stored away for winter without once having had a dismount on account of failure of tires during the whole time since putting them on my wheel. I also found scarcely any difference of power required to propel the wheel for lack of ease in tread and resiliency common in all other attempts at what you have secured in furnishing a thorough puncture-proof tire. Yours very truly,  
(Signed) F. A. COPELAND.

CHAS. FITZ-GERALD, Architect.  
MILWAUKEE, WIS., Dec. 17, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., Milwaukee, Wis.  
Gentlemen:—I used your Patent Puncture-Proof Tires on my wheel the last season, without having a puncture or any need of repairs, in the same service, in which I had the misfortune to average two punctures a week in the season of 1897, when I used the ordinary tires. Therefore, the Milwaukee Patent Puncture Proof Tire has given me very great satisfaction, and I take pleasure in recommending the same. Respectfully,  
(Signed) CHAS. FITZ-GERALD.

Representatives Wanted. Write for prices and other information.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.



# THE CYCLE AGE

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

Published every Thursday at 324 Dearborn Street, Chicago.  
Eastern Offices, American Tract Building, New York City.

Subscription price in the United States, Canada and Mexico, \$2.00 per year; in foreign countries \$6.00 per year.

ALL remittances should be made to THE CYCLE AGE COMPANY.

## MAIL ORDER COMPETITION

When one kind of trouble ceases another kind usually begins. Bicycle dealers have had their trouble with department store competition in the large cities and with curbstome brokers in the smaller ones. In the natural course of events the department store has found its level. Manufacturers have discovered that they lost touch with the public if the qualities of their product were left to be extolled through the scant knowledge of department store clerks, and have reverted with renewed faith to the professional bicycle dealer who does something more for his patrons than the mere surrendering of an article of commerce. The principle that "when we have received your money we are done with you; next!" which is inherent in the nature of the large stores, has been proved fallacious for all trade in bicycles which are better than they look, and by tacit understanding department store owners have returned to their old policy of trading exclusively in bicycles which are worse than they look, or worse than their previous reputation would indicate.

The general acknowledgement of this among the public and the manufacturers has smoothed the road for the professional bicycle dealer. His professional and personal guarantee of the bicycle which he sells and his ability to allow credit to his customers are again at a premium.

The restriction of credits and the general improvement in manufacturers' business methods have removed the curbstome broker and reduced the number of competitors for retail trade.

With these facts in mind the cycle dealer has generally been preparing himself for doing a prosperous business this year and has observed with much satisfaction that the all-around reduction in selling prices did not necessarily imply a corresponding reduction of his percentage of profit. For those who succeeded in selling a goodly number of bicycles last fall to the lucky agriculturists who had disposed of their wheat at war prices, it seems more or less likely that the natural increase in the volume of this rural trade, in combination with the decrease in number of competitors, would operate to make the total gross trade as satisfactory as the percentage of profit, and altogether 1899 has been looked forward to as a promising season for those who would read the signs right and act accordingly.

The devil is always at work brewing trouble, however, and usually appears in an attractive guise. This time he is muddling the prospects for rural trade through the patent inside columns of weekly country newspapers. Alert mail order houses have discovered that a bluff is a capital thing with which to discountenance any pretense on the part of rural buyers at knowing a good bicycle from a bad one at sight, and now propose to disarm all suspicions that might prevent such customers from forwarding money before they have seen the goods by calmly offering to express bicycles to any destination on receipt of one dollar, balance of 'steen dollars and cents to be paid the express agent after examination of the machine. If made to people who would know much more about the bicycle after they had seen it than before, this proposition would be the ne plus ultra of fairness. As it is, it is bound to produce results, and bicycle dealers, with whose plans it may interfere, may be wiser in taking measures for protecting themselves against it than by disregarding it. The price is low, and the offer is made so early in the season as to forestall the efforts which bicycle dealers usually make later in the season for obtaining that country trade which depends upon the agricultural crops.

Forewarned is forearmed. Whether the mail order business turns out large or insignificant, the cycle dealer should know

that unusual inducements are being offered to make it a success. Advertisements noticed in a single day comprise twenty-eight country newspapers, chiefly in Iowa, Illinois and South Dakota, but also in Nebraska, Indiana, Wisconsin, Tennessee and Louisiana, all worded in the same terms, with a bottom note suggesting to the bicycle dealer that he may readily sell the machines offered at the rate of one per week with an 80 per cent. profit added. No bicycle dealer will, of course, be so fatuous as to ruin his business by attempting to sell for \$30 what any reader of newspapers in his territory may obtain for less than \$20. The advertisers themselves probably have no such expectations, but are satisfied if the note will instill the poisonous idea in the reader's mind that bicycle dealers are in the habit of doing such things.

The measures of defense which the policy of the mail order house really suggests for bicycle dealers must be on a different line, and must take the form of retaliation and enterprise. Cheap bicycles are openly in the market, and samples of them may be secured by any dealer. To counteract the effect of the mail order advertisements the dealer must advertise his cheapest machines with complete description, as well as the better grades, and offer inducements to his rural customers in the way of terms that will tempt them to secure possession at once, or, still better, pay down part of the purchase money in advance.

## GOOD RACING PROSPECTS

Dealers in bicycles can as a rule not afford to dip deeply into the game of cycle racing. With their natural instinct for the sport still alive, though latent and subdued through the exactions of business, attention to racing is likely to get the upper hand with most cycle traders to the prejudice of business interests, if indulged in the whole-souled manner of bygone days.

Still there is a certain degree of familiarity with racing events which customers expect of the dealer, and there is a stimulus to trade in racing, which may easily be purchased too dearly, but which, if the popular interest in it is genuine and spontaneous, is not to be despised. For the coming season indications point to a revival of racing in the form which should not rest heavily on the trade, because it is likely to proceed from the public without much prompting or subsidizing.

The L. A. W. and the N. C. A. are both in the field, and, while it is difficult to say at the present moment whether the latter organization will succeed in enlisting popular support, it seems a reasonable surmise that it will at least stimulate the larger and older body to more active work. Competition in racing matters should prove a healthier factor than in trade.

Mechanical pacing and the rivalry between bevel-gear, roller-gear and chain bicycles also combine to add features of novelty and interest to racing which have been lacking of late, and it can hardly fail that the powers which make the mare go will also exert their influence in a quiet way to prove which of the three constructions should carry the laurel wreath for speed.

A little time spent by bicycle dealers to keep abreast of the situation may prove a profitable investment.

\* \* \* \*

It is the general impression that all the markets of South America are rising in value for our makers. Such, however, is not the case. In Central America and Honduras there has been a decline in the year from \$21,000 to \$7,000. Mexico shows a falling off of 20 per cent. The West Indies make a bad showing, leaving us, in point of money volume in exports, where we were three years ago. Argentina, on the other hand, is ranked as one of the best of South American markets, and its volume of business with this country in the past year has been two and one-half times as great as in the previous year. Considering the heavy shipments into Argentina, it is strange that the demand for American parts, materials and sundries is so light. Brazil almost doubled its purchases last year, principally for bicycles. The remainder of the South American markets show a decrease of 11 per cent.

## AUSTRALIAN TRADE AND PRICES

### Heavy Duties and English Fittings Bring List Prices Up —Outlook for American Machines

The following letters from Australia are self-explanatory and are given in full as reflecting accurately the state of the cycle trade of the antipodes:

To the Editor.—Noting in the December 15 issue of your paper, the prices of bicycles in Australia, as supplied by your Sydney correspondent, we desire to state that as this report is, in a measure, confusing to American and Canadian dealers wishing to push their goods on this market; we herewith enclose a corrected report of trade conditions in this country which you can rely on for accuracy, as the writer thoroughly understands the cycle trade of this country.

BRANTFORD BICYCLE SUPPLY Co.  
Sydney, N. S. W., Feb. 13.

#### Large Capital Required.

Australasia is divided into several colonies, and in each colony the duty varies from 10 and 10 per cent. to 25 and 10 per cent. on the ordinary market value of the goods at the port from whence they were last exported. In this way a factory opening a branch in Sydney, N. S. W., must pay duty when distributing its goods on the Sydney selling value of the machines, or else must open factory branches in the seven colonies, which is a very expensive undertaking considering that some of the colonies have not the population of one good-sized American city.

In conducting Australian trade a large capital must be invested. The two most successful firms have been the Goold Bicycle Company of Brantford, Canada, and the Massey-Harris Company of Toronto, Canada. It is claimed that each of these firms has been compelled to invest at least \$250,000 in opening their Australian branches.

#### The Range of Prices.

The first lists its machines in Australia at about the same price as in Canada. The \$75 model sells in Australia at \$82, and their \$100 model at \$105.

The second company lists its \$75 Canadian model at \$125, but this list price is not the cash price. This firm consigns machines at its own expense to country agents, which must necessarily raise the retail selling price.

The Austral Cycle Agency, another large Australian cycle house, is an offshoot of the John Griffiths Corporation of London. All agencies controlled by this firm in Australia are arranged in London by the head office, therefore, should it contemplate taking up the sale of American machines, contracts would have to be placed in that city. Balance sheets of the Griffiths Corporation, it is alleged, show a loss to date on the Australian trade of almost half a million dollars.

#### Consignment System Hurts Business.

Most of the leading American machines are represented in this market, but the consignment system adopted has retarded rapid progress.

Most of the English and American manufacturers have had traveling representatives cover Australia, and in their anxiety to get trade they accepted orders "cash against bill of lading." When the goods arrived they were in many instances left in the hands of the bank to be realized on. This flooded the market with English and American bicycles at any price, and in consequence has damaged the Australian trade. It is a well known fact that fully 5,000 bicycles were returned to English factories from cus-

tomers who could not or would not accept delivery.

American makers who wish to open up trade in this country must supply bicycles which conform to Australian ideas. A bicycle for this market must be a substantial machine with strong cranks (square preferred), detachable tires of the very heaviest variety, and easy spring saddles. All roadster machines must be fitted with brake and guards.

Neglect of Australian conditions on the part of American manufacturers when shipping bicycles to this country has done much to prejudice Australia against the American machines.

The universal tire on this market is an English detachable, but the Australian model is very much heavier than the American and is fitted to steel rims. The tire for Australia must have a heavy rubber surface and the strongest kind of fabric.

If American manufacturers are careful in following out Australian ideas, American and Canadian bicycles will eventually secure all the Australian trade, as the English makers are, as a rule, very much behind the times in all improvements.

### PERSISTENT ENGLISH LIES

#### American Bicycles Do Not Figure in Australian Auctions—Shoe on the Other Foot.

To the Editor.—The English Cyclist of December 14 says: "The last Australian mail brings news that large numbers of American cycles are still being put up for sale by auction." This is characteristic of the lies about American bicycles persistently circulated by the Cyclist, for not only are the Yankee manufacturers holding their own with the English, but in some sections they are beating them.

The firm that is doing more auction business than any other is the Austral Cycle Agency—a pup of the John Griffiths Company of England. It deals exclusively in English machines, and has put more bicycles on the market by auction this last six months than any other dozen firms.

Of course unfortunately there have been a number of American wheels sacrificed at auction; but I write in the interest of fair play.

I see a contributor has been writing to you about the prices American wheels fetch here, but you must remember that in most cases these prices are for the machines fitted with Colonial Dunlop tires and Westwood steel rims and English Brooks saddles. This adds a considerable sum to the landed cost.

Your contributor forgot to mention the Tribune. This is sold here by a Sydney firm for £21, with the firm's own nameplate on.

In conclusion, allow me to congratulate you on the get-up and general excellence of your paper. It stands apart from all other cycle trade papers, inasmuch as its contents repay perusal and the advertising pages are works of art from a printer's point of view.

AN AUSTRALIAN READER.  
Goulburn, N. S. Wales, Feb. 11.

#### Misleading Statement Corrected.

To the Editor.—We notice in recent issue of your paper that your Sydney cor-

respondent states that our bicycle is a \$35 machine and our agency was offered to the Austral Cycle Agency in this city.

We trust you will contradict the report, as articles of this kind circulated here would do us injury, and at the same time it gives the American manufacturer a wrong impression of Australian conditions as they are.

Our bicycles sell in Australia at the same price as in Canada. Our \$75 model lists in Australia at £16 10s. and our \$100 model lists at £21.

GOULD BICYCLE Co.  
Sydney, N. S. W., Feb. 13.

#### Why Exports to Australia Decreased.

The returns for American machines imported into Australia have greatly fallen off during the last few months, the imports for one month towards the end of 1898 being \$20,000, as against \$75,000 for the corresponding month of 1897. This decrease is principally traceable to the fact that the Australian market was used as an American dumping ground for cheap-grade machines, with the result that the Australian cycling community has had such a lesson that it will be a long time before the best American machines will be able to recover the ground lost through the short-sighted policy adopted by many American manufacturers when introducing their cycles into this country.—Australian Cyclist.

### EXPORTS FOR JANUARY

Almost \$200,000 Less Than in January of 1898—  
Shipments for Week Ending March 7.

Exports of cycles and cycle materials from the United States for the month of January, 1899, contrasted with those for the same period of last year, are reported as follows:

	1898.	1899.
United Kingdom .....	\$181,505	\$ 58,409
France .....	47,360	76,253
Germany .....	226,593	97,285
Other Europe .....	99,544	65,857
British America .....	24,244	69,517
Central America .....	945	275
Mexico .....	5,017	3,355
Santo Domingo .....	15	96
Cuba .....	763	425
Porto Rico .....	157	190
Other West Indies.....	6,268	4,596
Argentina .....	8,290	28,584
Brazil .....	10,973	2,538
Colombia .....	1,021	152
Other America .....	8,021	5,402
China .....	1,869	581
British East Indies.....	6,307	23,357
Hong-Kong .....	165	144
Japan .....	5,433	1,738
Australia .....	21,691	14,957
Other Asia .....	5,464	7,545
Africa .....	12,472	13,292
Totals .....	\$674,117	\$474,728

Exports of cycles and materials from the port of New York for the week ending March 7 are recorded as follows:

	Bicycles.	Mtls.
Denmark .....	\$ 47,012	\$ 9,607
Germany .....	21,837	6,738
Sweden .....	20,032	824
Africa .....	7,871	375
England .....	5,132	2,268
Russia .....	6,940	543
Holland .....	5,900	.....
Italy .....	2,770	2,547
Belgium .....	2,980	.....
Brazil .....	988	102
Mexico .....	924	24
Australia .....	851	110
France .....	797	.....
British West Indies .....	507	81
British East Indies .....	.....	205
Scotland .....	109	.....
Dutch Guiana .....	20	95
Switzerland .....	.....	70
Puerto Rico .....	50	.....
British Guiana .....	42	.....
Prussia .....	30	.....
New Zealand .....	.....	15
Central and other South America .....	195	.....
Totals .....	\$125,037	\$23,604

#### Asked Police to Fix Rentals,

The bicycle livery keepers of Toronto, Can., appeared before the police commissioners recently and asked that a tariff

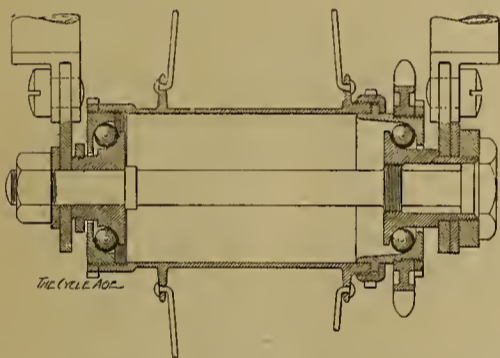
for the rental of wheels be fixed. They wanted a charge of 15 cents for the first hour, 10 cents for the second hour, and 5 cents for each additional hour. The matter was not settled.

**SEPARABLE REAR HUB**

**Allows Removal of Wheel Without Disturbing Chain—For Use With Gear Cases.**

In England where gear cases are in constant use the removal of the rear wheel to mend a tire puncture or accomplish any other repair is a matter of no little bother unless means are provided for slipping the rear hub out of the fork ends without disturbing the chain and its cover. To accomplish this end W. H. Chapman of London, has invented and patented a hub, the barrel of which is in two parts, allowing the removal of the main part without detaching the sprocket wheel and the right end bearings from the frame. On the sprocket side the ball cup carriers form an extension of the hub shell to which it is screwed by means of a collar which screws on to the outside of the shell, engaging a vertical flange on the cup while a horizontal annular flange of the cup fits into the hub shell interiorly.

The cone on the sprocket side is supported rigidly in the rear end lug of the frame by a nut screwing on to its outer threaded end. The spindle has a rigid head on its right end and is shouldered to fit against the end of the right cone through which it passes. Matching threads on the axle and on the inner end of the cone join the two to support the cone under the pres-



sure of the bearing when in use. The left axle cone slips into the spindle and abuts against a shoulder. A threaded collar on its outer end keeps the cone from falling entirely out of place when the axle is withdrawn from the hub.

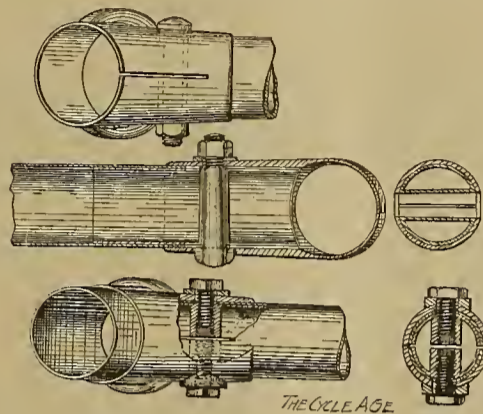
To separate the hub and remove the wheel from the frame the collar between the sprocket and the right spoke flange is loosened, the left axle nut removed and the axle withdrawn from the hub. The wheel is then slipped far enough to the left to free the hub barrel from the right ball cup and is removed from the frame. The right end bearing parts will remain in the frame and the left ones will be detached with the hub. After the wheel has been replaced and the left axle nut tightened the adjustment of the bearings will be the same as before. The most serious disadvantage of the hub seems to be that a considerable amount of space is lost between the sprocket and the right spoke flange, and that the ball cup on the sprocket side is subjected to a breaking strain which does not go well with the accurate circularity required of bearing parts nor with the nature of tempered tool steel.

**Three Mechanical Joints.**

United States patents have been allowed Henry Belcher and Frederick Easom of Beeston, England, on three forms of mechanical or brazeless joints. In the first the connecting lug is split and drawn tightly down around the frame tube by a screw draw bolt held from revolving by a small pin and notch engage-

ment similar to that formerly employed in cross compression bolts at split seat clusters. A short cross tube surrounding the draw bolt reinforces the frame tube.

In the second form of joint the wall of the lug is left solid and the end of the entering frame tube is split. A split cross tube coinciding with the side holes in the tube and lug is fastened inside of the frame tube. Through this tube a taper drawbolt is drawn by tightening down its nut and the cross tube is thus expanded. The expansion of the cross tube expands



the split end of the frame tube so that the latter is bound tightly within the connecting lug.

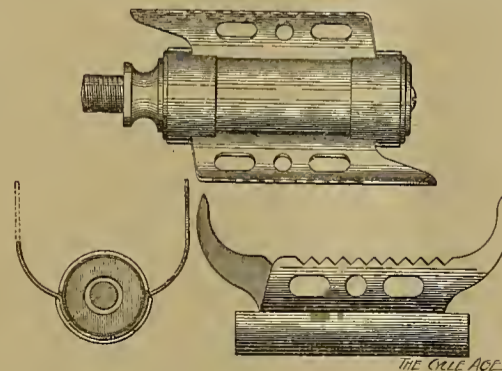
The third joint also employs a split tube end but the expansion is obtained by two set screws entering through holes diametrically opposite to each other in the lug. The screws, each, enter a threaded hole in an integral extension from the inner wall of a split reinforcement inside the frame tube. Turning the set screws draws the sides of the reinforcement or liner outwardly against the frame tube and expands it till it binds against the inner wall of the lug.

**SIMPLE ONE-SIDE PEDAL**

**Plates Formed in One Piece—Parts Held Together By Expansion of Pedal Barrel.**

The popularity of low crank hangers has brought out the fact that one-sided pedals are desirable for gaining clearance between the pedal and the ground. Emil Klahn of West Hoboken, N. J., invented and patented a pedal of this character which is shown in the accompanying illustration. The spindle and bearings are contained in a sleeve of straight tubing. The cups abut against the ends of the sleeve and are retained in position by rings which slip on over the ends of the sleeve.

The foot plates are made together in one piece, being up-curved projections from the sides of the semi-circular shell



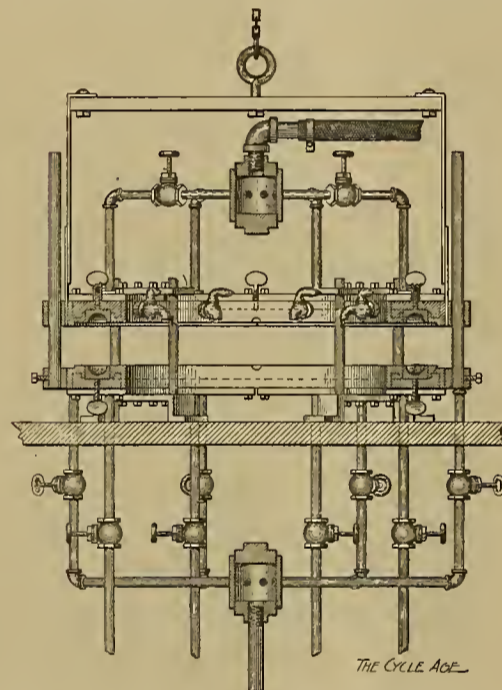
which fits around the under half of the pedal barrel. The end rings have two diameters, each being made with a curve on their lower half sufficiently larger than that on the upper half to accommodate the foot plate shell between it and the pedal barrel. They are also each split longitudinally at two joints diametrically opposite to each other to allow passage over the foot plate shell. The inner barrel or sleeve is longitudinally split along

its under side where the opening will be covered by the semi-circular shell and is made slightly larger than the inside diameters of the shell and end rings. The parts are to be so proportioned that the pedal will remain normally with the tread uppermost. If, however, this cannot be successfully accomplished a curved tongue might be formed integral with the rear foot plate, bent downward into such a position that it would aid the foot in picking up the pedal.

**NON-DISTORTING VULCANIZER**

**Tire Inclosed in Mold—Form Sometimes Improved During Vulcanization.**

F. R. Chamberlain of Newton, Mass., is the inventor and patentee of the vulcanizer shown in the accompanying illustration. The special objects aimed at in its construction are to avoid distortion of the tire to which a patch is being vulcanized and to render the vulcanization of fresh rubber patches on an old tire as sure as the vulcanization of a newly made tire. The appliance consists mainly of two metal rings matching one another and each having a semi-circular groove around its face, the two grooves when joined forming a complete circular mold for the entire tire. The lower ring is fastened rigidly to the bed of the machine



while the upper is vertically adjustable so that it may be raised sufficiently to slip the tire in place between the two. Each ring is also provided with an interior annular chamber which contains the steam or hot air used for vulcanizing. These heat chambers are divided into eight independent sections each of which is provided with a steam intake pipe and also a discharge cock.

After the tire has been patched it is placed between the molds and inflated to the proper degree. Steam is then turned into the section covering the location of the patch. As each ring has independent steam pipes the heat may be limited to one side of the mold if the patch is on the side of the tire. If it is on the tread or extends all around the tire the heat is turned into both moulds at the place where the patch was made.

This vulcanizer maintains and often improves the shape of the tire being mended but is comparatively expensive to manufacture, and takes but one size tire. It also occupies considerable space. It therefore seems to be intended for manufacturers more than for repairmen.

Its general design would point to especial usefulness of the machine for repairing rim chafed tires.

The patent is assigned to the Newton Rubber Works.

## SOLDERED FRAME JOINTS

### Factor of Safety Sufficient for Practical Purposes — Sand Blasting and Filing Obviated

To the Editor.—At this time, when manufacturers are displaying much interest in frame construction and joint forming methods, both from a standpoint of economy and structural excellence, the writer would like to call attention to a few of the advantages of a frame joining plan which, while it may not be new, has never as yet been credited with sufficient merit to cause more than trivial experiment. The scheme is nothing more or less than that of soldering together frame connections instead of brazing them as is commonly practiced, and while at first thought existing prejudice may make the proposition sound foolish, careful consideration ought to convince that soldering properly executed has many points in its favor.

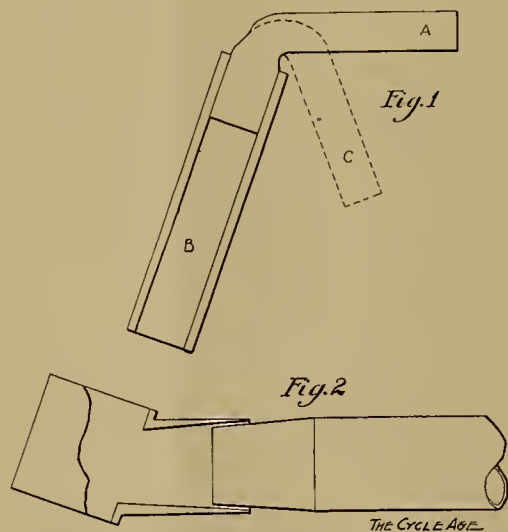
#### Great Tensile Strength Not Needed.

The first objection raised each time soldered joints are mentioned is that there is not enough strength in the solder. Resting upon this assumption cycle mechanics have declined to give soldering further thought. Of course it would be ridiculous to say that soft solder was just as strong as brass spelter, but that is not the important question in relation to its use in bicycle joints. The question is this: Is it strong enough for the purpose? And if so, what are its advantages over spelter? In all of the approved forms of frame joints great tensile strength is not required of the soldering metal. The frame tubes run either inside or outside of the connecting lug, and in high-class construction fit snugly. Were butt end flush joints in use now solder would be out of the question, but as they are not, at least to any great extent, it is sufficient to say that any solder which is strong enough to keep the tubes from slipping from the lugs or loosening under torsional strains and under constant vibration is strong enough for practical purposes. Brass brazed joints have loosened; not, however, because the tensile strength of the spelter was too low, but because there was practically no brass in the joint.

#### Actual Tests of Soldered Joints.

It is known to the writer that in 1893 a Chicago rider while out in the country several miles from home made a solder repair which demonstrated that soft solder is not so weak that its only usefulness is inside tin shops and tinkers' work rooms. The seat post on the bicycle was of the pattern shown in Fig. 1, the horizontal arm being a solid rod about one-half inch in diameter and being bent downward at its forward end and brazed inside of the hollow seat post stem. The brazing never having been well executed and failing suddenly, the rider was compelled to repair it in some manner in order to get home. He accordingly stopped at an electric light station and borrowed the electrician's soldering outfit, which was of the common portable kind, and soldered the arm of the post into the stem. Several days afterwards, from mere curiosity, an experiment was made to test the holding strength of the solder. The stem B of the post was clamped in a vise and with a heavy hammer the arm A was pounded, the intention being to loosen the soldered joint. The solder failed to give readily, however, and the arm was bent downward to the position C, indicated in dotted lines, without the solder having apparently been affected.

In 1897 a cycle mechanic soldered together, by way of experiment, the upper and lower frame tubes and the steering head of a bicycle frame. The joints were then tested to destruction and the factor of safety of the soldered joints was found to be greater than that of the tubing. As a result of this test a western cycle manufacturer was induced to build two completely soldered frames, one for his own experimenting and the other for the mechanic who had made the test. The former machine when completed was placed in the hands of a man who was engaged in trimming street electric arc lamps in a suburban town where the roads were in none too good condition. The electrician weighed nearly 200 pounds and always started on his rounds with 50 pounds of fresh carbons in a leather case hung from the handle bars of his bicycle. After the machine had been in use for a couple of weeks the joint between the seat mast and the crank bracket loosened, it not



having been well soldered in the first place. This was remedied without spoiling the enamel and the machine carried its rider through the season without further misfortune. In fact, for all that is known to the contrary, the bicycle is still in use.

The other machine built at the same time was in use every day during the summer of '97 and caused not the slightest trouble. It was stolen late in the fall and nothing was learned of its whereabouts till the summer of 1898, when a bicycle answering its description was reported to have been brought to a certain repair shop to have the frame cut down from 24 inches to 22 inches. The repairer stated that when he put the frame in the brazing flame to unbrazed some of the joints the entire frame fell to pieces. Having a natural horror for solder he immediately refused to complete the frame cutting job, claiming the bicycle to be a cheap bargain counter machine.

#### No More Injured Tubing.

These instances of soldering actually accomplished and given road tests show that regular frame fittings intended to be brazed may be soldered together in what is perhaps a crude fashion and still possess enough strength to give hard service. The assumption may then be made that were frame parts properly designed for being soldered together and then soldered by approved means which would insure perfect union of the con-

nections, the result would not only be satisfactory, but perhaps a heavy blow to the scoffers at solder.

If it be true that the factor of safety of a soldered joint is equal to or greater than that of the frame tubes of the bicycle, then the factor of safety of an entire frame as a unit ought to be more than that of a brazed frame. While the brazed joint may possess a much greater initial strength than the soldered one, it must not be overlooked that in order to accomplish the brazing the life of the tubing in the frame has been more or less injured, according to the caution and skill displayed in brazing. When a frame is soldered the heat to which the metal parts are subjected hardly exceeds 400 degrees Fahrenheit and cannot possibly injure the steel. So if the strength of the soldered joint is equal to the strength of the tubing, and the vitality of the tubing is greater after having been through the soldering process than when having been brazed to the lugs, the general life of the frame must surely be greater.

#### Frame Finishing Eliminated.

There is one other item in favor of the soldered frame which amounts to no small matter in these days of reduced profits and low manufacturing costs. It is that by soldering frames together much if not all of the work expended in finishing frames after brazing and before enameling is made unnecessary. After soldering there is no sand blasting, no pickling and but little filing. The soldering, if properly accomplished, can be executed at a less cost than brazing and twenty to fifty cents in finishing saved on each frame.

#### Practical Methods of Soldering.

Fig. 2 illustrates a preferred form of construction for soldered joints. The connecting lugs should be bored tapering and the ends of the frame tubes taper swaged to match. Then the inside of the lugs and the ends of the tubing should be given a light pickle treatment in dilute hydrochloric acid in order to clean them for the reception of the solder. The pickle need not be strong enough, nor the duration of its action long enough, to injure the tubing. After cleaning the lugs and the tube are thinly tinned with a solder composed of about equal parts of tin and lead, though the proportion may advantageously be 55 per cent. tin and 45 per cent. lead. The frame tubes and lugs are next assembled and forced together lightly, the joints being heated sufficiently to melt the solder while under pressure. A sure joint is thus insured and there is no solder at any point on the frame, inside or out, except where it is wanted and where it will render service.

A hand gas torch furnishes heat enough to melt the solder and all of the joints in a frame may by it be heated while the frame is in a suitable jig. Good machining of the lugs and accurate swaging of the tubing are the only primary requirements to satisfactory results.

#### Systematic Practice in Large Shops.

In a large factory, where a multiplicity of jigs can be had, an oven might be rigged up in which a traveling crane would carry jigged frames in at one end and out at the other in regular succession, each frame having been heated in its travel through the oven sufficiently to cause the melting of the solder in the joints. The connecting lugs can be left with a definite wall thickness at the ends of the branches and an ordinary outside joint obtained or the wall can be finished to a feather edge and a flush joint effect secured. As the melting point of the solder is in the neighborhood of 400 degrees, all enamels baking at temperatures lower than this may be safely applied to the soldered frames.

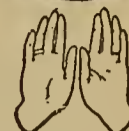
FRAME BUILDER.



TRADE MARK



The following wood rim manufacturers are the only ones who are authorized to manufacture



# Dunlop Rims



and their makes of wood rims are the only ones on which our tire is guaranteed. Other wood rim manufacturers claiming to have our measuring bands and templates are guilty of willful misrepresentation.



## The American Dunlop Tire Company



Belleville, N. J.

Chicago, Ill.



Fairbanks-Boston Rim Co., Bradford, Pa., and Bedford, Mass.



Kundtz Bending Co., Cleveland, O.



Olds Wagon Works, Ft. Wayne, Ind.



State of Maine Wood Rim Co., West Paris, Me.

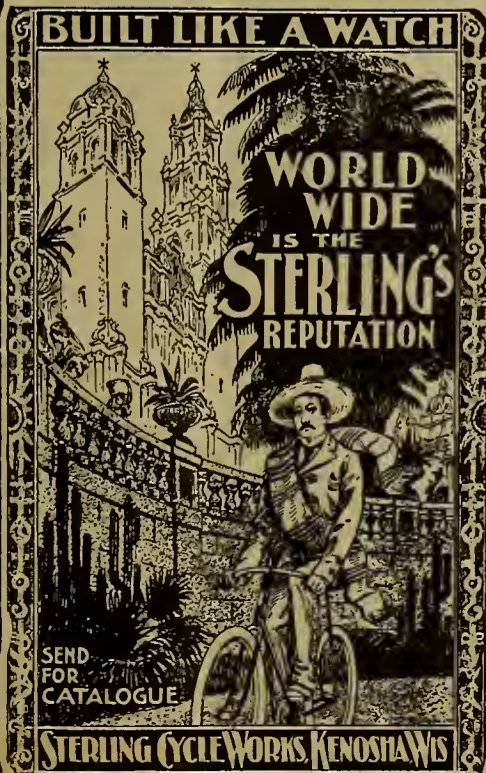


TRADE MARK



# THE STERLING

## "BUILT LIKE A WATCH"



THAT THAT IS IS THAT THAT IS NOT IS NOT.

Properly punctuated, this emphasizes the well known fact that a bicycle that is STRICTLY HIGH GRADE and of established reputation, represents money well invested; while the one that is not up to standard is simply an expensive object lesson.

STERLINGS are highest grade because they are made so.

BIG DISCOUNTS DO NOT INDICATE FIRST QUALITY.

STERLING net prices may not be as glittering as some others, but they are right, and the difference goes into the construction.

Do you wish quotations and descriptive catalog?

# STERLING CYCLE WORKS KENOSHA, WIS.

## MARVELS IN LITERATURE

### Two Samples of Daily Newspaper Work Intended to Help the Bicycle Trade

No sooner are the rigors of winter at an end than up bobs the scribbler for the country paper with his hardy annual essay on bicycle fashions. The scribbler may be, and usually is, about as wise as a frog concerning his subject, but his enthusiasm glows so fresh and strong that his intellectual blight is not resented by the trade he aims to serve. He is no trimmer, however; he never hedges in opinion; he is Sir Oracle. Out in Clinton, Ia., this is his favorite vein:

#### Talking Through His Hat.

The improvements on wheels this year are extensive. The 30-inch wheels are the talking points of many bicycle dealers and they are, without doubt, better than the old standard 28-inch wheels, for the reason that a large wheel will run more easily and longer after it is started than a smaller one, and this explains why there are so many of them being sold by manufacturers all over the country. Some say the big wheel can not be kept true. It can if it is looked after occasionally.

The hub recognized to be the most perfect for 30-inch wheels is on the \_\_\_\_\_ bicycle. The ferrule on this hub extends one inch above the hub proper. Twenty-eight inch spokes are used instead of the 30-inch, which does away with all possibility of the rims becoming twisted.

The frames used on these large wheels have an inch more drop.

#### Some "Late Improvements."

There are no center pins to work loose, which makes the wheel sound like a locomotive going up grade, and it gives the bicycle a finer appearance than the old time three piece crank. The two piece crank is a late improvement, but it is not so popular as the one piece and is used mostly on the cheaper grade of wheels, which are being sold at \$20 and \$30.

The expanders in the handle bar and saddle post are not as important as the other many improvements, but they do away with the clumsy bolts and clamps, which were so numerous in the wheels of two years past, but not so with the one piece crank, which is the admiration of every rider who has one on his wheel.

#### A Precocious Scribbler.

To the author of the following effusion, however, one is inclined to be less tolerant, for he hails from Rochester, a cycle manufacturing city, and, in addition to perverting public sense with respect to bicycle building, betrays an ignorance which is out of keeping with his opportunities for gaining true knowledge:

A reporter of the Post Express was shown through the factory of one of the large cycle manufacturing companies yesterday, where the bicycle in various stages of incompleteness is in the hands of the workmen. The tour of the factory began on the top floor. One of the first things necessary in the building of a bicycle is the tubing and the wheel spokes, and before these begin their career in bicycledom, they are put through a nickel plating process.

#### Tubing in the Nickeling Vats.

Electricity plays a large part in this process, the wires and tubing being hung in the chemical vats, which are so charged with electricity as to cover the surface of the wire with a coating of polished metal.

Another fundamental in cycle making is the brazing, the process which furnishes the greatest strength to the most important part of the machine. This is one of the really important things in the making of a wheel, and careless workmanship would render the entire wheel frame worthless. It is here that the metal is tested and the brass finishings melted and moulded into shape. Terrific heat is required for this. Another interesting department is that of the enameling, which is all handwork. The furnaces required for the baking, necessary to give the desired finish, are kept at a temperature of 600 degrees.

#### The "Wheel Turning" Machine.

One ponderous appearing machine is known as the wheel turning machine, and it is in that the hub and spokes are made perfect before the wheel goes to the assembly

room to become part of a bicycle. The machine puts equal tension on each spoke, and gives perfect balance. The biggest machine in the shop and the most formidable in appearance is one which chews up heavy steel tubing and turns it into hubs. Another machine which, by reason of its deeds, endears itself to every rider, is the vulcanizer, which applies a piece of rubber on a tire, in such a way that the tire forgets it was ever punctured.

#### Conclusions of a Rabbit.

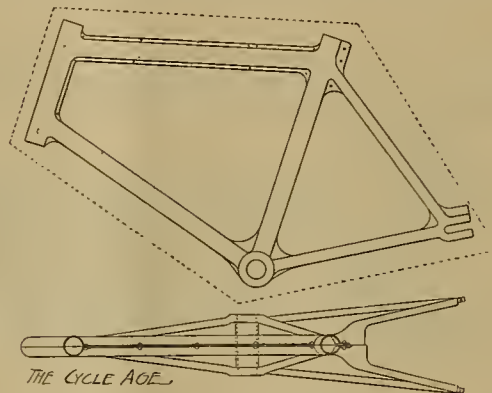
In the assembly room is gathered from the various departments everything necessary to the building of a wheel. There are at least a half hundred different kinds of bolts and nuts, and washers and countless screws, and the absence of one of these is fatal to the wheel.

The generally accepted theory of laymen, that each wheel is tested before shipment, is not demonstrated at the cycle works. Each separate piece of machinery in the wheel is tested and the wheels are as they should be, when the various parts of it are put together. The manager said he doubted very much if any large factory tested each wheel before sending it out.

The moral of both of the foregoing articles is this: Agents and makers should be at pains to educate the reporters for the daily press, else the money they spend in advertising will merely be used to destroy the intelligent effort that is being put forth to enlighten the public concerning cycle construction.

#### Frame Stamped from Sheet Steel.

A United States patent has been granted to John MacKenzie of Middlesborough, England, on his stamped bicycle frame



previously patented in Europe. The frame is made from two steel metal stampings, each representing a one-half section of the finished tubular construction. The sections join tightly together at the seat mast, upper frame rail and steering head and are here fastened either by riveting, clinching or brazing. Along the lower reach the two sections do not engage each other but are spread to receive the crank bracket between them. The rear portions are also left a short distance apart to form the rear stays and forks. The lower frame reach and the rear forks and stays are thus semicircular in cross section.

#### Make Your Customers Comfortable.

Very few bicycle salesmen realize the importance of having a customer comfortable and at ease when attempting to make a sale, says the house organ of H. A. Lozier & Co. Have a comfortable seat for your prospective purchaser and do not enter into a long explanation as to the merits of your bicycle while he is standing. He will soon become tired and his attention will wander in spite of your most persuasive eloquence. If he is comfortably seated he is likely to give you his careful, undivided attention and will not feel impatient for you to finish your

talk. Neither can you expect to hold your customer's attention to the machine you are trying to sell him if he is surrounded by a number of other models of various kinds. Endeavor to have some corner or portion of your store free from bicycles or distracting mechanical devices, and when you have your customer comfortable in mind and body, bring before him the machine you wish to sell him. If he prefers some other model take it away and bring to him the model he desires to see, but do not allow his mind and eye to ramble over a number of different machines at the same time. If you allow a prospective purchaser to ramble along a row of bicycles in an aimless sort of a way without finally centering his attention on one particular model, he is liable to leave your store in a state of indecision fatal to your sale.

## PATENT OFFICE BUSINESS

Applications Received and Allowed—Recommendations for Facilitating the Work.

The United Patent Office received 33,915 applications for patents, 1,843 for designs and 84 for reissues during 1898. Of these 22,207 were allowed, including designs. The receipts of the office over expenditures were \$1,538.28. The balance to the credit of the office in the government treasury is \$4,972,976.34.

The commissioner asks for additional room, for an increased force in the classification division, and for more stenographers and typewriters. The annual appropriation for the scientific library has for years been inadequate.

The following amendments to the patent and trade-mark laws are recommended:

1. Providing for a commissioner and assistant commissioner for a stated term, not less than six years. There have been since 1870 fourteen commissioners.
2. To limit the life of all patents to twenty years from the filing of the application. At present it is possible to keep applications alive for an indefinite number of years.
3. Permitting aliens to file caveats. This is recommended for the sake of probable concessions from foreign countries.
4. For the publication of 3,000 additional copies of the Patent Office Gazette, to be apportioned among senators and representatives, to be distributed among manufacturers and mechanics.
5. To provide for the registration of trade-marks used in interstate commerce.
6. Providing a fee of \$5 for petitions in interlocutory proceedings.

#### Hint for Credit Men.

Credit men in manufacturing establishments should be on their guard against an individual who signs himself Marshall Larkin and wishes quotations on bicycles, parts, sundries, etc. A Chicago commercial agency furnishes this information concerning Larkin: A short time ago one Patrick Larken—Patrick and Marshall are supposed to be twin in business—stepped into the agency and, after stating that he lived at 532 Cornelia avenue in that city, averred that he was worth \$30,000. This was two months ago. At that time Larkin said he understood upon reliable authority that bicycles costing \$15 could be retailed with ease at \$40, and was desirous of a credit rating in making purchases. Inquiries are coming in to the commercial agency from different concerns requesting information as to Larkin's credit rating. The agency people, however, cannot find Cornelia avenue on the charted map of Chicago, nor can they get trace of the flat buildings and real estate which he says have a total value of \$30,000.

## COMMERCE IN FOREIGN MARKETS

**MAKING COLLECTIONS IN GERMANY**  
 In Germany all small suits which amount to \$75 or less go before the Amtsgericht (ordinary court of justice). A lawyer is unnecessary. All amounts above \$75 must go before the Landgericht (provincial court of justice). A lawyer is obligatory. In this court the plaintiff must deposit beforehand a sum sufficient to cover all the costs, in case the suit turns against him. Not only can the court demand this deposit, but the opponent as well.

An American who is trying to collect an outstanding debt, if he has no acquaintances in the town or city where the debt exists, should address himself directly to the Amtsrichter for information, and in due time, a reply will be received. If the amount is less than \$75, the Amtsrichter will take charge of the matter and in time adjust it. If the amount is more than \$75, it will be placed in charge of an attorney, who will take the case before the Landgericht.

Definite laws govern attorney's fees. Fees are charged in proportion to the actual value of the case in hand. The following table will give an idea of these charges. It must be borne in mind that these fees do not cover court charges (which, by the way, are not high) and other incidental expenses. These figures represent only the fee for attorney.

Amount—	Charge.
For sums of \$5 and less.....	\$ 0.50
\$5 to \$15, inclusive.....	0.75
\$15 to \$30, inclusive.....	1.00
\$30 to \$50, inclusive.....	1.75
\$50 to \$75, inclusive.....	2.50
\$75 to \$112, inclusive.....	3.50
\$112 to \$155, inclusive.....	5.00
\$155 to \$215, inclusive.....	6.00
\$215 to \$285, inclusive.....	7.00
\$285 to \$380, inclusive.....	8.00
\$380 to \$500, inclusive.....	9.00
\$500 to \$640, inclusive.....	10.00
\$640 to \$800, inclusive.....	11.00
\$800 to \$1,000, inclusive.....	12.00
\$1,000 to \$1,285, inclusive.....	13.00
\$1,285 to \$1,600, inclusive.....	14.00
\$1,600 to \$1,850, inclusive.....	15.00
\$1,850 to \$2,380, inclusive.....	16.00

For all amounts between \$2,380 and \$11,900, a fee of \$1 will be charged for every additional \$476; for amounts between \$11,900 and \$23,800, a fee of 75 cents for every additional \$476; and for all amounts above \$23,800, a fee of 50 cents for every \$476. If an attorney has been put to any expense, this, of course, must be refunded in addition to the regular fees. If an attorney has to do any traveling, \$5 per day must be allowed him extra for this purpose.

There are no special drawbacks, as is usual in such matters. There is more or less procrastination; but, on the whole, an American going to law will find that his interests will be guarded as impartially as those of a native, and that the decision will be in harmony with justice and German law.

**THE DANISH CYCLE MARKET**  
 Denmark is a country designed by nature for cycling and it is not surprising to find that such a large proportion of the population are cyclists. For some time the country has been swamped with American machines, but the native manufacturers do not fear this competition as much as that given by the Germans, which they expect to see increase. The Germans make a very cheap machine and give long credits, which attract the agent. American machines which are at present selling best in Denmark average about \$34.

The majority of the farmers and their families ride and even in many cases the

servants and stablemen also, the machines used being American. There is a fear among the trade that sooner or later there will be a surplus in the German market and that the surplus will in all probability be sent to Scandinavia, as being the most convenient outlet, being a part of the world that can take a lot of machines; and there is a probability that these machines will undersell the Americans and drive them off the market.

If American makers would turn out an attractive looking machine to retail in Denmark at \$55, a fair trade could eventually be done with them. The possibilities of Danish trade must not be gauged by the size of the country, or the total of the population, because a large proportion of the goods sent into Denmark go there only to be passed on to Russia, Finland, Norway and Sweden.

**SELLING DIRECT OR THROUGH BROKERS**  
 There are three methods by which a foreign outlet can be secured for cycle goods. They are: 1.

Dealing altogether with export commission houses or importers; 2. dealing direct with the foreign retailer; 3. dealing with all three, but giving such prices and terms to the first two as will admit of an inside price to the latter, and thus protect and encourage them to sell the goods among their own customers. The first mentioned method has the call at present, but is likely to be superseded when this country has better international banking facilities.

Trading with export commission houses is clean business, though now and again snags, in the shape of rascally brokers, are encountered. By it there is the least expense connected with the procuring of orders and the least expense in handling it. These houses employ men who are expert in foreign shipping and custom house requirements and when errors occur from carelessness they shoulder the blame. Having large quantities of general merchandise to ship, they are in position to demand and secure the lowest freight rates, and in case of loss in transit they can always get a better settlement than the manufacturer. In the absence of accurate mercantile reports pertaining to the reliability of foreign buyers, their past experience with such concerns is the best evidence one can get, and this information is always available for patrons. The most desirable feature of this method of transacting a foreign trade is the possibility of doing a safe business without the risk of loss through failures.

Several of the New York commission and export houses are willing to agree that the manufacturer or merchant shall secure his own orders and guarantee that the goods are up to the grade contracted for. The export house will handle the merchandise, supervise the shipping and guarantee the payment of accounts for from 4 per cent to 5 per cent. For the handling, shipping and making out the papers 1½ per cent is charged, and the rate for guarantee rates range from 2½ to 3½ per cent.

Among the disadvantages of selling through commission houses may be cited the fact that the profit is smallest; the chance of gaining an individual reputation is lessened, and either exporters or importers may at any time substitute a cheaper article to take the place of your

goods. Not being in direct touch with the foreign consumer, it is difficult to ascertain when your goods are being superseded, and not the least of the disadvantages is the fact that if your product has a high reputation abroad, both export firms and wholesale importers as a rule will demand the lowest priced goods bearing your name which you make. Therefore the general tendency of this method of trade is to reduce grades.

There are few makers who possess the facilities for handling the delivery of small orders or for securing credit information on small foreign concerns, and on this account selling direct to retailers is generally regarded as impracticable.

By adopting the compromise plan the maker has two strings to his bow. By it he has the advantage of building up a reputation for his product, which is by no means harmful to the commission house or importer, for the reason that the extra demand created brings orders to them without their effort. It keeps the maker in direct touch with the demand and its changes, and is a desirable method to pursue in localities which are not of sufficient importance to attract the notice of either of his allies.

**OUR CYCLE TRADE IN BOHEMIA**  
 Bicycles are popular in Bohemia and the roads are good. Most of the machines are imported from England, Germany and the United States, although there are six domestic manufacturers. Bremen and Hamburg are the receiving ports. Retail prices range from \$48 to \$100. The demand is principally for cheap bicycles. They should not be very light in weight. The best merchants are engaged in the bicycle trade, some making a specialty of it and others selling bicycles in connection with hardware, machinery and guns. Whatever literature is sent into Bohemia should be printed in German and Bohemian. It is surprising to note how this market has been overlooked.

**WHERE ONLY RICH PEOPLE RIDE**  
 Bicycles are only used by the well-to-do class in Tunis, on account of high prices. The principal roads leading to the largest towns are very good and entirely adapted to the use of bicycles, but the small roads from country town to country town cannot be used by wheelmen, especially in the winter season. There are no manufacturers of bicycles in Tunis, the bulk of machines sold being imported from France. The receiving port is Tunis, and port charges are very moderate. There are no bonded warehouses, no wholesale importers, or retailers as yet.

**AMERICAN BICYCLES IN CHILE**  
 Most of the bicycles sold in Chile are from America, though some are imported from Europe. The American bicycle gives the best satisfaction and is the cheapest. There is a good field there for the product of American factories, but until there are better banking relations between Chile and the United States the bulk of the trade will go through English houses, as all drafts have to be bought on England.

It is said that the French are putting an acetylene gas lamp on the market, which is retailed at 30 cents. The Rothschilds must be making it.

# Current Cycle Manufacture

In the following table, which will be continued in subsequent numbers of THE CYCLE AGE, will be found an amplification of that class of information which is customarily given in catalogues issued by makers of bicycles, saddles, bells, lamps, chains, rims, cyclometers, etc. It will serve as a handy reference for dealers.

Firm Name	Model	List Price	Weight (all on)	Depths of Frame	Width of Tread	Form of Joints	Form of Front Crown	Drop of Hanger	Rear Fork Tubing	Rear Stay Tubing	Lugs at Bottom Bracket	Lugs at Seat-Post Cluster	Crank Hanger Form	
HOFFMAN BICYCLE CO.....	Model 27	\$75	19 lbs.	22	4½ in.	Flush	Square	3 in.	D sh'pe	D sh'pe			Two Piece	
	Model 28	75	23 lbs.	22, 24,	4½ in.	Flush	Square	3 in.	D sh'pe	D sh'pe			Two Piece	
	Model 29	50	24 lbs.	22, 24,	4½ in.	Flush	Square	2½ in.	D sh'pe	D sh'pe			Two Piece	
	Model 30 Women	50	25 lbs.	20, 22	4¾ in.	Flush	Square	2½ in.	D sh'pe	D sh'pe			Two Piece	
	Model 31	40	25 lbs.	22, 24,	4¾ in.	Flush	Special	2½ in.	D sh'pe	D sh'pe			Two Piece	
	Model 32 Women	40	25 lbs.	20, 22,	4¾ in.	Flush	Special	2½ in.	D sh'pe	D sh'pe			Two Piece	
	D. D. Tandem	100	44 lbs.	23, 24,	5 in.	Flush	Square							Two Piece
	Comb. Tandem	100	45 lbs.	22, 24,	5 in.	Flush	Square							Two Piece
STERLING CYCLE WORKS.....	D. D. Tandem	75	48 lbs.	21		Outside	Oval	2 in.	D sh'pe	Round	4, 5	4	Two Piece	
	Convertible Tandem Women	85	50 lbs.	24		Outside	Oval	2 in.	D sh'pe	Round	4, 5	4	Two Piece	
	Men	50	24 lbs.	21, 23	4⅞ in.	Flush	Oval	2½ in.	D sh'pe	Round	4	4	Two Piece	
	Chainless, Women	50	24 lbs.	20 to 26	4⅞ in.	Flush	Oval	2½ in.	D sh'pe	Round	4	4	Two Piece	
	Chainless, Men	75	28 lbs.	21	5¼ in.	Flush	Oval	2 in.	D sh'pe	Round	4	4	Two Piece	
	Chainless, Men	75	28 lbs.	22, 24	5¼ in.	Flush	Oval	2 in.	D sh'pe	Round	4	4	Two Piece	
SPEEDER CYCLE CO.....	Atlas	35	26 lbs.	22, 24,	4⅞ in.	Flush	Oval	2½ in.	Comb.	Comb.	4	4	Two Piece	
	Newcastle	40	26 lbs.	22, 24,	4⅞ in.	Flush	Oval	2¾ in.	Diam'd	Diam'd	4	4	Two Piece	
	Alcazar	50	26 lbs.	22, 24, 26	4⅞ in.	Flush	Arch	2¾ in.	Comb.	Comb.	3	3	Single Piece	
	Alcazar Chainless	75	27 lbs.	22, 24, 26	5 in.	Flush	Arch	2½ in.					Two Piece	
TOLEDO METAL WHEEL CO.....	Favorite Juvenile	20-30	18 to 22 lbs.	16 to 20	4¾ in.	Flush	Oval	½ to 2¼ in.	TaperD	TaperD	4	3	Two Piece	
	Favorite Adult	50	24 lbs.	22, 24,	4¾ in.	Flush	Oval	2½ in.	TaperD	TaperD	4	3	One Piece	
VANGUARD CYCLE CO.....	Vanguard	35	24 lbs.	21 to 26	4¾ in.	Flush	Oval	2½ in.	Tap'r D	Tap'r D	4	4	Two Piece	
	Progress	25	24 lbs.	22, 24, 26	4⅞ in.	Flush	Oval	2½ in.	D sh'pe	D sh'pe			Two Piece	
F. S. WATERS CO.....	White Scorcher	40	22½ lbs.	22, 24, 25	5 in.	Flush	Oval	2½, 4	Tap'r D	D sh'pe	3, 4	3, 4	One Piece	
R. H. WOLFF & CO.....	Model 29	75	23 lbs.	22	4¾ in.	Flush	Oval	2¾ in.	D shp'e	D sh'pe	4	3	Two Piece	
	Model 30	60	24½ lbs.	24	4¾ in.	Flush	Oval	2¾ in.	D shp'e	D sh'pe	4	3	Two Piece	
	Model 31	60	26 lbs.	22½,	4¾ in.	Flush	Oval	2¾ in.	D shp'e	D sh'pe	4	3	Two Piece	
REMINGTON ARMS CO.....	Model 56	50	24 lbs.	21, 23, 25	5¼ in.	Flush	Oval	2¾ in.	Oval	Oval			One Piece	
	Model 51	50	24 lbs.	21, 23,	5¼ in.	Flush	Oval	2¾ in.	Oval	Oval			One Piece	
	Model 47	35	24 lbs.	24, 26,		Flush	Oval	2 in.	V sh'pe	Round			Three Piece	
	Model 48	35	24 lbs.	21, 23,		Flush	Oval	2 in.	V sh'pe	Round			Three Piece	
ELECTRIC CITY WHEEL CO.....	30-in. Wheels	50	25 lbs.	20 to 26		Flush	Square	3⅝ in.	Comb.	Comb.			Single Piece	
	28-in. Wheels	45	25 lbs.	20 to 26		Flush	Square	2¾ in.	Comb.	Comb.			Single Piece	
CHICAGO TUBE CO.....	A 1	37.50		22 to 26	4⅞ in.	Flush	Arch	2½ in.	Tap'r D	Tap'r D	4	4	One Piece	
	G 13, 30-in. Wheels			22 to 26	4⅞ in.	Flush	Arch	4 in.	Tap'r D	Tap'r D	4	4	One Piece	
	A 9			22 to 26	4⅞ in.	Flush	Arch	2½ in.	Trp'r D	Tap'r D	3	3	One Piece	
HENDEE MFG. CO.....	American Indian	25	25 lbs.	22, 24,	4⅞ in.	Flush	Oval	2¾ in.	D shp'e	D shp'e			One Piece	
	Silver King	35	25 lbs.	22, 24,	4⅞ in.	Flush	Oval	2¾ in.	D shp'e	D shp'e			One Piece	
KEATING WHEEL CO.....	Mattabesett	35	25 lbs.	20 to 26	5 in.	Flush	Oval	2½ in.	Tap'r D	Tap'r D			Two Piece	
	Model 80, Keating	40	22 lbs.	20 to 26	5 in.	Flush	Oval	2½ in.	Tap r D	Tap'r D			Two Piece	
	Model 90, Keating	50	22 lbs.	20 to 26	5 in.	Flush	Oval	2½ in.	D sh'pe	Round			Two Piece	
	Special 30-in. whl's	75	21 lbs.	20 to 26	5 in.	Flush	Oval	2½ in.	D sh'pe	Round			Two Piece	
PATEE BICYCLE CO.....	Patee Crest	35	23 lbs.	22, 24, 25	4⅞ in.	Flush	Oval	3 in.	D shp'e	Comb.	4	4	One Piece	



# and Regular Equipment.

EQUIPMENT.

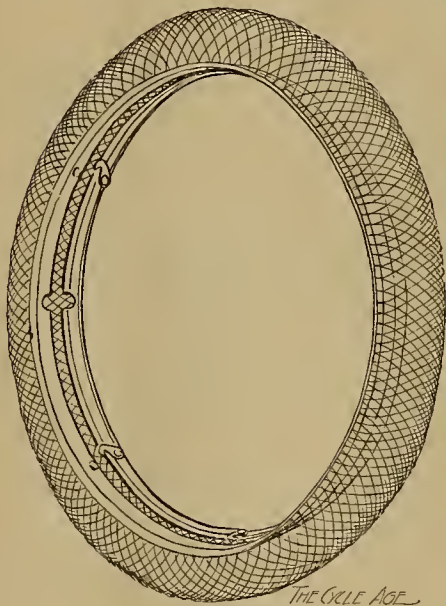
Handle Bar Fast'g	Seat Post Fast'g	Chain Adjust-ment	Form of Crank	Chain-less Gear	Crank Len'ths	Chain	Pedals	Rims	Saddles	Tires	Frame Colors	Front Sprock-et	Rear Sprock-et
Internal	Expand'r		Round		6¾ in.	Baldwin	Record	Kundtz	Wheeler, Garford	Goodrich, Dunlop and Palmer	Green	17 to 26	7 to 10
Internal	Expand'r		Round		6¾ in.	Baldwin	Record	Kundtz	Wheeler, Garford	Goodrich, Dunlop and Palmer	Green	17 to 26	7 to 10
Internal	Expand'r		Round		6¾ in.	Baldwin	Record	Kundtz	Wheeler, Garford	Goodrich, Dunlop and Palmer	Green	17 to 26	7 to 10
Internal	Expand'r		Round		6 in.	Baldwin	Brandenburg	Kundtz	Wheeler, Garford	Goodrich, Dunlop and Palmer	Green	17 to 26	7 to 10
Internal	Expand'r		Round		6¾ in.	Baldwin	Record	Kundtz	Wheeler, Garford	Goodrich	Green	17 to 26	7 to 10
Internal	Expand'r		Round		6½ in.	Baldwin	Brandenburg	Kundtz	Wheeler, Garford	Goodrich	Green	17 to 26	7 to 10
Internal	Expand'r		Round		6½ in.	Baldwin	Record	Kundtz	Wheeler, Garford	Goodrich, Dunlop and Palmer	Green	17 to 26	7 to 10
Internal	Expand'r		Round		6¾ in.	Baldwin	Record	Kundtz	Wheeler, Garford	Goodrich, Dunlop and Palmer	Green	17 to 26	7 to 10
Clamp	Clamp	Horizontal	Square		7 in.	Morse	Sterling	Boston	Christy and Options	Palm'r-Options	Olive, Black	22 to 25	7 to 10
Clamp	Clamp	Horizontal	Square		7 in.	Morse	Sterling	Boston	Christy and Options	Palm'r-Options	" "	22 to 25	7 to 10
Clamp	Clamp	Horizontal	Oval		6½ in.	Morse	Velox	Lobdell	Christy and Options	Palm'r-Options	" "	22 to 24	8 to 10
Clamp	Clamp	Horizontal	Oval		7 in.	Morse	Velox	Lobdell	Christy and Options	Palm'r-Options	" "	22 to 28	8 to 10
Clamp	Clamp	Horizontal	Square	Bevel	7 in.		Sterling	Lobdell	Christy and Options	Palm'r-Options	" "		
Clamp	Clamp	Horizontal	Square	Bevel	6½ in.		Sterling	Lobdell	Christy and Options	Palm'r-Options	" "		
Internal	External	Horizontal	Comb.		6½ in.	Indianapl's	Banner		Gilliam	New Brunswick	Bl'k. Maroon, Olive	24 to 28	8 to 10
Internal	External	Horizontal	Diamond		6½ in.	Indianapl's	Banner		P & F-B & W	New Brunswick	" " "	26, 28,	7 to 12
Internal	External	Horizontal	Diamond		6½ in.	Indianapl's	King		Wheeler, Sager	New Brunswick	" " "	26 to 32	7 to 12
Internal	External			Sager	6½ in.		King		Wheeler, Sager	New Brunswick	" " "		
Clamp	Clamp	Oblique	Oval		4½ to 6	Indianapl's	Hercules		Brown Style	New Brunswick	Black, Maroon	16 to 18	7, 8,
Expand'r	Internal	Oblique	Oval		6½ & 7	Indianapl's	Hercules		Brown Style	M. & W., Indn'a Goodr'ch Htf'd	Black, Maroon, Blue	22 to 28	8 to 10
External	Internal	Oblique	Comb.		6½ & 7			Lobdell	Gilliam and Options	New Brunswick and Options	Blk., Gre'n, Mar'n	20 to 30	8 to 10
Clamp	Clamp	Oblique	Round		6½ in.			Tucker	Gilliam	Clipper	Black, Green	25	9
Clamp or Internal	Internal	Horizontal or Ecc'ntr'c	Comb.		6½ & 7	Chantrell	Genessee and Banker		Cutting	Optional	Any	22 to 28	7 to 10
Clamp	Contr'ct'r	Eccentric	Oval		6½ in.		Wolff, Am.	Fairbanks	Sager	Kang., Options	Black, Ruby	22, 26,	8 to 10
Clamp	Contr'ct'r	Eccentric	Oval		7 in.		Wolff, Am.	Fairbanks	Wheeler	" "	" "	22, 26,	8 to 10
Clamp	Contr'ct'r	Eccentric	Oval		6½ in.		Wolff, Am.	Fairbanks	Wheeler	" "	" "	22	8 to 10
Internal	Wedge	Eccentric	Round		6½ & 7	Remington	Remington		Sager	Dunlop, Kang.	Blk. Green, M'roon	24 to 28	8 to 12
Internal	Wedge	Eccentric	Round		6½ & 7	Remington	Remington		Sager	" "	" " "	24 to 28	8 to 12
Clamp	Clamp	Oblique	Round		6 to 7 in.		Star		Sager	" "	" " "	23, 24, 25	8, 9, 10
Clamp	Clamp	Oblique	Round		6 to 7 in.		Star		Sager	" "	" " "	23, 24, 25	8, 9, 10
Internal	External	Oblique	Oval		6½ & 7	Snow, Baldwin	Forsyth, Record, Best	Fairbanks			M'roon, Green, Blk	20 to 28	7 to 10
Internal	External	Oblique	Oval		6½ & 7	Snow, Baldwin	Forsyth, Record, Best	Fairbanks			" " "	20 to 28	7 to 10
Clamp or Expand'r	Expand'r	Oblique	Diamond		6½-7½		Syracuse	Lobdell	Gordon	M. & W.	Optional		
Clamp or Expand'r	Expand'r	Oblique	Diamond		6½-7½		Syracuse	Lobdell	Gordon	M. & W.	Optional		
Clamp or Expand'r	Expand'r	Oblique	Diamond		6½-7½		Syracuse	Lobdell	Gordon	M. & W.	Optional		
Clamp	Expand'r		Oval		6½ in.				Sager	Regal, M. & W., Fisk	Black, Maroon, Green	24	7 to 10
Clamp	Expand'r		Oval		7 in.				Htf'd. M. & W., Dunlop		Black, Maroon, Green	26	7 to 10
Internal	Clamp	Oblique	Diamond		6½ in.				Garford	Hartford, M. & W.	Blk. Maroon, Green	20 to 26	8, 9, 10
Internal	Clamp	Oblique	Round		6¾ in.		Keating		Garford	Hartford, M. & W.	" " "	21 to 25	8, 9, 10
Internal	Clamp	Oblique	Round		6¾ in.	Keating Roller	Keating		Garford	Hartford, M. & W.	" " "	20 to 27	8, 9, 10
Internal	Clamp	Oblique	Round		7¼ in.	Keating Roller	Keating		Garford	Hartford, M. & W.	" " "	20 to 27	8, 9, 10
Internal	External	Horizontal	Diamond		7 in.	Indianapl's	Bridgeport		Patee	Patee, M. & W.	Green, Orange, Black	22 to 30	8 to 10

## HINTS FOR REPAIRMEN

### Apparatus for Detecting Leaks in Inner Tubes—Method for Removing Frame Dents

Repairers have long been annoyed in locating small leaks in the inner tubes of double tube tires by not being able to safely and sufficiently inflate the tube. Many makeshift expedients have been employed to obtain heavy air pressure without bursting the tube, but none have been entirely satisfactory. Instances where inner tubes have been replaced in casings without having been rendered completely air tight are numerous.

Albert J. Darch, a cycle dealer and repairer in Butte, Mont., has invented and applied for a patent on a device which will allow repairmen to inflate inner tubes to practically a riding pressure without distorting or endangering them in any way. The appliance is simple, comprising, as is shown in the accompanying illustration, a casing of substantially the same form as an ordinary double tube tire cover, but made of thin brass wire netting loosely woven and supported and maintained in shape by a rim of thin sheet metal. This rim is in two annular parts, which are brought to-



gether by hooks as indicated in the drawing. One of the joining edges is formed with an annular offset flange, so that the two overlap and when closely hooked together form a smooth and tight joint. Coinciding notches in the two edges form a valve hole. The interior is perfectly smooth, and chafing or pinching of the inner tube when in place is impossible.

When it is desired to locate a small puncture in an inner tube the divided rim of the casing is unhooked and the parts separated to allow the tube to be slipped inside with the valve projecting through the hole provided for it. The rim sections are then hooked together and the inner tube inflated, the wire netting restraining it against undue expansion. The woven casing with its inclosed inner tube is then immersed in a tank of water, being laid on its side. A convenient way of marking the puncture when it is located is that recommended by the inventor, which is to make a cross upon the netting with an indelible pencil. The puncture can, however, be marked in any other way desired by the operator. The remaining operations are, of course, to deflate the tube, remove it from the casing and patch the puncture.

Though the greater number of punctures in inner tubes occur either on the

tread portion or on the sides, it occasionally happens that there is a puncture on the rim side of the tube. When this is the case the locating of the leak is slightly more difficult with this device on account of the necessary rim for the wire inclosing fabric covering such punctures. Bubbles will escape, however, when the tubing is immersed in water, and the approximate circumferential location on the tube can be marked on the tread portion. Then, after the tube has been removed from the restraining casing, the rim side of the tube may be examined at the circumferential point marked on the tread and the exact location of the puncture thus determined.

The casing is made in a standard size for 28-inch by  $1\frac{5}{8}$ -inch inner tubes. It having been found that the elasticity of inner tubes permits the inflating of smaller or larger tubes, and also tubes for 26 and 30 inch tires, with perfect safety, no other size is made. The repairer using the casing is thus afforded a universal device which will receive all standard sizes of tires. Tires of 20 and 24-inch diameter do not come to repair shops in sufficient numbers to make necessary special provisions for them. The casing will take either endless tubes, such as are used in detachable tires, or double end tubes for laced tires.

Mr. Darch is ready to supply his device to the trade.

#### TO REMOVE FRAME DENTS.

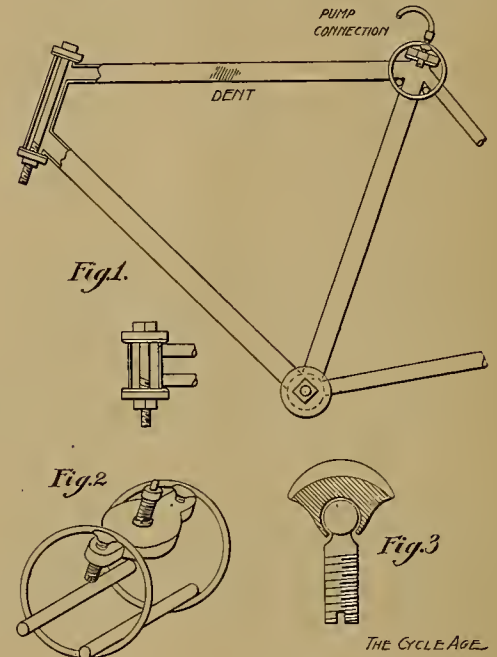
Splicing has been the most commonly employed means for repairing frame dents, large kinks and smashed tubes. There are, however, some disadvantages to this method, prominent among which is the liability to sprung frame tubes unless the insertion of the new section of tubing has been very carefully executed. Splicing also requires no small amount of time and labor. In the drawings herewith is illustrated a method for removing dents by a pneumatic process which has been followed with considerable success.

Leather faced clamps are fitted to all of the openings into the interior of the frame, rendering the latter practically air tight. Through a valve provided in one of the clamps air is then pumped into the frame by a foot pump, the dented part of the tube being heated at the same time. The outward pressure of the air on the inner wall of the tube will expand it to its normal shape.

The process to be valuable in a repair shop must be carried out by means which will be universal; that is the vent closing clamps must be of such design that they will fit all frames. The clamping devices shown in the illustration have this characteristic. The clamp for the head consists of a couple of heavy plates or washers lined with leather and clamped together by a draw bolt running through the steering head. The washers if made at least one and one-half inches in diameter will fit any size of steering head, and the draw bolt may be long enough to cover the existing range of head lengths. The hanger clamp is made in precisely the same manner, the proportion of the parts being adapted to the purpose.

Unless the rear forks and stays have open rear ends, which is rare, the only other clamp necessary is that for the seat mast, and this clamp may carry the inflating valve. If air is apt to leak through the rear forks the opening from the crank

bracket to the forks may be plugged in any suitable manner before the bracket clamp is attached. The seat mast clamp may comprise a leather lined washer similar to the others and may be attached by any means which will permit it to be fitted to any frame. A regular tire valve is used, preferably one with metal stem. The clamp shown attached in Fig. 1, and in detail in Figs. 2 and 3, is suggested as a suitable universal clamp. The cover washer is provided with two ears diametrically opposite and bored vertically, the holes being tapped to receive strong set screws which at the top are furnished each with a curved yoke attached in a manner similar to the attachment of the freely turning clamping end of the screw in an ordinary iron clamp. An iron ring is hung in the yoke



on each screw and when the clamp is attached to the frame a rod is placed under the top frame tube in the corner formed by its union with the seat mast, and another rod passed under the corner between the rear stays and the seat mast. The rods bind against the lower side of the rings, so that when the set screws are screwed upward the clamp washer will be forced down tightly upon the top of the seat mast tube. The ring being free to catch the rods at any points in its circumference, the clamp is universal for all seat clusters, irrespective of the relative locations of the corners against which the cross rods bind.

The pneumatic method will remove the dents in good shape, but it is still open to the same objection which makes all dent-removing plans more or less vexatious—that is, the tubing must be heated at the smashed place and the enamel injured.

#### Swindled Bicycle Makers.

A well planned fraud was recently contrived by a Montreal bicycle agent and carried out with the assistance of his relatives, the victims being a firm of Canadian makers whose representative sold 25 machines at \$50 apiece, \$250 in cash and the remainder secured by a mortgage on property worth \$7,000 and which was already mortgaged for \$4,000. The bicycle makers later found that the agent, George Meunier, had acted through a relative named Eugène Labreche, and that after the sale was agreed to they went before a notary, another relative, named Bleau, for the purpose of executing the mortgage. The notary received the signature of the representative of the bicycle making firm, who was totally ignorant of the French language, in which the deed was written, not to a deed of mortgage, but to a deed of sale of property from Labreche to the bicycle makers for the sum of \$6,000, of which \$1,000 was acknowledged

# FINISH....



The finish of the '99 BARNES BICYCLES is in keeping with the excellent material, mechanical features and improved methods used in their construction.

The white enameled frames with royal purple steering heads and fork crowns have set the fashion for the year.\*\*\*

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the Barnes is a Valuable One.  
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THE BARNES CYCLE  
COMPANY

SYRACUSE, N. Y.

paid in cash, and the bicycle makers undertook to pay \$3,000 to a hypothecatory creditor and \$2,000 to Meunier. Upon discovering the true state of affairs, the bicycle makers offered to return the \$250 cash paid in as soon as the bicycles were returned, asking the aid of the law for the cancellation of the sale and accompanied this action by the seizure of the goods. When the case came to trial, the defendant pleaded that he never dealt with the company, but that he sold Lebreche the property in question for \$7,000, of which the sum of \$2,000 was acknowledged paid in cash, though no cash was actually paid. Only upon investigation by the court was it discovered that the notary and the other two conspirators were relatives. The bicycles were ordered returned to the makers. The \$250 paid at the outset by Meunier was left with the makers, it being shown in the course of the testimony that five machines had actually been disposed of by Meunier.

### Considering "Junk Dealers" Case.

Washington, March 13.—The test case of John D. Lasley against the District of Columbia, brought to determine whether bicycle dealers selling second hand bicycles, taken in trade, can be made subject to a license tax of \$40 per annum for dealing in second hand personal property, was argued in the Court of Appeals last week. The court now has the matter under consideration and will probably render an opinion within the next month.

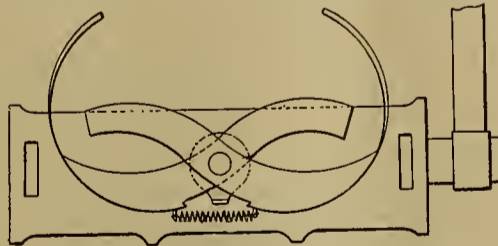
### Road Instruction By Agents.

In the east bicycle agents will be this season more accommodating than usual to the women customers. In Springfield, Mass., for example, if a woman purchases a machine she can have the services of a road instructor for nothing. Agents who

last season conducted riding academies will this year complete the cycling education of their customers on the highway and accustom the timid ones to the dangers of travel.

### An Automatic Toe Clip.

The most recent toe clip of the self-adjusting kind is the invention of P. E. Erickson of Port Chester, N. Y., and is illustrated herewith. The clip comprises two curved sections which are hinged together by the bolt that attaches them to the front side plate of the pedal. Ex-



THE CYCLE AGE

tensions on the inner ends of the clip sections cross each other and are curved to rise above the tread of the pedal plate. Thus when the rider's foot is placed upon the pedal it will press the extensions downward and raise the outer arms of the clip till they inclose the foot. A light coil spring is secured between the lower portions of the two arms so as to keep the clip open for the insertion of the foot and projections on the arms in conjunction with a lug on the washer which is interposed between the clip and the pedal keep the arms from dropping too low when the rider's foot is off the pedal.

### Sundries Dealers Evince Interest.

Twenty-five manufacturers of bicycles are reported to have asked for space at

the coming spring cycle show that will open in New York city March 23 at Grand Central Palace, and prospects indicate that this number may be doubled before the opening. A number of the makers who have been allotted space are recognized leaders in the trade. The manufacturers of sundries, however, appear to be especially favorable to the exhibition and a large number are expected to have booths.

The first dealers' cycle show for the eastern metropolis holds forth promise of being a creditable essay. Only one obstacle of real importance was at first encountered by the management; that was that the dates of the exhibition threatened to interfere with work in stores during the early activity in the selling season. But a weighty argument in favor of the dates was found in the timely and profitable advertising to be secured at a spring show for the public. A number of the dealers discovered that they could attend to old customers and visitors at their stores and still manage to take time to win some new customers at the show as exhibitors.

The management is now occupied in the endeavor to satisfy dilatory applicants for large spaces with locations that are left and in renting small spaces to those who are not so difficult to please.

### That Paralyzing Solar Plexus Blow.

During the last four weeks American cycles and cycle stuff to the value of nearly \$125,000 have been shipped to Germany. What's the matter with those German manufacturers who purposed paralyzing American competition by refusing credit to any German dealer who touched the American "monster"?—Baltimore Globe.

There are fifty cycling clubs in Berlin.

## SUBJECTS OF GENERAL INTEREST

### FUTURE RATE OF INTEREST

What will be the future rate of interest on investments? Prominent bankers throughout the country are inclined to think it will not be more than 3 percent. The Secretary of the Treasury says on this subject: "Looked at in the light of probabilities, with the general average conditions, social and national, which have prevailed for twenty years past, and taking into account the rapid increase of capital and the growing economies in production and distribution, it would seem that the tendency of interest was permanently downward, and that it would be hazardous to estimate a rate higher than 3 percent, as an average available return upon high-grade securities during the next twenty years. On the other hand, with our country largely undeveloped in its latent resources, as it is, affording still room for the intelligent application of capital to the development of such resources, it would seem to me that 3 percent might be fairly estimated to be a realizable average rate."

### NICARAGUA CANAL PLAN CRITICIZED

It is the prevailing opinion in governmental circles that before undertaking the construction of the Nicaragua canal a thorough and impartial investigation of its commercial value should be made. Certain obstinate facts are in the way of the construction of the project just at present and they are being made much of by those who oppose hasty action. It is pointed out that the distance from New York to Manila is 181 miles less by the Suez canal route than by the Nicaragua canal route. It is also shown that the distance from London to Manila is 5,080 miles less by the Suez canal route than by the Nicaragua canal route. There are, however, two important facts to be taken into consideration in connection with the item of distance, viz.: The Suez canal is a sea level canal, whereas the Nicaragua canal involves 220 feet of lockage. The other fact is that the Suez canal route is greatly superior to the Nicaragua canal route in point of coaling facilities. Estimated that the equated distance, embracing mileage, lockage and coaling facilities, would be equivalent to 2,000 miles in favor of the Suez canal for trade between New York and Manila, and to 7,000 miles for trade between London and Manila.

In a word, if the Nicaragua canal were completed the commerce of the Atlantic seaports of the United States and of all Europe, with Asia and Australasia, in steam vessels would for all time continue to pursue the Suez canal route. The government is now sending its transports and war ships to Manila by the way of the Suez canal and would do so even if the Nicaragua canal were now completed. Sailing vessels will never pass through either the Suez canal or the Nicaragua canal for lack of wind and the enormous cost of towage by either of the canal routes.

The transcontinental rail lines will, for all time, secure all the passengers, all the mails, all the express goods and all the perishable freights and fast freights between the Pacific coast and the Atlantic and Gulf coasts, leaving to the competition of the canal route only the residuum of low-class freights, and in all probability will beat the canal route for that. If the Suez canal were subject to such railroad competition it would at

once be financially ruined. It is debarred from such competition by physico-geographical considerations.

The general conclusion from the foregoing and other facts of equal significance is that the Suez canal and the transcontinental railroads of the United States have destroyed the commercial possibilities of any American isthmian canal which may have existed thirty years ago.

It appears to be a cause of regret that the pending bills in Congress for the construction of the Nicaragua canal were formulated with no reference to the foregoing facts and in the light of no inquiry by Congress as to the commercial value of the proposed Nicaragua canal. This is contrary to the fixed policy of the Government as to investigations in advance of construction. The military importance of the work is also as much in doubt. The canal proponents have thus far strenuously opposed such inquiry. The preponderance of professional testimony is to the effect that the proposed Nicaragua canal would be a source of weakness rather than of power.

### THE COAL SUPPLY IS INEXHAUSTIBLE

An apprehension that the world may be within measurable distance of the exhaustion of its coal supply must be dismissed as an idle fear. One who has investigated the mineral resources of China reports that the whole southwestern part of the province of Hunan may be called one coal field, covering in all some 21,700 square miles. Over large areas of this territory the coal measures are visible on the surface, and the coal is said to be generally of excellent quality. In the province of Shansi, too, there is another vast and easily workable coal field. At the present rate of coal consumption the world, it is estimated, could be supplied by China for 10,000 years to come. Thus, should the western coal fields become in time exhausted, the far east will easily make up the deficiency and keep the stoves and furnaces of the world in fuel for as long a time as any one now living need worry about.

### GLASS PUT TO A NEW USE

Glass is constantly finding new uses. A firm of glass manufacturers in western Pennsylvania, is making glass pipes for the conveyance of oil, gas, water or sewage as a regular commercial article, and an Ohio oil company is putting in a line of the glass pipe, about 100 miles in length, which will afford a practical test of its advantages. As the glass does not corrode and is unaffected by electrolysis when in the vicinity of electric tracks or conduits, there seems to be a large field of usefulness before this kind of pipe.

The Philadelphia Cycle Board of Trade was represented at the meeting of national and local trade organizations held in that city last Monday to make arrangements for the exposition of American manufacturers, which will open in Philadelphia next September.

The Connecticut legislature is considering a good roads law, at an annual cost of \$250,000. The committee recommends a commission, and reports its belief that the state should pay the greater part of the expense in improving highways in small towns.

### RAPID DEVELOPMENT OF THE SOUTH

While the public has heard a great deal about the resources of the south and the progress which that section is making, its advantages are by no means fully appreciated by the business people of the north. It should be remembered that the south has a very remarkable combination of advantages not possessed by any other one country or section of the world. It produces about three-fourths of the world's cotton crop, furnishing the raw material for the vast textile interests of Great Britain, the Continent and New England. This industry, representing over \$1,500,000,000 of invested capital, is gradually tending toward the cotton fields. In all parts of the south, and especially in the Carolinas, Georgia and Alabama, very rapid progress is being made in cotton mill building. The south now has over \$120,000,000 invested in cotton mills, against \$61,000,000 eight years ago, and about \$5,000,000 more is going into new mills now under contract and extensions which are being made to existing mills. Throughout the south the dividends of cotton mills have averaged for some years eight to ten percent a year after adding, in many cases, ten to fifteen percent to the surplus fund.

In pig iron production the south is making equally as rapid progress as in cotton manufacturing, Birmingham, Ala., having exported during last year an average of nearly 1,000 tons per day.

Taking into consideration the fact that the south seems to be able to produce iron at a lower cost than other sections, and that it has an unlimited supply of ores, coking coal and limestone, no limit can be set upon the probable extension of the iron, steel and coal interests of that section. When we consider that the manufacture of cotton has enriched England and New England, and that the production of coal and iron and steel have made Pennsylvania enormously wealthy, and that the lumber interests of the northwest have created great wealth and developed a vast business in that section, we can form some idea of what it means to the south and to the entire country that all these advantages in practically unlimited supply and of superior quality are found in that section and nowhere else in combination.

The south for the last fifteen years has been passing through an experimental period in which the mettle of its people and the inherent strength of its business interests have been undergoing such a test as was never given to any other section of our country. That they have stood the ordeal and have demonstrated to the business world the soundness of the whole southern situation is now universally admitted.

Another fact of great importance to the future of the south, and one which bears directly upon the commerce of our country, is the striking advancement that is being made in the development of southern ports. At Galveston, New Orleans, Pensacola, Mobile, Savannah, Norfolk, Newport News and other ports extensive enlargements of terminal facilities are being made at a cost of some millions of dollars. At Newport News the great ship yard, now employing 5,000 hands, has \$20,000,000 of work under contract. Though Newport News is comparatively a young place, its growth being a matter of about ten or twelve years only, its export trade last year amounted to about \$40,000,000.

Garford

Hunt

The Wheeler  
EXTRA

Brown

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P &amp; F

## By This Stamp

You May  
Know  
Them

**W**HEN you see an attractive saddle you generally look for the name of the maker, and nearly every time you find that it bears one or another of the familiar stamps here shown.

A saddle to be satisfactory must have beauty, style, durability and correct shape. These attributes are absent unless the goods are manufactured by experienced workmen under the supervision of men who make a study and have a thorough knowledge of the business, and who have the capital and the facilities to put together the finest materials in the best manner known to the art.

The American Saddle Company makes saddles that *satisfy*.

The evidence of it lies in the fact that such an overwhelming majority of the riders buy them, ride them and believe in them.

It is safe to trust the judgment that is so nearly universal and be governed by it in laying in your stock.

Buy the products of the American Saddle Company and you will need few others.



**American  
Saddle Company**

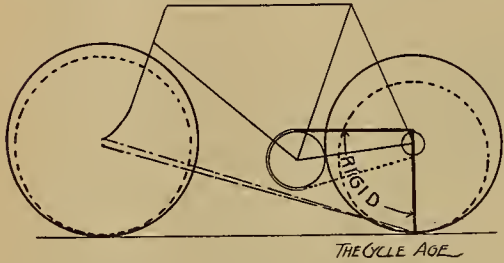
American Trust Building

Cleveland, Ohio

## RENOUF'S UNTENABLE THEORY OF FRONT AND REAR WHEELS

Small Rear Wheel Will in No Wise Assist the Front Wheel to Climb Obstructions.

Readers interested in bicycle design noticed in the March 9 issue of this paper an article in which the well-known English bicycle engineer Renouf is quoted as advocating the reduction of the size of the rear wheel in bicycles for the purpose of raising the direction of the thrust from the driving wheel to the front wheel above the horizontal and thereby facilitating the passage of front wheel over obstacles in the road. Mr.



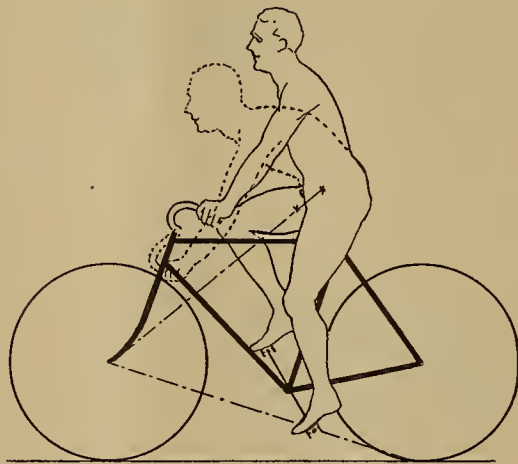
THE CYCLE AGE

Renouf would rather reduce the size of the rear wheel than increase the size of the front wheel, because he holds that a 28-inch front wheel has just the right dimensions for the best disposal of the handle bar when the steering head is of the length which he prefers. Otherwise his argument would favor a large front wheel.

He reminds of the ease with which a barrow is pushed over a curb by dropping the hands low and of the shock which is felt when the hands are not dropped, and takes it for granted that the thrust by which the front wheel is pushed forward travels from the rear wheel axle through the rigid frame to the front wheel axle. By dropping the rear wheel axle lower he therefore expects to obtain the inclined thrust which he desires.

### Bicycle Driven from the Ground.

It may be well to call the attention of Cycle Age readers to the fallacy of Mr. Renouf's reasoning when he supposes that the effect is the same whether he



THE CYCLE AGE

increases the size of the front wheel or reduces the rear wheel.

He overlooks that the point of ground contact of the rear wheel is in reality the point from which the forward thrust issues. While revolving, and therefore not rigidly connected with the bicycle frame, the rear wheel when considered as a driver is held rigidly to the extent of the thrust applied by means of the rider's foot on the pedal and the pressure transmitted through the chain. It is rigid in one direction so long as it is used as a driver, and the thrust by which the front

wheel is caused to rotate always takes the direction from ground contact of rear wheel to axle of front wheel—that is, it is always inclined at a sufficient angle upward and forward to help the front wheel over obstructions. The height of the rear wheel axle makes no difference in this respect, but that of the front wheel does. Mr. Renouf should therefore on his own basis of thought advocate the large front wheel and not the small rear wheel and by so doing would be in accordance with the time-honored English design which prescribes 28-inch rear and 30-inch front wheels.

### Advantage of Low Built Frames.

In his line of reasoning Mr. Renouf has left out of consideration the forward thrust caused by the momentum of wheel and rider, although this thrust under nearly all circumstances except such as prevail at laborious hill-climbing, largely exceeds the thrust of mere acceleration received from the rear wheel.

Considering the rider as rigid with his mount—for simplicity's sake—it is readily seen that this thrust travels from the center of gravity of rider and mount combined to front wheel axle and that the direction is one of a downward slope of the particular kind which Mr. Renouf desires to avoid when obstacles are encountered. It is also seen that the direction is aggravated when the rider is placed unusually high, as on a bicycle with a high crank hanger and a correspondingly high seat. The farther back over the rear wheel the rider is placed the smaller will be the angle of the thrust, but, on the other hand, if the rider bends forward and lowers the center of gravity the angle will also be reduced. If the supposition is that the bicycle must pass over the obstacle in its way with both front and rear wheels without changing the rider's position, the most favorable attitude is undoubtedly the customary scorchers' position on a low-hung machine, because this position divides weight nearly equally between front and rear wheels so as not to lose when the rear wheel passes over an inequality what was gained at the front wheel. This position has also the advantage that it pivots the weight of the body partly on the shoulder joints, so that the tendency to bear down on the front wheel caused by momentum when an obstacle is met, is very materially lessened by allowing

the body of the rider to swing forward while the obstacle is scaled.

The various positions and lines of thrust are indicated in the accompanying illustrations, and it is seen that a brief analysis of Mr. Renouf's argument from a practical standpoint leads the reader back to the bicycle design which is most in favor in the United States—the low-built frame with 28-inch rear wheel. There remains a suspicion that an increase in the size of front wheel might be desirable, but that is not what Mr. Renouf contended.

## AN IMPORTER'S TRIBULATIONS BOYCOTTED BY COMPETITORS

Danish Manufacturers Try to Make Capital of Jens Nielsen's Advocacy of Cash Export Sales.

In the issue of December 28, 1898, of this paper there appeared an article setting forth the bad experience which several of our manufacturers have had with exports of bicycles to European countries, when the bills were not paid in full against shipping documents, and part of a letter from Jens Nielsen, an importer in Copenhagen, Denmark, to "The Foreign Buyer" of New York was reprinted in the article so as to show that the better class of European importers themselves were opposed to the practice of credit sales on account of their tendency to disestablish current prices, if the buyer refused to accept the goods, and the latter were thrown upon the market at sacrifice.

### Harsh Means to Down Importers.

This article has proven the signal for the Danish sporting paper "Idraet" to fall over the enterprising but innocent Jens Nielsen and accuse him of being a traitor to his country. The trouble lies apparently in the statement made by Jens Nielsen that "the home manufacturers do not amount to much" and another remark to the effect that "every respectable firm on this side pays cash against bills of lading."

Considering that Mr. Halberstadt and other Danish and Anglo-Danish manufacturers probably see a slight in Mr. Nielsen's reference to the small capacity of their works (which is, in fact, very small for supplying all of the territory contributory to the free port of Copenhagen), and that several importers in the same city who prefer to buy on credit nevertheless consider themselves respectable, it is not to be wondered at that some bad feeling has been aroused, but Idraet and the Cycle Dealers' Association of Copenhagen have gone further. They have taken the extravagant measure of attempting to have Mr. Nielsen and the cycle paper "Cyclen," which defends him, boycotted socially and commercially as calumniators of the Danes and vipers that sting the breast where they are coddled.

### Simple Case of Enterprise.

The hapless importer whose inclinations for cash transactions have stirred up this hornets' nest writhes under the accusations and desires that the Cycle Age make a statement exonerating him of writing the fateful article. The Cycle Age cheerfully acknowledges that he did not. He probably wrote the passage with which he is quoted, but not to this paper, and the Cycle Age takes it for granted that the worst which may be charged against him is that he is an enterprising merchant who has loved not wisely but too well to convince American manufacturers that they should deal only with those who are situated like himself, i. e., who have the cash to pay cash with.

By using his pen for this purpose he has undoubtedly aimed not solely at conferring a benefit on American bicycle manufacturers, but also at reducing the number of his own competitors, and has been actuated by a laudable desire to uphold profitable prices. But his line of argument has not been malicious or personal; neither has it been directed against his countrymen, and it is preposterous to brand him as a traitor because he tries to defend his own particular market against demoralized prices.

Evidently the patrons of Idraet have discovered in the importer's correspondence to American papers a fine chance

# WHAT WOULD YOU DO?

The only sensible way to coast is the safe way. The safe way is possible only with perfect control of the bicycle. The minute the feet are off the pedals the control is lost—coasting then becomes a danger.

Eclipse Cycles Fitted with

The Morrow Automatic Coaster and Brake

Make coasting a safe pleasure. It enables riders to hold the



pedals stationary while coasting. A slight back pressure of the pedals applies the brake. The bicycle can be stopped on the steepest hill in the shortest time and smallest space. Any wheel thus equipped can be sold—easily. All the particulars if you want them.

Eclipse Bicycle Co., ELMIRA, N. Y.

# Plain Talks on ANDRAE Cycles

## XIII—THE SEAT POST CLUSTER.

Last week we told you that if you would compare the Andrae tandem in the Andrae '95 catalogue with other '99 tandems you would find the other '99 tandem a copy in design of the Andrae '95. Did you make the comparison?

Several makers are screaming about their new (?) V-shaped seat post clusters.

Let us get to comparison again.

Take a '96 catalogue and a '99 catalogue of the other make, turn to seat post clusters and you will find that—

**THE OTHER '99 NEW (?) SEAT POST CLUSTER WAS AN ANDRAE FEATURE WAY BACK IN '96.**

We have had three years to improve our seat post cluster.

It's a new thing with others.

And still the other maker asks as much for his '96 featured wheel as we ask for the Andrae.

Write for our paper, "The Andrae Agent."

ANDRAE  
CYCLES  
NEVER  
DISAPPOINT....

Julius Andrae & Sons Co.

MILWAUKEE, WIS., U. S. A.

—THE—

# Hollenbeck Rawhide Saddle

is the **LIGHTEST, HANDSOMEST** and most **COMFORTABLE** Bicycle Saddle in existence. No wood or

steel base covered with leather to hurt or chafe you, but instead, one sheet of molded rawhide, suspended on a skeleton frame, which is Flexible and Conformable to the rider, and no stitching or rivets to wear the clothes. 30 high-class wheel makers use them.

**\$ 2**

Booklet Free for the Asking.

Hollenbeck Saddle Company  
SYRACUSE, N. Y.

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- A. F. Shapleigh Hardware Co., St. Louis, Mo.
- Colorado Cycle Supply Co., Denver, Col.
- Great Western Cycle Co., Minneapolis, Minn.
- Deere & Webber Co., Minneapolis, Minn.
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- C. J. & F. E. Smith Cycle Supply Co., St. Paul, Minn.
- Baker & Hamilton, San Francisco, Cal.

# A THINKING AGENT

HAS,  
OR  
WILL  
OBTAIN,  
THE

# ORIENT

AGENCY  
BECAUSE  
HE  
THINKS...



WALTHAM MFG. CO. WALTHAM  
MASS. ❁❁❁

for a bit of patriotic advertising and they have made haste to utilize it in favor of home manufacture. That is the penalty of greatness. If Jens Nielsen had not sold quite so many American bicycles as he really has sold and had not said quite so much about it, he would not have been a formidable competitor of Danish manufacturers and nobody would have thought of boycotting him for advocating the cash principle. But Nielsen should rise to still greater greatness. He should turn the joke against his assailants, for Danes love a joke as much as the Briton a lord. He should advertise the boycott and make it clear to his countrymen that the patriotic fervor which ostensibly has actuated its instigators is only a thin veneer covering their inability to compete with the values which he can offer in American bicycles bought for cash. He should not get flustered, but should turn the advertising which he is receiving gratis to good account. The tempests which rage in Copenhagen do not sensibly affect trade with the provinces or with Sweden or Norway. He can continue to sell American bicycles after being scored by those who don't like to see them sold, as well as or better than before. A couple of slipshod expressions which have escaped his pen in the heat of business endeavor should not and will not mar his fortunes, when everybody can easily discern the mercenary animus of his persecutors.

#### Jens Nielsen on Contracts.

While complaining of the unpleasantness of being misunderstood Jens Nielsen finds time to rap American manufacturers in a communication to this paper on the subject of the hardships of his lot as a cash buyer, as follows:

In making contracts for large lots of bicycles and paying cash in advance, the importer on this side naturally wants a clause in the contract that he is sole importer of this special brand for 12 months—or one season. The importer in reselling the goods has to divide up the lots among his agents all round in his particular territory, or what you would call "organize the territory." The importer, who is supposed to make a little profit, in reselling his cycles, allot certain districts to his agents, same as you do in the states, I suppose. If a competitor in some part of the district—or if one of the agents apply direct to the factory in their states it would seem right and just that such orders were sent to the importer, according to the contract. However, I am sorry to say, that so far most all the factories I have dealt with, have not kept true to this part of the contract, but have not abstained from the temptation to fill direct orders at same prices or a trifle higher, and have so upset the whole organization and heavily damaged the first importer. Now, how is the importer, who pays cash in advance, to guard himself against such trespassings? He is powerless; all his work, his trouble and extra expenses for introducing a certain brand are lost and all he can do is to throw up that connection and turn to another, but only to be treated the same way over again. It is, of course, only the cash in advance payer who gets ill treated like that; such things cannot happen till "the bill is paid." Now, why will the manufacturers on your side make it impossible for the importer on this side to pay cash in advance? A cash payer ought to be placed on equal terms with those not paying cash, but, I am sorry to say, he is not. Where is the protection for bad packing, lacking parts, inferior goods, breaking of contracts for the cash in advance payer? Where the protection is for those importers, who do not pay cash in advance, that we all know. The cycle trade is a new one and is to be compared with a new rising town of gold mines—all kinds of elements rushing in, bad elements in the majority at the start till things get settled and the majority changes; I think the cycle trade today is just on the level point.

JENS NIELSENS.

An English tire firm is reported to be planning the construction of ten petroleum-driven pacing machines for use with a selected list of riders to secure the world's short and middle distance records in the spring.

Three new motor-car factories have been founded in Switzerland.

## STEAM VEHICLES RIDE EASY

### MOTORS FLEXIBLY CONNECTED

#### Engine Oscillates in Harmony With Jolts —Wagon Body Moves Freely on Springs.

From the unpleasant vibration which is a feature of most of the French motor vehicles driven by gas or steam engines many students and intending purchasers of motor vehicles have been led to believe that there were serious engineering difficulties in the way of connecting the running gear of these two classes of automobiles to the driving power in such a manner that shocks resulting from a bad road could be absorbed by springs and that vibration arising from irregularity in the torque of the driving shaft would not be felt by the passengers. The rapid wear of driving chains which has been observed in several American vehicles has confirmed this supposition.

#### A Condition of the Past.

Nevertheless it may now be confidently asserted that any shortcomings in this respect which in the past have tended to shorten the life of steam and gas engine vehicles, increase the repair bill and reduce the comfort of riding in them, have only been such as are liable to mar the perfection of the product in the infancy of any industry, and that the steam and gas engine wagons of the future may be constructed to ride as "easy" as any electric or horse-drawn vehicle.

#### Mathematics of Shocks.

One of the Stanley brothers wrote in this respect concerning their steam wagon as follows:

In our carriage the connection between the boiler and engine is flexible, so that the engine is free to oscillate. Then, the engine bed is connected with the rear axle in such a manner that the chain which is used for transmitting the power is always at exactly the same tension, and can be tightened or loosened at will by simply turning a nut. The body of the carriage is perfectly free to move up and down, or to tip from side to side with practically no resistance excepting from the springs.

Now, since our carriage weighs about one-quarter as much as an electric carriage that will run the same distance and carry the same number of passengers, we can use a much more flexible spring, and it consequently rides much easier.

The crank shaft of the engine and the rear axle are connected by a brace 30 inches long. While the body of the carriage moves up and down about 4 inches vertically, as a maximum, the crank shaft of the engine moves on an arc of a circle with a 30-inch radius about the same distance.

If the power of the engine were absolutely irresistible and the crank shaft revolved at a uniform speed, the motion of the carriage would vary about 2 inches with a vertical motion of 4 inches of the body. But the power is not irresistible; on the contrary it is limited and extremely flexible, as flexible as steam is elastic. The tendency of the crank shaft to rotate at a uniform velocity depends upon the momentum of the fly wheel. The tendency of the carriage to move at a uniform velocity depends upon the momentum of the carriage.

The fly wheel, which is simply a sprocket wheel, and all the revolving parts of our engine weigh less than 2 lbs. The carriage fully loaded weighs 800 lbs. The speed of the carriage is fully ten times the speed of the revolving parts of the engine. The force required to interrupt or change the speed of either conforms to the law of the striking force of bodies, that is, it is proportional to the weight multiplied by the square of the velocity. Since the speed of the carriage is ten times as great as the speed of the revolving parts of the engine, the force required to interrupt its motion would be 100 times as great, if of equal weight; but the weight of the carriage being 400 times as great the ratio is that of 1 to 40,000. It is almost as absurd to suppose that such a shock would be felt as it would be to suppose that you would feel a shock if a fly should light upon the dasher.

#### First Hundred Steam Wagons.

The Stanley brothers of the Stanley Dry Plate Works of Newton, Mass., have purchased the old "Hickory" bicycle fac-

tory at Newton and will at once lay down a plant equal to the production of one thousand Stanley steam wagons annually.

The Stanleys have just received their one hundredth order for their steam motor vehicles. Fifty have been contracted for by Count de Jotemps for delivery in Paris, France, and the other fifty have been ordered piecemeal by visitors to Newton who had an opportunity to test the merits of the vehicles in actual trial.

Two patterns of the vehicles will be turned out, one with seats for two at \$600 and another to carry four at \$700.

#### Motor Buses Refused Park Privileges.

The promoters of a company formed for the purpose of operating motor omnibus lines in Chicago presented a petition signed by 300 citizens living along the boulevards of the South Side to the South Park board of commissioners recently requesting that permission be granted to run twenty or more vehicles on the boulevards and park drives. The petition was promptly denied by unanimous vote of the board, however, the commissioners refusing to take the matter into consideration. The compensation offered to the commission was 10 percent of the gross receipts, if exclusive right of way was given. The backers of the company are Simeon Haskell and James S. Shortle. J. E. Otis is the attorney.

In refusing the grant the commissioners said that no concessions of any sort had ever been made by the board and the rule would not be broken now. President Donnersberger, moreover, stated that letters opposing the scheme had poured into his office. The promoters of the scheme said they would bring the matter up again, as they were confident of success and that the people were behind them.

#### Overman Adopts Steam.

A steam motor vehicle has been completed at the Overman Wheel Works. It is stated that the company has abandoned its gas engine vehicle pattern in favor of steam, and that the new wagon is controlled by the steering lever operated by the driver's left hand, while the engine is governed by another lever operated by the right hand.

#### Season Tickets for Inflating.

An English cycle repairer has inaugurated a system of season tickets for inflating tires and lubricating cycles. The twelve months' ticket for the former costs only 62 cents, a similar charge being made for the oiling, and for \$1 one may have his machine kept in good running condition for one year.

#### Effective Work of Washington Police.

The number of lost and stolen bicycles recovered by the police of Washington, D. C., increases each year. During 1896 the department recovered 117 machines, 183 in 1897, while in 1898, out of 288 bicycles reported as lost or stolen, 254 were recovered and returned to their owners. Many of these are not claimed for weeks or are held as evidence in cases pending before the courts.

Richmond, Va., will not impose a tax on bicycles. The ordinance introduced in the common council having this end in view has been rejected, under the advice of the city attorney, who held that according to the law the bicycle was a vehicle and could only be taxed in common with other vehicles.

There are now in Holland eleven concerns exclusively engaged in the construction of motor carriages, while the number of cycle factories exceed fifty.



# What you get for your money

IS AS IMPORTANT AS THE AMOUNT YOU PAY.

Have you ever thought of that? Follow out the theory and what result do you get?

Buy a pair of shoes for \$2.50. They are shoes. You get some wear out of them. (All that you pay for.) Are they comfortable, well turned and sightly? Do you have to get them repaired soon?

Add 40 per cent. to that price and buy another make. What do you get? As good a shoe as is made, don't you? One that will give you good and long service without repair; that is good looking and suits you. You've had value received in both cases, but isn't the latter the cheaper in the end?

MR. DEALER, when you select your leading bicycle for 1899 don't be penny wise. Look to your net results at the end of the season.

A...  
National  
Rider  
Never  
Changes  
His Mount.

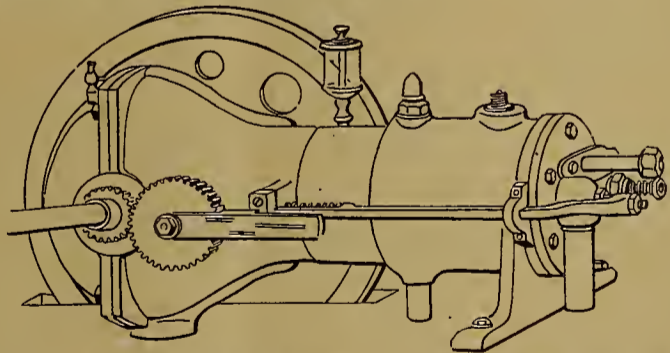
What  
Does That  
Mean?



# GASOLINE MOTORS

THE ONLY RELIABLE MOTORS FOR HORSELESS VEHICLES.

OURS can be run at cost of less than 1-2 cent per hour (2 horse power—larger ones same ratio). SPECIAL MOTORS and TRANSMISSION GEARS for Carriagemen and others to construct THEIR OWN VEHICLES.



**W**E believe this to be the very best Gasoline Motor ever placed on the market for simplicity, durability, more power and less weight than anything ever produced. Especially adapted for Motor Wagons Boats, Small Electrical Plants, Elevators, Machine Shops, Optical Works, Printing Presses, Feed Cutters, Carpenter Shops, Lathes, Emery Wheels, Corn Shellers, Laundry Machines, Pumping Water, Ice Cream Freezers, Irrigation Machinery, Ventilating Fans, Hay Presses, Cream Separator, Sewing Machines, Mining Machinery, Sawing Wood, etc., etc.

These Motors are manufactured horizontal or upright. They are absolutely safe, and cannot explode or cause damage, and are always ready for instant service. They require no mechanical experience or licensed engineer.

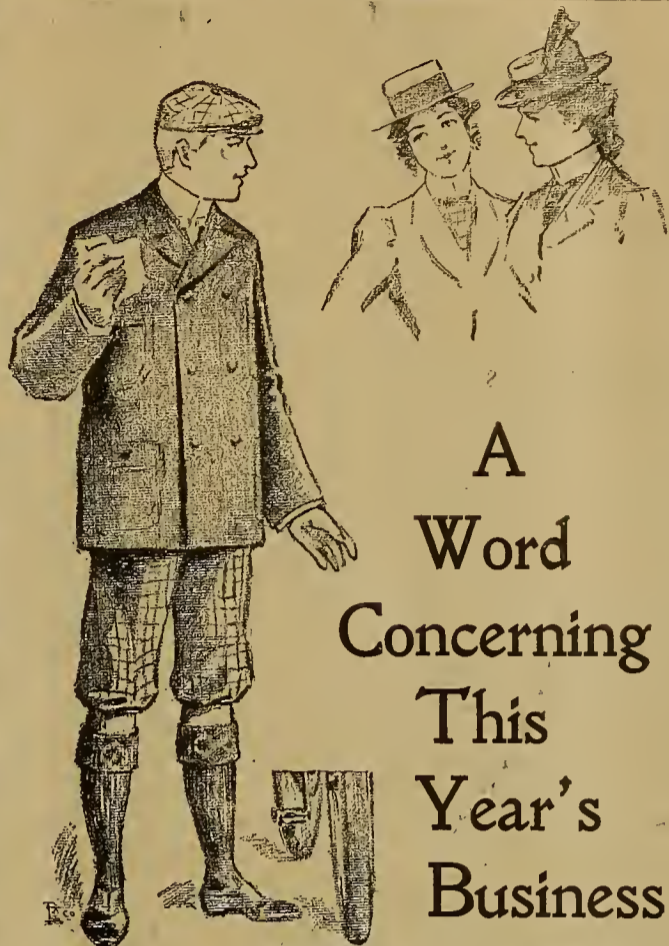
Our 2-horse-power Motor weighs but 89 pounds, and occupies a space 24x11 inches; runs at high speed and high compression.

Working parts are all tightly enclosed; one sight feed oil cup lubricates all bearings. Our ignition device is perfect, and all wearing parts are especially strong and substantial.

—WRITE FOR PRICES—

THE ST. LOUIS GASOLINE MOTOR CO.

822 CLARK AVE., - ST. LOUIS, MO., U. S. A.



A  
Word  
Concerning  
This  
Year's  
Business

Merely to see the Waverley Bicycle for 1899 is to create the desire to be mounted on it, to fly along over the smooth, hard roads that will soon come. The

1899  
**Waverley**  
\$40

is the handsomest and richest looking bicycle yet produced—that is the unanimous testimony of those who have seen it—while those who have ridden it (the 1899 models have now been tested for months) are enthusiastic over its smooth, noiseless running.

Combined with the IVANHOE line of good lower-priced bicycles, the Waverley gives the strongest foundation for a profitable business this year. Write at once for the agency.

**INDIANA BICYCLE CO.**  
INDIANAPOLIS, IND.

We are ready to talk about  
**ELECTRIC MOTOR CARRIAGES**  
in a limited way. More next week.

# THE PASTIME AND SPORT

## DATES SET FOR BIG MEETS

**International Meet Convened in Montreal August 7—League Meet Opens the Week Following.**

Last fall when the International Cyclists' Association awarded Canada the World's meet for 1899, a strong committee was organized in Montreal which immediately set to work to devise means of defraying the expenses of promoting the meet, but the refusal of Canadian manufacturers to take part in the cycle show seemed to have smothered their enthusiasm and very little was done during the past few months.

But hustling President Porter, of the Boston Meet Committee, visited Montreal last week by appointment to meet President T. A. Beament and the local committee of the C. W. A. for the purpose of deciding on the date for the international meet, and after a very harmonious conference it was definitely decided to hold the big meet during the week beginning August 7, and the L. A. W. meet at Boston the following week.

### Outlaws to Be Barred.

The fixture of dates has given fresh impetus to Canadian interest, and the Montreal and Boston committees will work together from now on.

The riders under suspension by the L. A. W. will either have to make their standing good with the L. A. W. or refrain from participating in any Canadian race meets.

Many projects are being considered in connection with the holding of the League meet in Boston, August 14 to 19. The officers and members of the Boston '99 Meet Club have, for a number of weeks been working hard on the preliminaries of the great meet, with the determination of making it second to none ever held by the American wheelmen. During the month of August representative racing men of Great Britain, France, and, in fact, all European countries, will be here to compete in the international contests to be held at Montreal.

### Special Circuit for Foreigners.

The authorities of Montreal and Boston have practically agreed upon the establishment of a circuit of races in which the foreign racing men can compete for good prizes previous to the final contests at Montreal and Boston. A European steamship line, having terminals at both Boston and Montreal, has agreed to bring the foreign racing men to this country at reduced prices. The object is to bring the men to this country at least a month previous to the holding of the meets to give them an opportunity to learn the ways of the American racing men in competition, as well as give them an opportunity of becoming acclimated. Were it not for this special circuit, the men would have to leave their native countries some time before the holding of the meets, in order to become acclimated and waste much unprofitable time in training.

This will certainly have a tendency to attract the foreigners, and there is every reason to believe that this year America will see more foreign racing men of ability than she has since the early '80's.

### Opening of Texas Circuit.

Sunday, March 5, the first race meet was run on the new eight-lap track built at Houston, Tex., by Jack Prince, who

intends to run a circuit of similar meets in the south during the spring. The races at Houston were well attended. Several amateur events competed by local riders and two open professional races were run. The mile open professional was won by Bob Miller in 1:53, with Walthour second. Bert Repine ran first in the three-quarter-mile professional. Arthur Stone was second and Walthour third.

### N. C. A. Activity in New England.

Springfield, Mass., March 13.—Henry E. Ducker, manager of the Charles River park, Boston, and A. G. Batchelder, chairman of the board of control of the National Cycling Association, held a conference in this city tonight which is said to be preliminary to Ducker, his followers and the Charles River track coming into the N. C. A. camp, bag and baggage. Batchelder has also approached the Springfield Bicycle Club, which is under L. A. W. suspension, with a proposition to run a tournament under N. C. A. auspices. R. F. Kelrey, a former L. A. W. handicapper, is working in the interests of the N. C. A. at Hartford. The present outlook, therefore, is that about all the racing of consequence in New England this season will be under N. C. A. control.

### Urging Anti Six-Day Law.

The Collins bill to prohibit the running of six-day races in New York state is receiving the hearty support of the state division L. A. W., which is urging citizens in all parts of the state, through the agency of the daily press, to write letters to their assemblymen and senators asking them to aid the passage of the measure, which is said to be approved by Governor Roosevelt. The prohibitory clause in the bill is as follows:

In a bicycle race or other contest of skill, speed, or endurance, wherein one or more persons shall be a contestant or contestants, it shall be unlawful for any contestant, to continue in such race or contest for a longer time than twelve hours during any twenty-four hours. The proprietor, occupant or lessee of the place where such race or contest takes place, consenting to, allowing or permitting any violation of the foregoing provisions of this section is guilty of a misdemeanor. The manager or superintendent of such a race or contest consenting to, permitting or allowing any violation of the provisions of the first sentence of this section is guilty of a misdemeanor.

This act shall take effect immediately.

### May Abandon Chicago Race.

Trainer John West returned to Chicago from San Francisco in advance of the racing men to secure a suitable building as near the center of the Windy City as possible for the running of a six-day race next month. The Tattersall building is engaged for April and May for other purposes and it seems probable that the plan may have to be abandoned.

### Ziegler's Return to the Track.

San Jose, Cal., March 13.—The bicycle races yesterday afternoon were largely attended, but a gale interfered with the riders. Otto Ziegler formally returned to track racing, doing the half-mile exhibition behind Fournier's infernal machine in :49 3-5, with only three days' actual training. McFarland rode a paced mile in 1:35.

Munich, the capital of Bavaria, has 35,000 wheelmen and sixty clubs, but the clubs have few members.

## A. N. A. RACE MEETS CONCLUDED

**Walne Wins Scratch Event at Electric Light Meet—Carpenter Captures Australian Cup.**

Sydney, Feb. 13.—The Australian Natives' Association meet was continued on January 28 and concluded February 4. The day attendances were only fair, owing to the uninteresting programs each day, but the public turned up in large numbers to witness the racing in the evening by electric light. Walne again demonstrated his superiority by winning the scratch race. The much talked of team race was a "frost" and disgusted the public. The Australian Cup race, run in fifteen heats, was won in great style by Carpenter on an American machine. Summaries of the races:

One-and-one-half mile Australian Cup handicap; final heat—G. Carpenter, 150 yards, first; G. Bishop, 175 yards, second; J. Robertson, 135 yards, third. Time, 3:14 3-5.

Two-mile team handicap race—Barker, Denning and Tame, 60 yards, first; R. W. Lewis, Auger and P. Beauchamp, 80 yards, second; Murray, Morgan, and Webster, 90 yards, third. Time, 4:57 2-5.

One-mile scratch—R. H. Walne, first; R. W. Lewis, second; F. Beauchamp, third. Time, 2:29 2-5.

Three-mile team race—Morgan, Gordon, and Webster, 100 yards, first; Lewis, F. Beauchamp, and P. Beauchamp, 40 yards, second; Relph, Jackson, and J. Carpenter, 65 yards, third. Time, 6:45.

### Australia's Major Taylor.

Australia can boast of a good colored rider as well as America. S. E. Gordon, a dusky crack, is rapidly coming to the front and has won two big handicaps off short marks as well as other events this season in Victoria. He is a splendid sprinter and gives promise of developing into a champion. Unlike Major Taylor, who is not given a fair deal by American riders, Gordon is not interfered with in any way by other riders while competing in a race. He is also popular with the public. If he takes proper care of himself he has a great future before him as a racing cyclist. Among his wins are the L. V. W. Cup \$500 race and the Federation \$335 Handicap.

### The N. C. U. Badly Duped.

Recently an Australian supposed amateur visited England—by name Percy E. Marsden. While in England he lowered a number of world's and British amateur records, and was much boomed by the English press. He also competed at several race meets in amateur events. Marsden took Johnny Bull in very badly. Before he left Australia he was disqualified for six months for getting the Melbourne to Sydney record "in a train," and while under this disqualification he went to Tasmania and competed for cash. On his return to Sydney Marsden was disqualified for life.

### Much Crooked Riding Prevails.

A great deal of "crooked" riding is now indulged in by the Australian cracks while racing in Victoria, and few races are won on the merits of the victor. Of course the betting evil is to blame for this. Walne, Beauchamp, Jackson and Barker, four of the best riders in Australia, arrange who is to win, and this man is backed and of course a considerable sum of money is won from the bookmakers. In order to get their man home, a lot of elbowing and bumping is also indulged in by these riders. The Victorian League officials are only waiting for a

chance to suspend them for a term, but they are so clever that the chance will probably not come.

#### Washington Tax Bill Goes Over.

Washington, March 13.—Wheelmen of the national capital are rejoicing over the fact that Congress failed to enact the law imposing an annual tax on bicycles in the District of Columbia as first proposed by the chief of police, and then drafted into a bill by the District commissioners. The wheelmen vigorously opposed the enactment of legislation to tax bicycles while other vehicles remained exempt, but the matter would have been taken up and the bill very likely passed had it not been that appropriation bills and other matters of national importance commanded the attention of Congress to the end of the session. It is the general belief that the bicycle tax measure will be presented early in the next session. As the matter now stands the proposed law will not be passed unless the board of commissioners recommend it. One of the commissioners is in favor of such a law, another is bitterly opposed to it, while the third member of the board is neutral. If he can be induced to join the opposition, thus making a majority, the chances of the tax measure becoming a law will be decidedly slim.

#### Gerlach Going East Soon.

New York, March 13.—George E. Stackhouse, former secretary of the New York baseball club, was appointed a member of the national racing board of the League of American Wheelmen this afternoon by President Keenan. The appointment was announced after a meeting of the executive committee of the League. President Keenan said tonight that Fred Gerlach, the new racing board chairman, will leave Chicago for New York in a few days and will make his office either in New York or Philadelphia. During his absence from Chicago racing affairs in the west will be looked after by E. N. Hines of Detroit, who will be appointed official representative of the board.

#### League Committee Appointments.

President Keenan of the L. A. W. last Friday announced the reappointment of Otto Dorner of Milwaukee, Wis., as chairman of the committee on highway improvement. Following is the balance of the committee: H. B. Worrell, Philadelphia; A. B. Choate, Minneapolis; Dixie Hines, New York; G. Richmond Parsons, Providence; D. B. Luten, Lafayette, Ind.; Clarence W. Small, Portland, Me. The appointment of F. R. Van Valkenburg chief consul of Wisconsin, and Herbert W. Knight of Newark, N. J., completes the committee on rights and privileges. The committee on rules and regulations is entirely from the west, and consists of D. J. O'Brien of Omaha, Douglas W. Robert of St. Louis and Charles W. Lloyd of Detroit.

#### Chicago to Refund Wheel Tax.

The first act of Chicago's new comptroller after being confirmed in his new office in the council was to notify the cyclists of the city and the owners of vehicles who paid licenses to the city two years ago under the wheel-tax ordinance, that the amounts thus paid by them would be refunded upon presentation of their license certificates and tags at the city hall. The tax on bicycles for the first season was 75 cents and on other vehicles from \$1 up. The law was declared unconstitutional.

#### Philadelphia A. C. C. Shows Life.

At the annual meeting of the A. C. C. of Philadelphia last Friday night the following officers were elected to serve dur-

ing the ensuing year: Thomas Hare, Century Wheelmen, president; Madison Rush, Centaur Wheelmen, vice-president; John L. Carson, Pennsylvania Bicycle Club, treasurer; Joseph Estoclet, Quaker City Wheelmen, secretary.

Through the efforts of the A. C. C. committees the tolls on the old Lancaster pike have been reduced to one cent at each gate, which means a saving of 40 per cent. to local cyclists. A balance of \$1,776.49, with no liabilities, was reported by the treasurer. On motion it was decided to hold a fall race meet on the L. A. W. National circuit.

#### Cycle Path Activity in Ohio.

The Montgomery County Cycle Path Association of Dayton, O., has been organized for the purpose of constructing a bicycle path from Dayton to Miamisburg and eventually to connect with the proposed path between Cincinnati and Hamilton, for which purpose the West End Cinder Path Association of Cincinnati was some time ago organized. It is the dream of wheelmen of that section of Ohio to connect Cincinnati, Hamilton and Dayton by cinder cycle ways.

#### Mears to Go to Montreal.

President Keenan of the L. A. W. has appointed Chas. W. Mears of Cleveland to act as the League's representative to the annual meeting of the International Cyclists' Association to be held next August in Montreal.

#### NEWS IN BRIEF.

A \$10,000 track is to be built at Bideford, Devonshire, England, this year.

A \$16,000 cement track is being erected at Frankfort by a German bicycle firm.

One of the first events of the coming racing season in England will be a match between human and mechanical pacemaking.

Palmer, the English stayer, announces that he will go for all records from 50 to 100 miles and 50 to 100 kilometers, paced by motorcycle, this season.

Palmer, Chinn, Gascoyne and Green, with the possible addition of Platt-Betts, will be retained as a team by one of the prominent English tire firms this season.

Tom Linton has signed a new contract to race in America, but will not leave Paris until he is in perfect condition and has won a few good races or matches.

H. B. Plant, who built the Belleaire bicycle track, has a New York agent looking up track architects for the purpose of getting estimates for a cement track to be built at Havana.

There were only ninety-nine arrests in New York city last year of cyclists for riding faster than the law allows, while the previous year there were 1,127 arrests for that offense.

Few big race meets were given in Italy last year, notwithstanding the country has very good tracks. The Italian riders have plenty of places in which to train, but they lack a sufficient number of pacing machines.

The Melbourne Bicycle Club which annually promotes the Austral wheel race in Australia is reported to have \$25,000 in the treasury. The net profits of the last meet, which was held in December, amounted to \$7,500.

The Bordeaux-Paris road race is expected to be unusually interesting this year because Huret, Cordang, Rivierre and Walters have each declared their intention to win the event, and the rivalry between them is well known to be intense.

Platt-Betts, the English record breaker who was seriously injured by a collision with his pacemaking team which fell on the track in a record trial last year, says he will not follow pace any more, but will enter unpaced sprint contests.

Jimmy Michael complains that the expense of pace making for middle-distance competition and record breaking is so heavy that there is but little profit for the rider, even though he wins a number of large purses. Michael's plea shows the importance of developing motor cycle pacing for the purpose

of reducing expenses in large match races and record trials. It has been estimated that the cost of motor pacing properly carried out will be about one-fifth of that of human pacemaking.

The government of motor vehicle racing will be looked after by the English N. C. U. A clause reading, "Any cycle wholly or partially driven by any other power than that of the rider" was added to the existing description of bicycles.

The legislation and reception committee of the Toronto city council has appropriated \$300 for the purpose of giving a luncheon to the delegates to the approaching annual Good Friday convention of the Canadian Wheelmen's Association in that city.

C. W. Miller, who is now in Chicago, will do no competition riding until he goes to Paris to enter the 50-hour race to be run there next May. He hopes that after a good rest he will be in shape to come out of the race winner as he did in last year's event.

The chief of police of the department of the Seine, in which is included Paris, has notified the cycling clubs of the department that because of the frequency of accidents at the municipal track at Vincennes it has been decided to have a doctor in permanent attendance at the track during race meets.

Tom Eck has issued a challenge on behalf of John S. Johnson to race Angus McLeod, the Canadian bicycle champion, a match race, one mile, best two in three heats. The heats must be ridden inside of 1:50. The race is to be held in June for the largest purse offered in Canada and \$500 a side. McLeod said he would accept the challenge.

Permission has been granted to the South Side C. C. of Chicago by the South Park commissioners to hold its annual road race to Pullman on July 4. Owing to the opposition that has arisen to the running of road races on the boulevards of the city, some doubt was entertained as to the possibility of running the time-honored event over the historical course this year.

Harry Elkes is reported as saying that when the expense of pacemaking is taken out there is not much profit left in middle distance riding even though the rider be successful throughout a season. He further states that unless he can make some very satisfactory business arrangements beforehand for next season he will return to sprint racing and may go to Europe.

Harry Gibson has arranged match races for May with John S. Johnson, Floyd McFarland and perhaps with Elkes. All three contests will be decided on the Chester Park track, Cincinnati, the first, with Johnson, on May 30. Gibson will enter strict training early in May at Chester Park, where a number of the prominent men intend to prepare for the season.

The racing season of 1899 will be opened in Paris on March 26 by a meet at the Prince track. The manager announces that all short distance races will be run with a single pacemaker, to start a short distance ahead of the tape, after the American method. Paced races and matches will be numerous, but human pacing will be rarely seen. Whether petroleum or electric machines will be used will be decided after the first one or two meets. Motorcycle races will be a prominent feature of the season.

A contingent of six-day men have announced that they will stay in San Francisco until they receive a better reward for their services in the recent six-day race run in the Mechanics' Pavilion, claiming that money is still due them from Manager J. C. Kennedy. The riders who paced the Elkes-McFarland match are also indignant, their grounds for complaint being that though they were promised \$15 each for pacing, they received but \$5. One of them stated that had not Brady been called to New York on account of the death of his son, all of the accounts would have been squared. Another bill that Kennedy has failed to liquidate is that of the handicapper of the California Associated Cycling Clubs, which organization is very indignant.

Fournier, the Frenchman, now on the Pacific coast with his famous motor tricycle, was for years one of the best racing men not only of France, but of all Europe, and now wears upon his watch chain a heavy gold medal denoting the championship of France. Fournier has made a fortune in bicycle racing and is now a partner in a French firm representing American makers of bicycles in Paris. He has two petroleum motorcycles here with him which he is trying to introduce in the United States. Seated on his buzzing cyclone, the Frenchman scorches around the tracks without the aid of pedals, while his long brown locks stick straight out behind. When Henri trots out his demon motor tricycle and takes the inclined curves with one wheel in the air he's a terror.

## RETAIL MISCELLANY

## General Information Concerning Cycle Agents and Repairmen Throughout the Country

**Arizona.**

Dorris Brothers, of Phoenix, have dissolved. They handle furniture and bicycles.

**Arkansas.**

W. M. Graham succeeds Graham & Orr in the hardware and bicycle business at Clarendon.

J. C. Barlow has sold out his hardware business in Helena. He carried bicycles as a side line.

**California.**

The San Diego Cycle & Arms Co. has fitted up attractive salesrooms at the corner of Fourth and E streets. The company consists of F. W. Garrettson, George G. Garrettson, D. F. Garrettson, J. S. Ackerman and Frank Ecker, well-known business men. A full line of bicycles will be carried.

Bridges, Greever & Co., of Azusa, have been succeeded by H. S. Rodgers & Co. in the hardware and bicycle business.

**Canada.**

Gordon Duncan has been appointed agent in Stouffville, Ont., for the Racycle.

**Colorado.**

Bert Gartin is busy getting his bicycle shop in shape for business. He will be better prepared than ever to give his attention to repairing. He will handle Rambler and other well-known bicycles.

**Connecticut.**

The enterprising firm of Brunner & Co., 198 Pearl street, Hartford, has prepared for a larger business than ever this year. The store has been refitted throughout with handsomely tinted paper, new carpets, rugs, furniture, etc. They handle both chain and chainless models.

Harry E. Fay, the well-known bicycle rider, has opened up a bicycle repairing department in William Carr's harness shop in the Park building, Hartford.

The Mystic Bicycle Agency has opened in the Buckley block, Mystic, with a line of bicycles, including the Keating, Iver Johnson, Columbia, Monarch, Remington, Wolff, American and White. A full line of sundries is carried, and the repair shop is fitted with the latest and most modern means of repairing wheels. Souvenir spoons, china and flowers were presented to all the ladies who attended the opening, and to the gentlemen cigars were given. Nelson J. Baker is the manager of the agency.

**Delaware.**

V. V. Harrison, who was for a number of years connected with McLearn & Kendall, has taken the agency for Remington bicycles and other well known machines and has opened a store and fully equipped repair shop at 215 West Seventh street, Wilmington.

**District of Columbia.**

Doremus & Just, Washington, have dissolved partnership. They were repairers of bicycles.

**Illinois.**

The Hazard-Doubet company, of Peoria, has been granted incorporation papers. The capital stock is \$15,000. The incorporators are Samuel B. Hazard, Sylvester Doubet and Charles A. Myers. This firm will conduct an implement and bicycle business. Much of the stock is already in and more is arriving.

F. Sierp, of Aurora, has removed his repair shop to 7 North River street.

C. E. Crandall & Co. will on March 25 open a first-class bicycle livery and repair store in Dwight. They will have the best machines for sale and rent and will do all kinds of repairing on short notice.

McCarty Bros., of Mason City, have sold their stock of bicycle repair tools, etc., to B. C. Rickard. Mr. Rickard will have his bicycle repair shop in his furniture store and keep a competent man to do the work. Mr. Rickard does not intend to sell bicycles, but will keep a full stock of supplies and sundries.

J. E. Keener, who says he is a real estate man, was arrested in Chicago and charged with obtaining goods by false pretenses. Henry R. Pollow, a bicycle merchant at 238 Lake street, says that Keener, in company with another man, bought \$500 worth of bicycle tires, giving in exchange a check signed "R. E. Dent." Dent is a prominent

merchant in Des Moines, Ia. At the bank on which the check was drawn the signature was declared a forgery.

F. E. Schroeder succeeds Schroeder Bros. in the hardware and bicycle business at Warrensburg.

H. F. Olmstead & Co., Evanston, who handle bicycles as a side line, contemplate moving to Marinette, Wis.

David Fife succeeds Bussard & Fife in the bicycle and hardware business at Palestine.

Mr. Wortham has sold his interest in the firm of Wortham & Cox, who handle hardware, bicycles, etc., at Tuscola.

Arthur J. North is ready for business at his new store, 316 East State street, Rockford. Last season Mr. North started to sell bicycles at a cigar store and, despite the fact that he was in the field late, the excellence of his line gave him a fine business. He will sell Hurd, Rockford, Syrian and Halladay models.

**Indiana.**

The Meyer Cycle Co., of Fort Wayne, has branched out and recently removed from last year's quarters to 39 West Berry street. The Viking and Orient bicycles are their leaders this year. Bicycle sundries can be found at this establishment in more general variety than at any other supply house in the city. A guarantee of perfect workmanship will be given with every job turned out from the repair department.

Jack Banta, who has been engaged as salesman for the National Bicycle Mfg. Co., has finished his trip and returned to Terre Haute, where he will continue his North Sixth street bicycle agency.

L. S. Wheeler has opened up a bicycle repair business at 359 South Calhoun street, Fort Wayne.

Clark C. Tuttle, formerly salesman for the Hay & Willits Mfg. Co., of Indianapolis, has taken charge of the retail department of the H. T. Hearsey Cycle Co., 216-218 North Pennsylvania street, the oldest and largest bicycle house in that city.

A new bicycle shop will be opened at 23 North Seventh street, Terre Haute, under the management of Messrs. Jenny and Singhurst, of Chicago. They will manufacture cycles to order and will also rent and repair bicycles.

Harvey & Little, of Waynetown, have placed a bicycle repair shop in their hardware store.

Tom Hay, the well-known wheelman of Indianapolis, has opened a new bicycle store at 39 Monument place.

A large crowd was in attendance at the opening of Shirley Carrell's bicycle store in Hartford City last week. The Dayton quad attracted much attention, as well as the Columbia chainless. Mr. Carrell's store would do credit to a city several times larger than Hartford City.

Will Lamberson, of Greenfield, will shortly open up a bicycle store in the rear of his drug store, and will keep a good supply of machines.

**Indian Territory.**

Jas. K. Mulock has taken a partner in his hardware and bicycle business, and the firm name is now Smith & Mulock.

**Iowa.**

N. S. and M. H. Harter have gone into the bicycle business in the McCarthy building, Sac City, where they will sell, rent or repair.

The friends of John R. Vosburgh, the popular bicycle dealer, are welcoming his arrival home from Syracuse, where he has been passing the winter gaining additional knowledge of bicycle construction in one of the large factories in that city. Mr. Vosburgh will again conduct a bicycle business in that city during the coming season, but has not yet decided upon a store location.

Buser & Son, Cedar Rapids, have opened a store for the sale of bicycles.

P. Williams & Son have succeeded Blakestad Brothers in the hardware and bicycle business at Bode.

H. L. Traub's bicycle shop at Clinton has undergone many improvements and there is a competent workman in charge of the repair department.

The Cedar Rapids Cyclery, Des Moines, was incorporated last week by articles filed with the secretary of state by Harry K. Smith. The capital is \$10,000.

**Kentucky.**

A bicycle show was held in Owensboro for

three days. The show was under the management of W. A. Guenther & Sons, who handle several high-grade machines.

**Louisiana.**

The Abbott Cycle Co., Limited, of New Orleans, has secured an admirable space at the state fair and is the only bicycle establishment which has been allotted a position on the ground floor of the main building. R. W. Abbott, the head of the company, purposes making a handsome display of bicycles and sundries. The firm is engaged in a modest way in the manufacture of bicycles and is one of the few such concerns in New Orleans.

**Massachusetts.**

John J. Guthrie, Worcester, has hired the news room in J. S. Livermore's hall, which he is fitting up as a bicycle salesroom.

Horace Partridge & Co., Boston, makers of athletic goods, anticipate moving from their present location to the corner of Franklin and Arch streets, where they expect to have an opening about the middle of March. The firm will give its undivided attention to the sale of bicycles, sundries and athletic goods.

J. Leonard Tattersall has withdrawn from the firm of Freeman & Tattersall, the Broadway bicycle dealers and repairers of Lawrence, Mass. The business will be conducted by Mr. Freeman, as it was prior to his taking a partner.

F. E. Wing will open his bicycle store at 74 Washington street, Salem. Mr. Wing has had ten years' experience in the bicycle business. Last season he managed the bicycle department of Dame Stoddard & Kendall, of Boston. He will handle Peerless, Barnes, chain and chainless, Sager roller gear chainless, Duquesne and other makes.

Fred Harper will open a bicycle store in Salem.

H. O. Curtis has bought out the bicycle business of James B. Barnes, at Gardner. Mr. Barnes has done a good business for three years. The agency bought out is for the White bicycle only, but Mr. Curtis expects to secure other agencies.

**Michigan.**

Burnett Stevenson and Will Hendershott have opened a bicycle repairing store under Deery's art store, Port Huron.

Aleck Ericson has reopened his bicycle livery and repair shop in Marquette.

Mr. Holmes, of the Holmes Cycle Co., Lansing, states that their wholesale trade in Michigan and Indiana has been over four times greater so far this year than for the same period in 1898. At their formal spring opening they will display the New Fox and Climax models manufactured by the Holmes Co. and also a complete stock of Dayton and Trintly bicycles.

A bicycle opening was held at Bements retail store, Lansing. Men from the Butler Wheel Co., of Butler, Ind., and the White Sewing Machine Co., of Cleveland, O., were on hand to introduce the machines made by their respective companies.

Bert Smith is traveling in the Thumb introducing new machines before opening his bicycle store in Caro.

B. A. Isbell is reopening his bicycle store in Mount Pleasant. He will deal exclusively in bicycles this season, and has a first class repairer engaged.

Al. Guichard, of Walla Walla, who has opened a bicycle and repair shop in the Besserer building, recently received a lathe of the latest pattern.

Clint C. Allen, the bicycle manufacturer on Columbus avenue, Bay City, has placed an air tank in his shop for the use of customers.

The Huron Cycle & Electrical Co., Port Huron, has reopened its bicycle works in the Sanborn building.

C. H. Bartholomew has removed his repair shop in Tecumseh to the table factory office with Leon Rosacrans on Chicago street, and, with increased facilities, is better prepared than ever to do work in the bicycle repair line.

Gurdon Edgerton, of Holly, has moved his bicycle repairing establishment to a building recently purchased of I. W. Mitchell.

C. E. Lancaster, of Petoskey, has sold his bicycle livery to Geo. E. Mills, and will devote all his time to the bicycle repair shop.

J. Sullivan has sold out his interest of the firm of Chandler & Sullivan, Dundee.

Frank H. Wixson succeeds Gibbs Wixson in the bicycle and hardware business at Coleman.

Brown's Detroit Bicycle Exchange succeeds the Detroit Bicycle Exchange in business.

**Minnesota.**

The agency for Victory bicycles, manufactured by Hawkins & Co., has been placed in the hands of Frank Hunt, of Crookston.

C. A. Zabel, of New Paynesville, has gone out of business. Hardware and bicycles were the goods handled.

**Mississippi.**

J. W. Hooze of Jackson, Miss., has consolidated with the Jackson Cycle Co., of the

# SHELBY STEEL TUBE CO.

...MAKERS OF...

## SHELBY Seamless Tube



....ALSO....

FORK SIDES, D REAR FORKS  
AND STAYS, BENT  
TUBES AND CONTINUOUS FORKS, AND  
CROWNS, BOTH FRONT AND REAR.

WRITE FOR CATALOGUE

# SHELBY STEEL TUBE CO.

GENERAL SALES OFFICES:

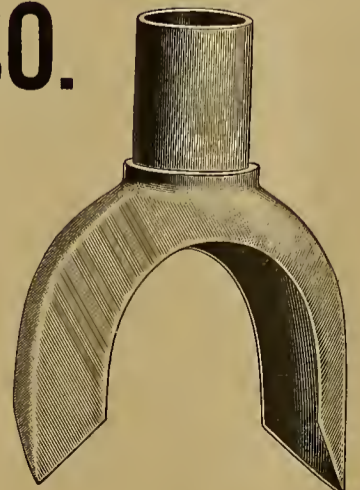
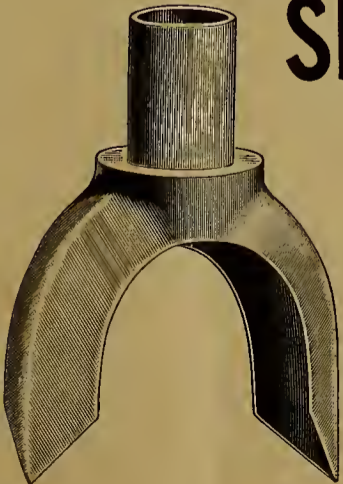
CLEVELAND, OHIO, U. S. A.

BRANCH OFFICES:

No. 144 Chambers Street,  
NEW YORK, N. Y.

No. 135 Lake Street,  
CHICAGO, ILL.

No. 29 Constitution Hill,  
BIRMINGHAM, ENG.



same place. A complete stock of everything requisite to a first class and strictly up-to-date bicycle establishment will be kept on hand.

#### Missouri.

Bradley, Alderson & Co. succeeded the firm of Bradley, Wheeler Co., Kansas City.

Louis Riggs succeeds the firm of Louis Riggs & Co., dealers in hardware and bicycles at Kennett.

James E. Hart will succeed the firm of Hart & Sailor in the hardware and bicycle business at Montgomery City.

#### Montana.

Rodgers & Co. succeed Sam Crockett in the bicycle business at Bozeman.

#### Nebraska.

Jeff. Van Debergh & Son have sold out their bicycle and hardware business at Talmage.

#### New Hampshire.

The Laconia Hardware Co., Laconia, has burned out. They handled bicycles as a side line.

#### New York.

Jacob Seigel is talking very strongly of putting up a bicycle repair shop on Main street, Hornellsville.

H. F. Flint, of Clifton Springs, has concluded to open bicycle stores in both Phelps and Shortsville as well as Clifton Springs.

Peter W. Sitterly will soon go into the bicycle and repairing business in Ponda.

Jno. F. Shaughnessy will succeed the firm of Shaughnessy Brothers in the hardware and bicycle business at Utica.

#### New Jersey.

Chas. S. Taylor, of New Monmouth, has started in the bicycle business.

The firm name of James Sweeten & Son, Pedrickstown, who carry bicycles as a side line, has been changed to James Sweeten's Sons.

#### North Dakota.

James Coulter, of Grand Forks, will use a part of the Carter confectionery store for a bicycle shop.

The Fargo Typewriter Exchange succeeds R. E. Young Co. in the bicycle sundry business at Fargo.

#### Ohio.

Clyde McKee and W. A. Thomas have leased a portion of the old rink on East Market street, Warren, and will engage in the bicycle business.

F. E. Low, Steubenville, has reopened his bicycle repair shop.

Will Ludwig, of Bellaire, has removed his bicycle repair shop from opposite the park to the Gorby building.

J. B. Clark & Co. is the name of a new firm which will handle bicycles, bicycle sundries and conduct a repair shop in Jefferson.

J. M. Lakin & Co. succeed Jas. Martin & Co. at Manchester. The goods handled are hardware and bicycles.

Charles H. Krug, of Dayton, has brought suit against Edward Boderwisch, in which he asks the court to dissolve the partnership of the bicycle firm of Boderwisch & Krug and makes a motion to have a receiver appointed to take possession of the property and collect outstanding debts. He claims that they have been losing money and that he is unable to agree with his partner. Plaintiff places the assets at \$800 and liabilities at \$225.

#### Pennsylvania.

The Jersey Shore Cycle Co., of which Mr. John C. Irvin was manager, has changed hands. It will hereafter be managed by B. F. Nurnett and known as the Jersey Shore Cycle Co., Limited.

William Harris will open a bicycle store and repair shop at Montoursville.

Snyder & McFall have opened a bicycle store on South Beaver street, York City, for the sale of Columbia and Hartford bicycles. They have also equipped a complete repair shop. Mr. Snyder is a well known and experienced repairman.

The Enterprise Mfg. Co. is the name of a new concern that has gone into the bicycle business at 25 West Seventh street, Erie. The company will build and repair bicycles.

W. A. Stouck has opened up a bicycle store at 219 West Fourth street, Williamsport, where he will handle the Demorest bicycle, a full line of bicycle repairs, etc.

Frank R. Calder, a bicycle dealer of Harrisburg, has gone out of business.

J. Wesley Johnson, of Philadelphia, has gone out of the bicycle business.

#### Rhode Island.

E. R. Darling, of Woonsocket, dealer in bicycles, etc., has installed a new four horse power gas engine made in Garrett, Ind., at

a cost of about one cent an hour when in use. Mr. Darling contemplates lighting his store with electricity, the plant necessary to be run by the gas engine.

#### South Carolina.

C. D. Nesbitt has sold his interest in the firm of Nesbitt, Trowbridge & Co., Piedmont. They carry bicycles as a side line.

#### South Dakota.

W. S. Piggott succeeds Cuppett & Alexander in the jewelry and bicycle business at Hudson.

Schneider Brothers Co. succeeds the firm of L. V. Schneider & Brothers at Salem. They handle bicycles as a side line.

#### Tennessee.

E. A. Banfield and J. W. Clouse, two young men from Toledo, will open a bicycle store in Chattanooga in a few days. Both are experienced in the bicycle business.

#### Texas.

The West Texas Supply Co., Seymour, succeeds the firm of Finn, Fowlkrs & Co. They sell hardware and bicycles.

#### Wisconsin.

Claude Shepard will open a bicycle store in Rhinelander the coming summer.

Frank Trist has opened a bicycle and repair shop at 1507 West Sixth street, Racine. He will keep a full line of supplies and sundries.

The Kolsch Hdw. Co., Menasha, has added bicycle enameling to its bicycle repair shop. George DeWolf has charge of the work.

Earl Van Vliet will open a bicycle repair shop at 917 State street, Racine. He will carry a full line of bicycles and supplies and also have machines for rent.

Emery Reed has opened a bicycle repair shop in Elkhorn.

A. H. Johnson will open a bicycle livery in Rhinelander. He will handle Stearns bicycles.

The A. J. Lucla Bicycle Co. will soon open their bicycle emporium and repair shop in the Flatley building, Adams street, Green Bay.

Mueller & Mann are making a number of improvements in their store on Fine street, Green Bay. In the future the second floor will be used as a store room for bicycles.

L. W. King, of La Crosse, has taken the retail bicycle agency of the J. S. Medary Saddlery Co.

### BORROWING TO CLAIM DISCOUNTS

Important Source of Profit Frequently Neglected—  
Advantages of Borrowing from Banks.

It is frequently discovered that a merchant, while progressive in most matters, still fails to perceive the profits to be made from discounts. Some time ago a customer of a certain house was found to be very tardy in his payments. Investigation of his statements made to the commercial agencies showed that he was in good financial condition, having a surplus of some \$20,000 over all indebtedness. He carried a stock of about \$10,000. His annual sales were about \$30,000, which would indicate that he turned his stock three times a year. In other words, with a capital in use of only \$10,000 he was doing a business three times that volume in amount. This is an important fact to bear in mind. It was found further, upon investigation, that this merchant, in common with many others, had gained the idea that he could place his money in outside investments to better advantage than would follow from using it in his business.

In some lines of goods which he carried he received a discount of 6 percent on bills paid in ten days. In other lines the discounts varied, grading down to 2 percent for the minimum. The average discount allowed for prompt settlement was 4 percent. It was soon made clear that, inasmuch as the capital employed, say \$10,000, was used for purchases three times a year, and each time by claiming discounts was entitled to 4 percent, it was possible to make a profit of 12 percent per annum upon the investment through this means alone. The merchant at once perceived that a yearly income of \$1,200 upon a capital of \$10,000 is a much better return than he could expect from any out-

side operations that are absolutely safe. Such a return for prompt payments will go far toward making any business an unqualified success.

The question arises in many cases how to take advantage of discounts when ready cash is not at hand. This, however, is a problem of no very great difficulty, provided the business is in good condition and shows by the relation of live assets to liabilities that the merchant is entirely solvent and in possession of a reasonable surplus. Money is plentiful in the banks, and bankers are always ready to lend a responsible borrower. The rate of discount at which money can be secured from the bank is rarely above 6 percent per annum. Accordingly, the merchant who occasionally borrows from his bank for the purpose of claiming discounts which net him 12 percent per annum is enabled to make a clear profit of 6 percent upon the transactions. Or where he borrows for all his payments, with a business of the size mentioned above, there is still a gain of \$600 in discounts.

These facts clearly show that every merchant who does not arrange to discount his purchases is neglecting a very important source of profit.

### Advertising Cheap Machines.

Did you ever remark how much easier it is to write advertisements intended to help the sale of cheap machines than it is to prepare announcements which will arrest the attention of those who may be expected to have a lurking fondness for high priced goods? Just notice how smoothly the following advertisements, prepared by a Harrisburg dealer, read, how forceful they are in expression, how adroitly they are worded:

## Bicycle Talks

FRIDAY, March 3rd, 1899.

Good Bicycles at \$16.50 are not plenty; never will be any where but here. \$25 to \$75 will be the range of prices for wheels this year—nobody thinks of paying less or more than these sums.

Here's where I get my fine work in; right at the very beginning of the season, I am selling good, all 'round wheels—wheels and tires guaranteed; and both equally as good as to be had in any \$35 wheel on the market—500 of them for \$16.50 each!

\$5 more; or for \$21.50 I give you a wheel that is better—every way better than most \$50 wheels. Come and look at the wheels, take them apart—see for yourself. I want you to do that before you buy them.

Salesroom—4 S. Market Square.

John N. McCulloch.

## Bicycle Talks

SATURDAY, March 4th, 1899.

Paying a big price for a wheel is like riding down town in a cab when you could go in a car. Looks more elegant, to be sure—costs more, too.

All right if you can afford it. For all practical purposes the bicycles I am selling for \$16.50 are as good as any.

They'll ride as easy and carry you as far as the average \$50 wheel—not so fancy, perhaps, but just as much wear.

I guarantee every part of these wheels and the tires and will make good any thing that proves defective in material or making. 500 wheels; men's and women's models at \$16.50 each. See them. Salesroom, 4 S. Market Square.

John N. McCulloch.

**M**ARY had a little lamb  
 With white and fuzzy wool,  
 He wore a cow-bell 'round his neck  
 And tagged the girl to school.

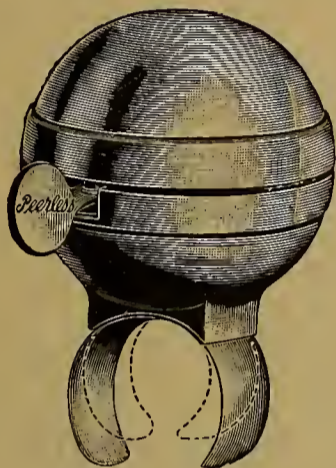
The jangling of that awful bell  
 Made such unearthly noise,  
 The teacher could not teach her class  
 Of little girls and boys.



Peerless, No. 80

What did that clever schoolma'am do?  
 She bought a PEERLESS bell  
 And hung it 'round the lambkin's neck  
 And strange it is to tell—

But now they love to hear the lamb  
 Come tinkling into school,  
 The bell makes such sweet music,  
 (That schoolma'am was no fool!)



Peerless, No. 50

THE  
 BRISTOL  
 BELL  
 CO.....Bristol, Conn.

# Trouble-less Transfers

What is the use of having a hand-stripe artist in every village, when the best of them who are employed by large manufacturers and only for special work, cannot compete in beauty of design and fineness of execution with our transfer work at one-tenth cost?

We are the centralized Decoration Artists of the Cycle Trade. Our high-paid artists put consummate skill and talent into designing and color distribution. The rest is automatic. The hand striper makes blunders at every turn. He is not automatic.

**Enamellers, Cycle Retail Dealers and Jobbers—Write us for full information, samples, trial designs, directions for use, electros, etc.**

N. B.—Remember stock designs in lots of fifty, especially intended for cycle agents.

## The Meyercord Company, Inc.

American Manufacturers Guaranteed Decalcomania Transfers,

NEW YORK OFFICE:  
 805 St. James Building.

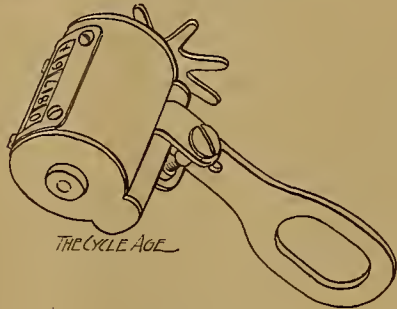
MAIN OFFICE: CHAMBER OF COMMERCE BUILDING, CHICAGO, ILL.

ST. LOUIS OFFICE:  
 610 Fullerton Building.

# INFORMATION FOR BUYERS

## JOCKEY CYCLOMETER AND CYCLE WATCH.

The New England Watch Co., of Waterbury, Conn., claims that a cyclometer which can be reset and changed at will does not keep accurate records and hence in making its Jockey cyclometer it uses a geared mechanism every part of which is locked in position and is only released as it comes into action and cannot be moved except by revolving the wheel. The cyclometer thus cannot be reset and it is practically impossible for the figures to jump or be falsified. The action is direct, there being no springs or eccentrics. No oiling is required. The register continues to 10,000 miles, when the cyclometer instantly returns to zero and repeats. The parts are rust proof and the casing is rain-tight. The cyclometer is made for 26,



28 or 30 inch wheels. The company also makes the Jockey bicycle watch, which has a genuine four-jeweled watch movement with duplex escapement. It fastens to the handle bar by a light, secure holder and is not affected by jars and jolts. It winds and sets from the stem and both can be readily done without removing the watch from the holder. The construction of the holder imparts a spring action to the watch which prevents all rattling.

## SAFE SUNDRIES FOR DEALERS.

Special efforts are being made to acquaint the dealers with the virtue of Cole's Tire Fluid which has been added to G. W. Cole & Co.'s line of bicycle specialties, the other principal compounds of which are the familiar "3 to 1" lubricating oil, R. R. rust remover and nickel polish, and Pacemaker chain lubricant. The tire fluid is a puncture curing compound which is put up in four-ounce collapsible tubes having threaded nozzles which screw directly on to the valve. Thus no pump is required for forcing the fluid into the tire, and a thoroughly clean and agreeable method of injecting the compound without soiling the hands or anything else is furnished. For the purpose of thoroughly and effectively introducing this sundry, the makers, G. W. Cole & Co., 111 Broadway, New York city, are making a special offer elsewhere in this issue to send one full sized sample tube of the tire fluid weighing four ounces to any dealer or repairman upon application accompanied by 10 cents to pay expressage.

Notice has been sent to every jobber of cycles and cycle sundries in the United States by G. W. Cole & Co. of New York city that every jobber cataloguing their tire fluids would be indemnified against loss and protected against suit for infringement of patent on the puncture closing compound. The announcement was called forth because of the action of certain parties, who made it a point, according to Cole & Co., to procure jobbers' catalogues, and if they discovered any other puncture healing compound but their own advertised therein to notify the jobbers that they held the only valid patent and would hold all infringers liable.

Cole & Co. went into the tire fluid business innocently, having no knowledge of any patents, as various compounds had been on the market for years. They are making and selling a tire fluid and state that, having secured the advice of their attorneys, they will defend themselves and their customers against any action brought by others claiming infringement.

## ALL KINDS OF RIMS.

The Fairbanks-Boston Rim Co. of Bradford, Pa., manufactures so extensively that it is impossible to list and describe all of its various styles and sizes of rims. Its line of laminated rims ranges in sizes for tires from 10x1 inch to 38x4 inches, and in this class of rim the company furnishes rims suited to any purpose to which a suspension spoke wheel is adapted.

Its line of single-piece rims does not comprise so great a variety as the laminated, it having been found impossible to produce satisfactory rims for all purposes in the one-piece pattern. Some of the rims furnished by this company have been used for motor vehicles weighing nearly 2,000 pounds and

carrying tires 4 inches in cross section. The company also owns the patents covering, and is now engaged in manufacturing the aluminum lined rims for Continental and Dunlop tires.

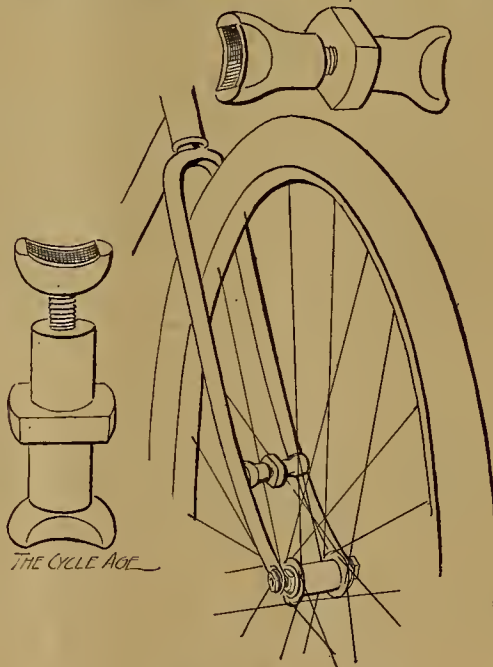
Counting the total number of styles of rims made by this company and multiplying by the various sizes in each style, the various purposes for which the different sizes are designed and the entire list of standard rims which it is equipped to furnish, the aggregate amounts to almost 3,000 specifications. The accompanying cut shows four of the various sizes. Other sizes are figured by the company's expert to withstand the strains to which the rim may be subjected, the weight it is to carry, and the style of tire it is to be fitted to.

## HARTLEY & GRAHAM'S SUNDRY STOCK.

An extensive line of standard cycle sundries and supplies is catalogued by Hartley & Graham, 313 Broadway, N. Y., and though the goods shown constitute one of the largest jobbers' lists in the east the firm has taken care not to catalogue anything which it does not actually have on its shelves. Hence orders placed with Hartley & Graham are sure to be filled quickly. The firm aims to sell only products of standard manufacture, desiring to have its patrons feel that they are buying reliable goods from a responsible house. The following list of firms for which Hartley & Graham are exclusive export and metropolitan distributing agents is ample proof of this: Bridgeport Gun Implement Co., pedals; Wheeler Saddle Co., saddles; Bevin Bros. Manufacturing Co., bells; National Cement & Rubber Manufacturing Co., cements, etc.; Coe Manufacturing Co., toe clips and coasters; Matthews & Willard Manufacturing Co., lamps; Badger Brass Co., lamps; Claus Handle Bar Co., handle bars; J. B. Young, sprocket rims; Whaley-Dwyer Co., stirrup toe clips; New England Cycle Supply Co., shop tools; Bristol Bell Co., bells; P. W. Tillinghast, vulcanizers; Morgan & Wright, tires, and the Morse Chain Co., chains.

## FRONT FORK SPREADER.

Repairmen and riders have had frequent trouble in the past when removing and replacing front wheels on account of the decided inward spring of the fork blades. The A. J. Kapp Sons' Ivory Co., 114 East Fourteenth street, New York city, is marketing a small appliance called an expansion jack which relieves the person handling the machine of the work of pulling apart the fork sides so that the wheel may be readily slipped in or out of place. It comprises a hardwood turn-buckle on the outer end of each bolt section of which is a segmental socket that matches the sectional contour

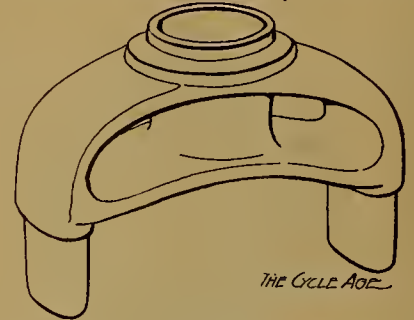


of the fork blade. When it is desired to remove the front wheel the expansion jack is placed between the fork sides about four inches above the hub and the central nut turned until the forks have opened sufficiently to allow the wheel to easily slip from the forks. In replacing the wheel the operation is repeated. The socket faces of the jack ends are covered with felt to prevent the appliance from marring the enamel on the forks. The jack is made in two forms, one being longer than the other and intended for use in wide forks. In the wide pattern the central nut has two axial pro-

jections, to one of which the end socket is revolvably secured and in the other of which a tapped hole is provided, into which screws the threaded extension from the socket on that side. The nut in the narrow pattern is provided with a threaded axial shank on each side, these shanks screwing into the clamping sockets. The jacks are made of box wood and are well finished and strong. Selling at a very reasonable figure, they ought without much difficulty to find their way into the majority of repair shops.

## BRIDGED ARCH CROWN.

The accompanying illustration shows the new forged fork crown made by the Indianapolis Drop Forging Co. of Indianapolis.



The crown combines the strong features of the double plate and arch crowns and is a novelty in front fork crown design. The distance between the two arches of the bridge permits large brazing surface for the forkstem and braces the latter in the same manner as did the once popular flat double plate crown. The company is ready to furnish the crowns either machined or in the rough forgings and will be glad to figure on the special requirements of manufacturers.

## HANDLES ENGLISH STEEL TUBING.

The catalogue of John S. Leng's Son Co., 4 Fletcher street, New York city, is one of the most complete lists of bicycle material, sundries and tools recently issued. Nearly 200 pages are filled with illustrations, brief specifications and prices of standard goods of all description. Complete bicycles are also catalogued, the machines being those which comprise the line of the Snell Cycle Fittings Co. The company acts as American agent for the Weldless Steel Tube Co., of Birmingham, Eng., whose tubing is kept in stock in all sizes. This brand of tubing has been manufactured for twenty-four years and is claimed to be absolutely accurate both in diameter and gauge. Though the line of sundries handled is very broad, including popular articles of many makes, a specialty is being made of the "Arc Light" acetylene gas lamp which the company is jobbing and which is attracting much favor in the east. The lamp is small and has many features which render it a very convenient gas lamp to operate. The workmanship is guaranteed to be of the highest class and the price is reasonable.

## TRUING LINES ON VIM TIRES.

Notwithstanding various rumors to the contrary, the Boston Woven Hose & Rubber Co. of Boston is still making Vim tires under the control of the assignees and trustees, and expects to continue in the business. While the factory is not running twenty-four hours a day, it is running six days a week, as many hours as the law of the state allows. Neither are any members of the company standing on the front steps and shouting to all passersby to come up and get tires for nothing, as the southern dandy gets "ligion." The business is being conducted on business principles with satisfactory results.

A simple but effective innovation in tire construction has been adopted by this concern, which now makes its Vim tires with a truing line on either side of the inner periphery, just about where the edges of the rim will come. These lines make it an easy matter for the person who cements the tire to the rim to get it on straight every time without having it twisted or lop-sided, the lines showing instantly any variation.

## ANOTHER MODEL IN THE DAYTON LINE.

The Davis Sewing Machine Co. of Dayton, O., manufacturers of the Dayton cycles, has added another model to its '99 line, which is fully described in a supplement to its catalogue, recently issued. This supplemental model is built on racing lines and has three-inch drop of the crank hanger. The Dayton two-plate fork crown, handsomely nicked,



is used. While this model is designed for racing purposes, it is adaptable to and guaranteed by the company for general use. The same options in equipment provided for any of the other models are allowed. The new model is designated as Model 22 and the list price is \$60.

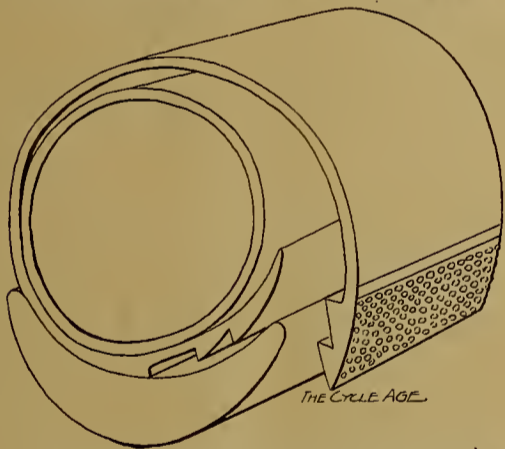
**RIDERS SATISFIED WITH WOOD FRAMES.**

The M. D. Stebbins Mfg. Co. of Springfield, O., states that owners of its Chilion resilient wood frame bicycles constitute a better satisfied class of riders to-day than did its patrons during the seven years in which the company manufactured high grade bicycles with steel frames. It further states that the rigid test of use under all conditions has proven that the joints employed in the Chilion wood frame do not work loose and that the frame bars do not warp nor give trouble in any manner even under outrageous abuse. In designing and constructing Chilion bicycles the company has guarded against falling into that rut common to makers who have something distinctive to introduce, which is to neglect the general construction of the machine in developing the particular distinguishing feature. The Chilion bicycle is made by builders who have had long experience in the manufacture of steel bicycles and the entire machine is designed with that care and erected with that skill which insures high grade product.

The Chilion is offered in two standard patterns, a man's and a woman's, and each has incorporated in it popular ideas in frame lines, etc. The finish has an antique wood effect and the connections are nickel plated. The company's recently issued catalogue tells all about the claimed advantages of the wood frame and the reasons why it was adopted by the makers of Chilion bicycles.

**FEATURES OF RUSH DETACHABLE TIRE.**

The Rush detachable tire made by the Rush Tire Co., of Williamsport, Pa., was given hard tests last year and under varying conditions and on all kinds of rims, by different road riders, and the result showed that even under the most adverse circumstances the tire would not creep on the rim nor loosen in its fastening while being ridden. The molding of the rubber and the making of the fabric is such that the tendency of the rim side under air pressure is to hug the rim as closely as possible. The company is now ready to fill orders in all quantities and a profitable business is expected. Locking upon itself as it does and being designed to fit the standard crescent shape rim, the tire should be greeted favorably by advocates of double tube detachables and especially by those dealers, repairers and manufacturers who would often supply detachable tires if they could do so without changing rims. The ample lapping of the under edges of the tire casing pre-



vents pinching of the inner tube and makes the work of slipping it back into place after a repair a matter of but a second or two. The tire is said to be extremely lively and resilient.

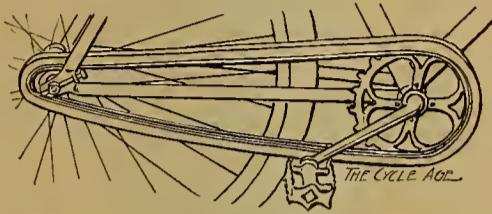
**HALL-SHONE CO.'S SUNDRY LINE.**

The Hall-Shone Co., of Rochester, N. Y., mails its catalogue, the latest edition of which has just been published, only to dealers, agents and repair men, and is accordingly able to publish prices, terms and discounts that are intended to procure and keep trade. By fair and liberal dealing with patrons the company has made a steady growth during the last five years and now occupies fifteen times the amount of space used at the commencement of its business. The firm prides itself on its ability to keep abreast of the market and to buy from manufacturers at low net prices and thus be able to sell correspondingly low. The catalogue is so complete and shows such a large line of material, fittings and sundries that it has been found that it amply takes the place of traveling salesmen. Hence the saving in selling expenses enables the making of prices which in some instances are but little more than those paid to manufacturers by small jobbers. As a convenience to customers a complete net price list accompanies each catalogue and

the trouble of figuring out discounts on various articles is thus avoided. The firm announces that after July 1 its name will be the E. H. Hall Co., Inc.

**THE AMERICAN CYCLE "CHAIN-STALL."**

This device is self-contained and consists of a tube of pure rubber of suitable cross section to conform to the shape of the bicycle chain on four sides, completely covering the same except that a slight opening is left on the inner or working side by which means it passed by the sprocket teeth. This tube is passed over and around the chain, its ends being attached together in an exceedingly quick and simple manner, and travels with the chain continually, di-



viding in passing the sprockets, and has no attachment to any other part of the machine.

To attach or detach the "Chain-Stall" for examination or repair of the chain, it is sprung over the latter as simply as a rubber band is slipped over a package. No tools are used, the hand alone in a simple movement performing the necessary operation in a few seconds.

The device has been called the "chain-stall" by the makers because it is an attachment to the chain pure and simple as distinguished from all gear cases and chain covers which attach to the bicycle frame. It is the acme of simplicity, does not detract from the appearance of the machine, being scarcely noticeable, and weighs but four ounces. It is made by the American Cycle Chain-Stall Co., P. O. box 2525, New York city, which makes the following claims for it: That it makes the machine run easier by protecting the chain; saves wear on chain and sprockets; is simple, neat and handsome; is light, noiseless and absolutely without friction; is a complete protection to trousers or dresses, perfect in action, and costs but a trifle; that it reduces friction, saves power, improves the appearance of the machine, adds no complication, weighs practically nothing, never gets out of repair, and saves strength, temper and money.

**LUTHY "LINE OF BEAUTY" CRANKS.**

The S curved crank is still a distinctive feature of the Luthy bicycle, manufactured by Luthy & Co., of Peoria, Ill. These cranks together with the outside fishmouth nicked joints which have characterized the Luthy for some time have proven so popular and have gained such a reputation for the machine that the makers see no reason for discontinuing them, especially when their mechanical worth has been long since demonstrated to the satisfaction of Luthy riders. While Luthy & Co. do not hire racing men nor in any way stand behind track teams financially, the Luthy racer is by no means a stranger to fast tracks nor to national circuit race meets, for the string of world's records made in America on Luthy bicycles is large and includes both short and middle distance events. At the last national L. A. W. meet held in Indianapolis the Luthy carried off four of the most prominent amateur events. The company has lately issued a small booklet containing illustrations of the two leading Luthy models, lists of track records made and races won on Luthy bicycles and testimonials from satisfied Luthy owners. Besides the \$75 Luthy the company also make the Fairy King and Fairy Queen, selling at popular prices and bidding fair to be favorites in their classes.

**AGGRESSIVE REMINGTON AGENT.**

The Veru Bicycle & Rubber Co., 160 Orange street, New Haven, Conn., which has been very successful in the past in selling Remington bicycles and which enthusiastically upholds the merits of the Remington nonstretchable chain, is unwilling to abide by ordinary selling methods in the scramble for business this season. It has accordingly collected from among its numerous patrons of last year testimonials regarding the efficiency of the Remington chain and has compiled these declarations of satisfaction into a small pamphlet, which is being used to create a Remington reign in New Haven this season. Many of the persons quoted in the booklet are professors in Yale college.

**FIND FAVOR IN CACTUS COUNTRY.**

The Milwaukee Patent Puncture-Proof Tire Co. of Milwaukee states that the demand for its non-puncturable tires is increasing and exceeds its expectations. The tires have been thoroughly tested in Mexico and Texas, where riders are troubled with cactus and

orange thorns. The tests have been very severe and proved the great efficiency of the tires among cactus thorns. Large orders are being received from the territory named and testimonials are coming in to the makers from San Antonio and El Paso, Tex. Orders from South Africa and the Hawaiian Islands have also been received, as well as a great many inquiries from Germany, France, Russia, Sweden and other foreign countries.

**TRADING ON J. & D. REPUTATION.**

Jarvis & Daniels, makers of bicycles, sundries and sporting goods in Grand Rapids, Mich., state that they have been advised by certain legitimate jobbers that the Willis Company of Park place, New York City, is offering J. & D. leather grips at 10 cents per pair. In justice to the many large jobbers who are handling their goods exclusively and in justice to themselves, Jarvis & Daniels assert that they have never sold the Willis Company any grips whatever nor had any correspondence with the firm. Moreover, they feel very certain that the concern has none of their grips, because no one in the country has ever bought them in any quantity at the low price of 10 cents, for which the Willis Company is offering them.

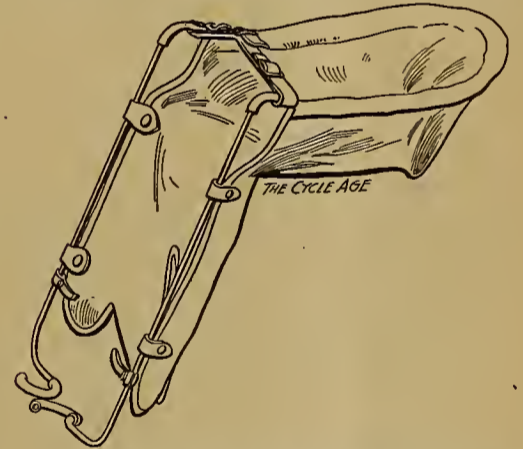
**BAY STATE WOOD RIM CO. PURCHASED.**

The K. & C. Mfg. Co., which manufactures wood rims in Ayer, Mass., announces that it has purchased the plant formerly owned and operated by the Bay State Wood Rim Co. and will devote its efforts solely to the manufacture of the K. & C. lock-joint, one-piece wood rim. The factory is being rearranged and additional machinery put in, and the company will be in position to make deliveries early this month. It is intended to make these rims as perfect in finish and appearance as the joint is perfect in strength, and the company offers to put the rims in competition with any on the market. Prices will be based upon existing trade conditions.

**STEADY TRADE IN CHILDREN'S SEATS.**

The Kozy baby seat continues to meet with a growing demand and George Hilsendegen, of Detroit, who supplies it to the trade direct, expects to sell nearly 5,000 during the present year. The particular points of advantage possessed by the Kozy seat are that it is light and strong, will fit any bicycle, is readily attached and detached, inexpensive and can be retailed at a low price. It can be instantly converted into a luggage carrier by removing the dust flaps and drawing them back over the handle bar.

The trade can secure these through any of the leading jobbers, as A. G. Spalding & Bro. of New York and Chicago; Simmons Hardware Co., of St. Louis; Excelsior Sup-



ply Co., and Hibbard, Spencer, Bartlett & Co., of Chicago; Farwell, Ozmon, Kirk & Co., of Minneapolis, and Shone-Hanna Co., of Rochester.

**FIBRE-BUCKSKIN MAILING CASES.**

Large quantities of mailing cases such as are used for sending liquids through the mail are being manufactured from fibre-buckskin by the Bascarman Manufacturing Co., of Malden, Mass., which produces the well known fibre-buckskin bicycle grip. The absorbent feature of the material has been so well brought out that it seems to be particularly adapted for packages of this sort. A letter from the postoffice authorities of a very complimentary nature led the company to make some of these cases up for the trade. They are very much lighter and stronger than anything now in use, so that they cost the purchaser less in the matter of postage, and at the same time they serve the government better in preventing all risk of the liquid going through the mail matter in case of leakage of the inner receptacle.

**NEW HANDLE BAR AND SEAT POST CO.**

The League Specialty Mfg. Co. has been organized by Arthur J. Keating, John Collins and J. C. Church of Chicago to begin

the manufacture of handle bars and seat posts at 215 South Clinton street. Offices will be located at 84 LaSalle street, Chicago, and Monroe Mitchell will act as general sales agent.

#### POPE TIRE TESTING MACHINE.

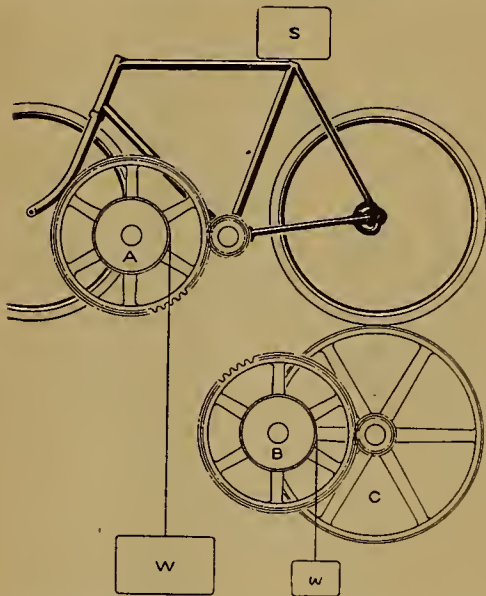
Almost the first result of scientific study of the resistance of a bicycle was the revelation of the supreme importance of the tire. Racing men and some manufacturers had known for years that there was much difference between a "fast" tire and one which "dragged," yet few realized how great a part of the total resistance was that due to the constant flexure of the materials of the pneumatic tire.

One well known professor conducted an elaborate series of tests and published some surprising statements before discovering that the difference in tire resistances, due to variations in construction and in degree of inflation, were so great as to render quite worthless his conclusions as to the relative merits of different forms of driving mechanism.

Of course any good dynamometer may be used for testing tires. The Pope Mfg. Co., however, has designed and for some time had in use a novel dynamometer specially adapted to this work.

In principle it is simply a large Atwood machine. A weight, which in practice varies from 225 to 350 pounds, suspended by piano wire, descends about 60 feet, unwinding from a drum like a clock weight. The motion of the drum is communicated by a spur gear to the crank shaft of a bicycle. The bicycle has a prescribed load on the saddle and its rear wheel rests on the rim of a light pulley called the track pulley, which it rotates. This pulley in turn, by a spur gear and drum, winds up a weight of from 50 to 150 pounds, as may be found desirable.

The accompanying drawing gives a clear idea of the working parts, though no at-



tempt has been made to indicate, except in a general way, the relative sizes of the toothed wheels and the drums. A is the driving drum, W the driving weight, B the driven drum, w the weight that is raised by the bicycle, C the track pulley, S the saddle load.

In order to steady the mechanism and to secure substantially uniform velocity as soon as possible after starting, fans were inserted between the spokes of the track pulley. The parts are so proportioned that the bicycle, if of 70 gear or higher, may be allowed to run one mile. The operator simply notes, with a stop watch, the time required for this run.

The dynamometer has given great satisfaction in comparative work. It "checks" itself admirably and seems never to get out of order. All the shafts run on ball bearings and the work done by the bearings of the bicycle itself is so slight, owing to the small load wound up, that the resistance overcome is little except that of the tire and that of the fans. Its sensitiveness is very great, the times for the run of a mile with different tires recently tested having varied from 2 minutes 23 seconds to 21 minutes 29 seconds.

As showing the reliability of the instrument, the records of the performance of a single standard tire, given a run every morning for a week, may be of interest. They were as follows: 2:12, 2:12, 2:13, 2:12, 2:14, 2:12. Twelve days afterward, the work having been meanwhile discontinued, the standard tire was tried again and ran its mile in 2:14.

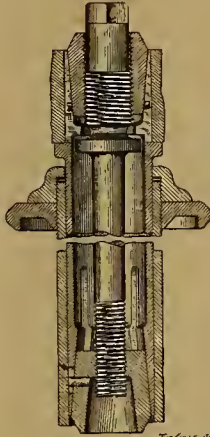
#### SUCCESSFUL OPENING DAY IN MONTREAL.

R. & W. Kerr of Montreal, Can., dealers in bicycles and sporting goods and Montreal agents for Cleveland bicycles, held an opening day at their store March 4. The store room was handsomely decorated and many attractions were arranged to obtain the good will of visitors. The firm reports that

it was one of the most successful opening days ever held in Montreal, a great amount of interest having been displayed in the goods shown.

#### FEATHERSTONE DOUBLE EXPANDER.

A patent was last week granted to Anthony Jerome of Chicago on an expander which accomplishes a double purpose. It not only binds the handle bar stem within the fork stem, but secures the handle bar to its stem. By this construction the bar is made readily reversible. The stem is split and provided with a taper seat at each end



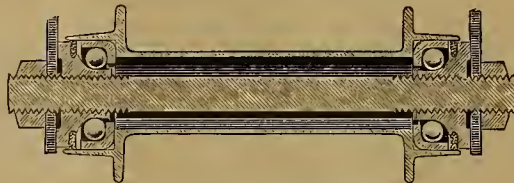
and the expander drawbolt carries an expanding shoe at each end, the bolt passing clear through the upper expansion shoe and being provided with a squared end for the reception of a wrench. An annular flange around the bolt just below the counterbore at the upper end of the stem prevents the bolt from rising when being turned in the releasing direction and thus causes the lower expander to automatically loosen from its binding position in the taper seat. The threadings in the upper and lower expander are of course rights and lefts so that the two will be drawn down into binding positions together. The expander patent is assigned to A. Featherstone & Co. of Chicago.

#### THREE VEEDER CYCLOMETERS.

The Veeder was the first small barrel-shaped cyclometer extensively marketed and in the three years that it has been before the public its maker, the Veeder Mfg. Co. of Hartford, Conn., has, it states, profited by the sale of more than 500,000 of the little distance recorders. The Veeder is now made in three patterns. The first is the regular 10,000 mile, one ounce cyclometer which is known everywhere. The second is a 10,000-mile repeating cyclometer with 100-mile trip attachment, and the third is a 10,000-mile pattern similar to the regular model but gold plated and engraved and furnished in an individual satin lined leatherette case. It is a handsome present and is suitable for those riders who desire their bicycles and equipments to be more than ordinarily attractive. The Veeder catalogue contains an illustrated list of parts and serves the dual purpose of demonstrating the simplicity of the little instruments and furnishing a guide for parties ordering duplicate parts.

#### THE NEW NATIONAL HUB.

The new hub fitted to all bicycles made by the National Cycle Manufacturing Co., of Bay City, Mich., has an extremely wide spread to the bearings and is composed of the fewest possible number of parts. The cones have broad, flat backs that fit flat against the inner faces of the fork ends. The barrel ends and ball cups are thus brought quite close to the forks, giving more space than is usual between the rows of balls. The seats into which the cups are pressed are accurately machined so that the cups may align properly with each other.



Liability of the cones tilting on the axle and thus causing the bearings to bind is greatly reduced by the broad binding surface of the cone faces against the fork sides. The locking of the bearings is also made quite secure by this construction of the cones.

#### WANTS TRADE LITERATURE.

The Cleveland Cycle Co. has been formed in Los Angeles, Cal., with headquarters at 332 South Main street, for the purpose of doing a wholesale and retail business in bicycles and cycle sundries and accessories. The company would like to get into communication with eastern manufacturers.

The firm consists of R. C. Lennie, well known the country over as representative for Morgan & Wright for five years, and J. A. Ostendorf, who has been connected with H. A. Lozier & Co. in San Francisco for five years and was manager of the Lozier branch house there for three years. The new company will make the Cleveland bicycles its leaders in Los Angeles.

#### PIERCE & CO. OPEN NEW BRANCH STORE.

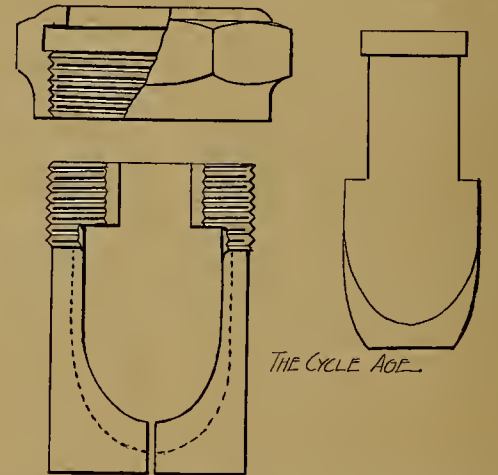
Another of the leading manufacturers of bicycles has opened a branch store in Forty-second street, New York city, just west of the Grand Central depot. This latest addition to the new "bicycle row" is Geo. N. Pierce & Co., Buffalo, which is now displaying the Pierce bicycles prominently to the gaze of commuters and the volume of other travel along the well trodden pavement between the railroad quarter and the west side elevated and surface roads.

On Saturday afternoon the new store had its formal opening, with E. B. Ryder of the Pierce forces in charge of the ceremony. Invitations had been sent out to a large number of riders, and the establishment was crowded during both the afternoon and evening hours. The prominence of the location and handsome fittings and many models of bicycles displayed were favorably commented on.

The other cycle stores along Forty-second street have already had their openings, more or less formal, and the selling season in that locality may be regarded as fairly under way.

#### THE BERKEY EXPANDER.

In last week's issue of this paper an illustration of the Berkey Expander was shown without the split in the tube which permits the wedge-piece or tongue to expand it against the seat mast or handlebar stem. The error is corrected in the accompanying illustration. The expander is marketed not by Berkey & Gay as stated but by the Berkey Spring Seat Post company of Grand Rapids, Mich. It is manufactured in sizes rang-



ing from 3/4-inch inside and 7/8-inch outside dimensions to 1-inch inside and 1 1/8-inch outside.

#### RECORD BREAKER FOR MILWAUKEE MFG. CO.

The principal difference between the old machines and the latest improved models of bicycles made by the Milwaukee Mfg. Co. of North Milwaukee, Wis., is the doing away with flush joints and the change in the two-piece hanger, whereby the hexagon lock nut is dispensed with. This improvement has been thoroughly tested by the company's men in actual road use during the entire past riding season, and the makers guarantee its effectiveness. There are no complicated parts and nothing to get out of order, thereby causing the jobber and manufacturer trouble.

The Milwaukee Mfg. Co. finds the demand for its machines beyond its expectations. The plant is being operated with a full force of 300 men and is running full time and until 9 o'clock four nights each week, yet the company is still behind on deliveries. During December, January and February 14,000 bicycles were shipped, and the company is averaging 275 per day in March. Numerous inquiries for bicycles are being received every day and the company states that it looks as if this year is going to be a record breaker.

#### ARNSTEIN SECURES MALCOM'S SERVICES.

Robert Malcom, secretary and treasurer of the Chicago Cycle Supply Jobbers' Association, has severed his relation with the Excelsior Supply Co. and will hereafter be connected with the bicycle department of Eugene Arnstein, 86 West Lake street, Chicago.

#### CONFINES ITS LINES TO SUNDRIES.

Clark, Horrocks & Co., of Utica, N. Y., have just issued an extensive bicycle sundries catalogue. In selecting its lines of stock the firm has endeavored to cover the sundry field broadly, and in order to be able

MANUFACTURER OF



BICYCLES

# At Times...

it is hard for a man to think of just what he wants. At other times he knows what he wants but can't think where he can get it. Between times he uses a substitute that does for the time being but in the end doesn't pay. Our catalogue does the thinking for you and our facilities supply you on call with

## Everything for Bicycle Builders and Dealers

### EXCELSIOR SUPPLY CO.

ESTABLISHED 1876.

88 and 90 Lake St., CHICAGO.

at all times to supply dealers and repairmen with desired articles of this character the company has excluded parts and fittings for building bicycles from the list of goods catalogued and handled. The sundries listed include both high and moderate priced standard articles. Dealers writing to the company for sundry catalogues should specify catalogue IIB, which is accompanied by a separate circular giving dealers' discounts.

**BRASS LINED CYCLE TUBING.**

The Wilmot & Hobbs Mfg. Co., of Bridgeport, Conn., has found that a brass lining within cycle tubing greatly assists in securing a perfect braze between tubes and connecting lugs, especially for flush joint work. They are now making brass lined fifty carbon and also nickel steel tubing of the Clincher kind as well as brass lined rear forks, rear stays, front forks, head tubes, loop tubes, etc., and are in receipt of flattering testimonials from leading manufacturers in regard to the advantages of the brass lining. It is stated that the brass coating which is so thin that it does not add materially to the weight of the tubing, prevents frames from rusting from within and thereby losing strength, and that the enamel is not liable to peel off on frames made from this tubing. All Clincher tubing is thoroughly polished exteriorly, presenting a fine surface for enameling work. The company, however, also sells seamless tubing with brass lining in order to demonstrate to all the advantages of this new feature. The brass lining is produced by dip brazing, a process which the Wilmot & Hobbs company claims to have brought to a higher degree of perfection than any other concern, and this manner of producing the deposit adds a density to the brass which could not be obtained from electric plating. The firm will send samples of any style of brass lined tubing to manufacturers who desire to satisfy themselves of its merits. The brass lined is said to be especially well adapted for manufacturers who employ the dip brazing process.

**IDEAL BARS FINELY FINISHED.**

Success in securing contracts for the bulk of its output and the necessity of working night and day on orders has not caused the Ideal Plating Work Co., 3 Appleton street, Boston, Mass., to slight the workmanship and finish on its large line of well known Ideal adjustable handle bars. At the present time the company has sold nearly two-thirds of its output and expects to turn out more than twice as many bars this year as in previous years. The factory is running two shifts of men, yet better work than ever before is being put on the product. All bars are given a heavy copper plate and are then scratch brushed and heavily nicked, making them what the company claims to be the finest finished bars in the market.

**CYCLE SUPPLY CO.'S SUNDRIES.**

The policy of the Cycle Supply Co. of Hartford, Conn., is not to quote in its catalogue job lot or bankrupt stock prices on standard goods, but to list articles of recognized merit at prices which include cost and a moderate margin of profit. Hartford sundries have been sold for six years with increasing popularity and the firm's old watchword of "Good goods at fair prices," will be adhered to in the future. The catalogue is neatly compiled, and printed, being free from long used and poorly executed cuts and from close crowding of reading matter and illustrations. The line of sundries handled is supplemented by a carefully selected stock of parts, fittings and supplies.

**BAILEY AUTOMATIC BRAKE PATENTED.**

Herbert L. Bailey of Chicago has been granted a patent on improvements in the automatic rear tire brake manufactured by the Bailey Manufacturing Co., also of Chicago. The Bailey brake is of the spoon pattern and operates by means of a roller, which is raised by the lifting of the under side of the chain in back pedaling. The improvements in this patent relate to means for automatically maintaining the spoon in its proper normal relation to the tire and the roller in its correct relation to the bicycle chain.

**HORSELESS AGE NOW A WEEKLY.**

The Horseless Age, whose offices are located in the American Tract Society building, New York city, was established in 1895 and is the first motor vehicle journal published in the English language. It was formerly a monthly journal but has just been changed by its publishers to a weekly. This change is not only a pleasing indication of prosperity for the Horseless Age, but shows as well the rapidly increasing interest in automobiles in the United States.

**TOO BUSY TO DO ANY "SHOUTING."**

The Indianapolis Chain and Stamping Co. of Indianapolis does very little talking for publication. This year has seen no change

in this policy and the company states that it has been too busy to do any "shouting," and is glad to report that it has sawed a large quantity of wood. From present indications it anticipates that this will be the banner year in the trade, so far, at least, as the manufacture of chains by the Indianapolis company is concerned.

**HAS BEEN "SAWING WOOD" VIGOROUSLY.**

Such a heavy demand for both single piece and Dunlop laminated rims has been made upon the Olds Wagon Works of Fort Wayne, Ind., that the company has literally been "sawing wood" this winter instead of making a lot of noise to attract attention. It has produced large quantities of strips and finished rims. It is such quiet activity as this that verifies the dealers' predictions of a large trade this season.

**BUSY ON CROWNS AND EXPANDERS.**

The two articles which are just now most in demand among the large list of specialties made by the Racine Malleable & Wrought Iron Co. of Racine, Wis., are its fork crowns and expanders. Orders for these are coming in very fast at present. The company's new works are running full time on these and on seat post clusters, frame connections, hangers, etc.

**WANTS AGENCY FOR GOOD SUNDRIES.**

The Coe Mfg. Co., 50 Warren street, New York city, is desirous of adding to its well known brand of "Round Edge" toe clips, coasters, etc., a number of good selling sundries as sidelines. Among the eastern agencies now held by this concern are those of the Whaley-Dwyer Co. of St. Paul; James E. Plew of Chicago, and the Mossberg tire bells for the entire United States.

**HANDSOME FRONTENAC RETAIL STORE.**

Frontenac progress is in evidence throughout the country, but perhaps more particularly in Syracuse, where the makers of "bicycles that are built right" have recently opened one of the prettiest retail cycle stores seen in many a day. This retail sales-room is in charge of George Potter, one of the most popular bicycle salesmen in central and northern New York.

**USES NON-LEAKING VALVES.**

One of the most obstinate problems the tire maker has to contend with is the leaky valve. Many a good tire has gone wrong because of leaky valves. The New Brunswick Rubber Co. of New Brunswick, N. J., has hit upon a new method of construction which is claimed to absolutely obviate all leakage at the valve. It is using this new method on all grades of its tires.

**BALDWIN RACING CHAINS POPULAR.**

Business for season of 1899 is much in excess of that of 1898 with the Baldwin Cycle Chain Co. of Worcester, Mass. Manufacturers have specified in advance and enabled the company to fill orders promptly. The Baldwin special racer chain in both 3-16 inch and 1-8 inch sizes has found great favor and bids fair to be very popular.

**The Salesman Was too Fresh.**

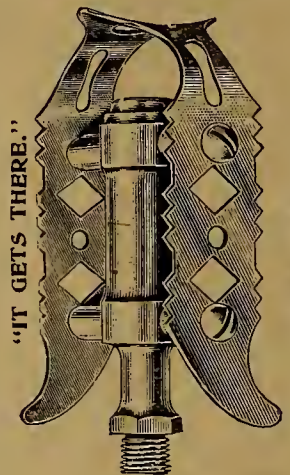
A salesman for a big Chicago concern recently called upon a firm of cycle dealers in a prosperous town in the western part of Kentucky and was not aware that the three brothers composing the firm bear a marked resemblance to each other. One of the brothers is himself a cycle salesman during the winter months. The Chicago man bragged a good deal about the business which he had done on the road and how he was making life a burden for his rivals. He chattered about the different agents whom he had persuaded to cancel orders given to other traveling men and which were eventually placed with him. To hear him tell it, one would have imagined that he was the only salesman who was earning his salary and his concern's machines were the only ones which were being sold in the state of Kentucky. All the forenoon was occupied in this sort of conversation.

In the afternoon the Chicago man called to get the order and without knowing it entered into conversation with the brother who took a turn at traveling. He was easily persuaded to grow voluble over his success with agents and the luck he had been having in causing orders to be canceled. In detail he explained how

**YOU SEE WHAT WE CARRY—WRITE US FOR PARTICULARS**

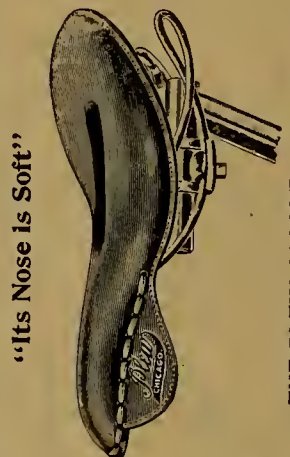
**We have a proposition to make to one dealer in every town in the United States.**

**The Plew Hub**  
turned from solid bar,  
**\$1.50 per pair**



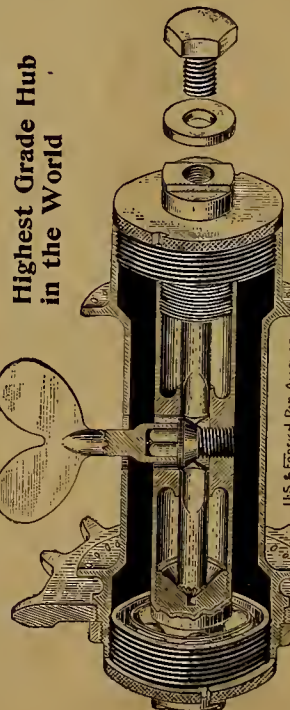
**"IT GETS THERE."**

Selling Agents for  
Eli and Elyria Pedals  
Collmer Hubs  
Robinson Grip Fasteners and the League Step



**"Its Nose is Soft"**

Selling Agents for  
Peru Rims  
Excelsior Balls  
India Tires  
Duthie Chains  
Indiana Chains  
Wood Guards  
Perfection Chain Guards



**Highest Grade Hub in the World**

**THE PLEW SADDLE.**

**THE COLLMER HUB.**

**THE PLEW SADDLE COMPANY, 1446 Wabash Avenue, CHICAGO, ILL.**

# CYCLE AGE

Vol. XXII. No. 20.

THE CYCLE AGE OFFICE.

March 16, 1899.

## READY FOR DELIVERY!

## MODERN CYCLE REPAIRS

One Hundred and Thirty Pages and One Hundred Illustrations of All Sorts of Repairs of Cycles—A List of Its Contents.

### CHAPTER 1—Repairs, or Replacement.

First equipment of the shop. A study of economical methods. Illustrations of good and bad methods. List and cost of tools and fittings. Use of assembling jacks.

### CHAPTER 2—Wheels and Component Parts.

Purchase of spokes, sizes to buy and how to keep them. Rims; tools for spacing and drilling. Inexpensive truing jigs. To repair broken spoke holes in hubs. Nipple grips. Replacing cups and cones. To braze a split cone.

### CHAPTER 3—Frame and Forks, Brazers and Brazing.

To braze without spoiling enamel. Three ways to repair broken tube. Broken lugs, fork ends and fork stems. Dangers of twisted forks. Truing a frame. Selection of a brazer.

### CHAPTER 4—Remodeling of Frames.

Computing the cost. Cutting down frames. Changes of all sorts in singles and tandems.

### CHAPTER 5—The Crank Hanger.

Remodeling. Loose cranks. Buckled tandem sprockets. Two-piece construction.

### CHAPTER 6—The Steering Head.

Broken crown cones. A question of solder.

Fixing loose cones. Squeaking steering heads. Rust on nickel.

### CHAPTER 7—Seat Posts and Handle Bars.

Broken parts. Internal expanders. The flashing of tubing. Ways of bending bars.

### CHAPTER 8—Hints on the Art of Enameling.

Necessary equipment. Keeping of enamels. Coating and baking. Two and three color work.

### CHAPTER 9—Saddles and Pedals.

Springs and clamps. Repairing pneumatic saddles. Rattan lacing. To make pomel clip. Broken springs. Difficulties of pedal repairs and how to overcome them.

### CHAPTER 10—Building Frames from Component Parts.

Should be undertaken by men of experience only. A variety of patterns. Correct angles. Dimensions. Cheap mandrels and their uses.

### CHAPTER 11—Purchasing Parts for Special Work.

Ingenuity of great value; examples. Methods by which many parts may be made of unexpected value.

### CHAPTER 12—Experimenting With Construction.

Repairmen best suited to devise practical improvements. Value of their ideas.

### CHAPTER 13—Mechanical Power in the Shop.

Practical advantages. Cheapest forms of motors. Installation. Floor plan.

### CHAPTER 14—Miscellaneous Repairs and Suggestions.

### CHAPTER 15 Tire Repairs.

According to tire construction. Method for each kind described.

## INTERESTING FACTS

Concerning the Lists From Which the Cycle Age Is Mailed.

Mexican agents are a wide-awake lot. One in every four is a subscriber to The Cycle Age.

New York has the largest number of actual subscribers. Of 3,607 agents 20 percent are on The Cycle Age's paid list.

Michigan is second on the list although five states are ahead of her in the number of agents. Then comes Illinois, Pennsylvania and Ohio in the order named.

On March 1 there were on The Cycle Age list, 55,568 bicycle agents, of whom 36,243 were in the United States. The work of correcting and adding to the lists gives employment, all the time, to not less than three persons.

A separate record is kept of every agency. It shows the length of time the agent has been in business, what wheels and accessories he handles, his commercial agency rating, and in what, if any, other business he is engaged.

The result of all this work is that The Cycle Age places its advertisers in contact with all the agents who are up-to-date and worth cultivating.

## PRIZE FOR A PROCESS

Of Case-Hardening on a Small Scale to Beat the Cyanide Method.

The repairman needs to turn up a cone, cup or pedal spindle with fixed cup from machinery steel and to case harden it economically. He does not want to wait till he has a large lot to harden, or to lose money by heating a large case for the sake of a single piece. He is forced to use the cyanide of potassium method, which hardens only a very thin shell. He is looking for something better.

Manufacturers have no trouble. They case harden a thousand cups and cones at the same time. Suitable devices are in use by chain makers for hardening parts of chains on a revolving arrangement and edge tool makers use similar methods by which they harden the edge of saws, hatchets, plough shears, etc. A system for doing the work by electricity was recently described in The Cycle Age.

But the repairman is left in the lurch with his cyanide method.

Who has a better method?

The Cycle Age will pay \$10.00 for a description of the best method by which the repairman may harden a single piece of machinery steel economically and durably.

Any method suggested will be tested before the prize is awarded. Subsequently it will be described in The Cycle Age.

"Every bicycle dealer should take The Cycle Age as it is a business educator."—Unger, Harrmann & Co., Norristown, Pa.



# SUPPOSE

ALL OF THE ADS. IN THIS PAPER WERE PICTURES

Wouldn't you look through them every week?

If they were clever pictures wouldn't they impress you more quickly than a lot of reading matter?

Wouldn't you get better returns for your outlay if your ads. contained pictures?

If you can't afford pictures—though they don't cost much—why don't you change that copy which has been running a month or more?

Do you know that many an advertiser becomes dissatisfied with a medium solely because he doesn't use the right matter?

Everything wears out. Why do you buy a new overcoat and continue to wear that out-of-date, threadbare ad.?

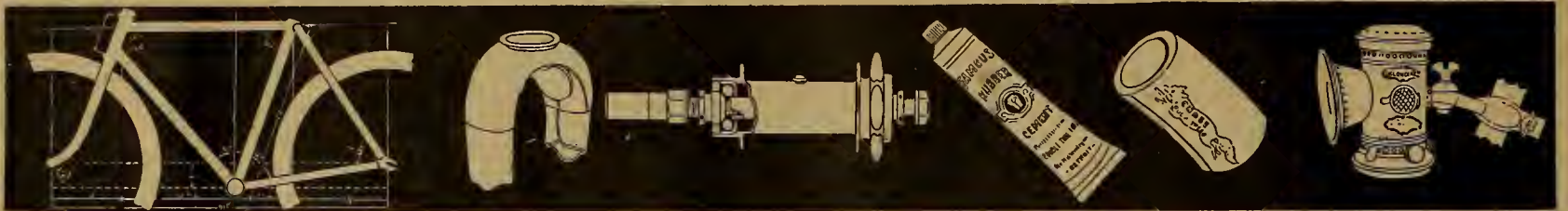
It costs THE CYCLE AGE money to change ads. But we live for something beyond today. We want you to be satisfied. Then you'll come again next season.

Satisfy yourself and satisfy us by satisfying the reader that there is something new which he *must* read in the advertising pages every week.

If you want ❁ ❁ ❁

PICTURES  
DRAWINGS  
CUTS OR  
ELECTROS

The Cycle Age will be glad to supply them at cost. ❁ ❁ ❁



# Fittings

... AND ...

# Sundries

Experience teaches that the best is the cheapest

**TIME IS MONEY**—our fittings save you time. Orders are filled same day as received—builders should consider this. Our prices are right—our Stock of Fittings and Sundries is complete. Catalogue on application.

Long Distance Phone  
Western Union Telegraph  
in Connection....

**GEO. HILSENDEGEN**

Detroit, = = = = = Mich.

# AN EXTRACT

"Of all the bicycles made and sent from the Chicago market the greatest bargains are those offered by the Chicago Tube Co. Their 28-inch, 30-inch and 3-crown wheels with Fauber one-piece hangers beat them all. They are up to date in design and equipment and are exceedingly highly finished, and their agents control the market with them in their respective territories."

IN ADDITION to bicycles referred to in this extract from a letter by a prominent dealer we make and sell frame sets and frames and also all material to build or to repair or to equip a bicycle, and have, for the past six years, a constantly increasing business, and are in a position to give the best for the least money. Particulars, catalogue, etc., to any address.

## CHICAGO TUBE CO.

217 East Washington St. - CHICAGO, ILLS.

he ran down the goods of every concern except his own. Then the traveling dealer disclosed his identity and read that glib young man such a lecture as he is not likely to forget in a hurry. The discomfited Chicagoan lost the order and is said to be wearing a muzzle when he roams through Kentucky.

### Old Gag in New Dress.

It is storied that an English cyclist one day last year punctured his tire near Sandringham, and found to his dismay that he was minus a repair outfit. An elderly gentleman who happened to be riding past, seeing him in distress, dismounted and placed his tool-bag at his disposal. The joyful cyclist set to work, the good Samaritan looking on, "in case," as he jocosely put it, "he should have to do a repair himself some day." The repair finished the young fellow handed his benefactor a card, and asked him when "in town" to give him a call. The other replied that he would certainly do himself the honor, and then with a quiet smile gave him his own card in return, bearing the simple inscription, "The Prince of Wales."

The Indian Cycle and General Engineering Company has contracted with the imperial government for the conveyance of mails on bicycles in British India.

It was a cyclist messenger who was sent to bring the priest to the death-bed of Felix Faure.

**CLOSING OUT SALE**—Until closed out, we shall offer the following: 600 pairs finished, flat cranks, regular thread, rights and lefts, at 20c per pair, 6 in.; 2200 pairs brazed forksides 1 1/2 in., 10c; 350 pairs brazed forksides 1 in., 10c; 4360 seat post forgings, 2c each; 630 crown forgings, 2c each; 2700 pairs upper back stay forgings, 1c each; 2200 lower adjustment forgings, 1 1/2c each. **CORTLAND CARRIAGE GOODS CO., Cortland, N. Y.**

## MISCELLANEOUS.

Advertisements under this head 5 cents per word first insertion; 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders or stamps received.

### WANTED.

**WANTED**—Already established wholesale bicycle dealer, in the Netherlands, will take on a few more choice American lines of sundries to job in connection with regular trade. Mail catalog and export quotations. Satisfactory American references given if business results. **J. C. VAN OUDENALLEN, Frombergstraat No. 2, Arnhem, Holland.**

**SIDE LINE**—Salesmen in the bicycle and hardware trades wanted to sell standard bicycle sundry on commission. Quick seller and liberal commission. Samples carried in vest pocket. **B. H. DIVINE, Utica, New York.**

**WANTED**—A good line of cheap wheels or bankrupt stock. **MERRILL, 1457 Blake St., Denver Col.**

**WANTED**—Bicycles; must be something that will make competition howl; quote prices. **WM. VAN DERPOOL, Indianapolis, Ind.**

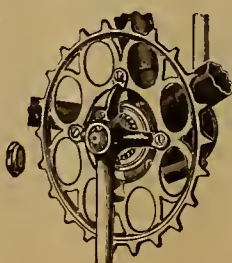
### FOR SALE.

**FOR SALE**—500 up-to-date '98 wheels in lots of 25 or more. Bargain for spot cash buyers. Address Box 472, Canton, Ohio.

**FOR SALE**—An Arnstein enameling oven, cheap. **ROBT. L. THOMPSON, Muscatine, Ia.**

**FOR SALE**—Good double diamond tandem; cheap. **E. L. KERFOOT, Sterling, Kan.**

**FOR SALE**—At a bargain—Three Commercial Graphophones and complete equipment. **GRAPHOPHONE care Cycle Age.**



### "D. & J."

Single, Tandem, Triplet, Quad....

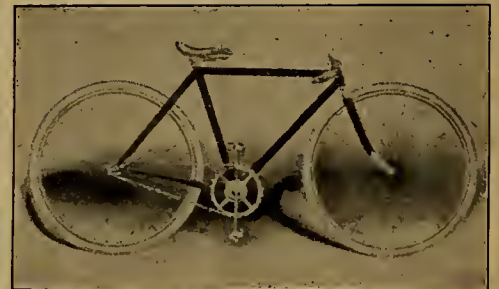
### Hangers

We make Hangers for only high grade wheels.

**Park City Mfg. Co., N. W. Cor. Jackson & Clinton Streets, CHICAGO.**



## A NEW PROPOSITION:



## Wheels Built to Order \$12

upwards. FROM HIGH GRADE MATERIAL and fittings of your own selection.

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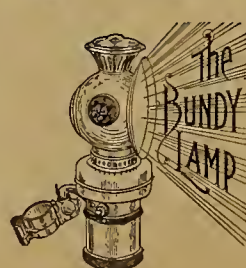
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# THE CYCLE AGE

Vol. XXII—No. 21.

CHICAGO, MARCH 23, 1899.

NEW SERIES No. 70.

## BICYCLE MAKERS TO COMBINE

**Supported By a Powerful Syndicate of Bankers, A. G. Spalding is Obtaining Options on Every Plant of Importance—Unlimited Money at Command—Will Control Foreign Markets.**

### PLEDGE FROM A. G. SPALDING.

To the Editor: Please assure your readers that the proposed bicycle alliance will have no effect on this season's prices, agency arrangements or anything else.

A. G. SPALDING.

New York, March 20.

For a week past everyone in the trade, however humble or great, has been industriously hazarding or swapping opinions concerning the substantiality and probable effects of the giant enterprise now in process of formation in New York city for the purpose of consolidating the large bicycle factories. The daily papers have let loose such a flood of misinformation concerning the subject that the Cycle Age and other trade papers—all of which were pledged to the suppression of the intelligence until this issue—are now assigned the distasteful work of tardily but correctly presenting the whole matter. These are the facts:

#### The Facts in the Case.

1. An invitation has been sent by A. G. Spalding, representing a group of New York financiers, to a majority of the important manufacturers of bicycles, asking them to submit, in confidence, proposals for the sale, for cash, of their plants and goodwills.

2. There is no truth in the story, widely circulated by the daily papers and corroborated in great measure by the *Bicycling World*, that a trust or combination of interests of all the important manufacturers of bicycles in the United States has already been consummated.

3. There is no limit to the number of concerns that will be taken in, provided they have progressive and prosperous businesses to sell at a fair cash valuation. The success of the enterprise is dependent on the ability of the promoter to secure the plants at a fair price.

4. The man at the head of the project at present is A. G. Spalding. His share of the work consists in securing the options. That done, the matter will pass into the hands of the attorneys for the financiers.

5. The attorneys are Alexander & Green, with whom is connected Col. McCook. The accountant selected to make the necessary investigations is Mr. Simpson, well known to many of the leading makers and who, at one time, undertook similar work for the cycle board of trade.

6. The statement that the necessary capital is to be underwritten by a huge New York financial institution is mere guesswork, probably growing out of the fact that Col. McCook is one of its directors.

7. The capital of the proposed combination has not been fixed. It is dependent entirely upon the amount necessary to make desirable purchases. The \$50,000,000 story is more guesswork.

8. All options and the figures accompanying them will be examined by the accountants and submitted to the syndicate of financiers, who, as usual in such cases, will make only such purchases as business prudence warrants.

9. The business head of each concern is required, as part of the bargain, to sign an agreement to retain his position for five years.

10. No agreement has been made with any manufacturer, or set of manufacturers, to purchase their business; nor is it likely that any such agreement will be made in the near future.

11. The lists printed of makers included are purely speculative. There have been many good guesses—nothing more. No list of concerns affiliated with the combination will be given out until it is certain that they will be purchased.

12. Under no circumstances will the proposed combination affect the business of any

concern participating in it, during the present season.

13. No change whatever will occur in the matter of prices, during 1899, as a result of the proposed combination.

14. The combination is not based on chainless patents. They cut no figure in the negotiations.

15. The negotiations have been in progress less than a month. Mr. Spalding's European trip had nothing to do with the matter.

16. It is not likely that the combination will be completed and prepared to take definite action as to plans of action for several months. The deal is too stupendous to be pushed through hurriedly. Hence all statements as to plans are mere surmises. Even the men who are most prominently identified with it are unable to indicate definitely any plan of action. No one will be able to talk with authority until the company has been floated, the capital subscribed and the directors, officers and committees selected.

#### Well Founded Impressions.

The Cycle Age hazards no guess on any of the questions involved, but presents herewith the gist of impressions gained from a number of persons interested:

A. There will be no change in the principals of any concern for the present and, so far as is known, none for five years.

B. The closing of factories is not contemplated; on the contrary, it is expected that outputs will be increased in view of an expected increase of foreign trade.

C. There will be no changes of agencies, or of existing arrangements, for the present.

D. The combination will not seek to antagonize or decrease the number of reputable agents.

E. The strict maintenance of advanced prices will be one of the first rules of the combination.

F. The names of well known machines will be retained and advertised as fully as heretofore.

G. It is likely that, should this effort succeed, the makers of parts and sundries will be similarly combined.

#### No Menace to Dealers Contemplated.

The authenticity of the foregoing statements is guaranteed. They indicate clearly that, no matter what the ultimate

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outcome, the proposed "concentration of brains and energy" is at present in its infancy. Alarmist reports may be safely disregarded by agents for the present for three reasons: First, there is no certainty that the combination will succeed; second, the promoters offer assurance that no menace is intended to legitimate dealers; third, months must elapse before the combination takes definite shape, so that dealers will have abundant time to consider the matter in all its bearings.

The Cycle Age will present details of developments as they occur, direct from headquarters, avoiding statements which are mere guesswork.

#### Unlimited Capital at Command.

There is a practically unlimited amount of capital behind the movement. Mr. Spalding's headquarters are at the Waldorf hotel in New York city. That he has been a busy individual for a week or two past may be easily imagined. For three days, up to last Saturday night, he did not leave the hotel. He was just beginning to gather in the loose ends with a view to the completion of the first chapter of the most interesting event in the history of the cycle trade.

But wild rumors were set afloat last week. They told of a capitalization of \$50,000,000; of a proposal to kill off 80 per cent. of the agents; of a decision to close many of the factories, and of other matters equally wide of the truth. The facts are here given for the first time as a result of interviews with Mr. Spalding and a number of gentlemen associated with him in the project.

#### Talk With Mr. Spalding.

"Please do not bear too heavily on my connection with the matter," suggested Mr. Spalding. "I have been selected to undertake this work more from chance than deliberate selection.

"During the past year I have been approached at various times by different manufacturers as to the advisability of some kind of an alliance or combination being formed that would be in the general interest of the bicycle trade. These various conferences convinced me that the leading manufacturers were favorably inclined towards some kind of a business alliance on the lines of other industrial enterprises, and several urged me to take the initiative in the matter. I hesitated for some time in taking it up, hoping that it would be brought about in some other way or by some other person, but finding that nothing was being done, and being continually urged by different makers to proceed in the matter, I put myself in communication with the leading financiers of New York who take an interest in matters of this kind, and found a ready willingness to provide the necessary funds to carry out such a deal based on conservative cash values.

"Having satisfied myself that the necessary money for such an enterprise would be supplied, I then communicated with the principal bicycle manufacturers of the country and found the idea met with a hearty and favorable response,

which has resulted in a definite proposition being made by all the leading bicycle manufacturers for the sale of their various plants on a cash basis.

#### Thirty Concerns Ready to Sell.

"Up to the present time over thirty of the prominent bicycle manufacturing concerns have expressed a willingness to consolidate, and have made a definite proposition for the sale of their various properties.

"It is the desire of those financing this enterprise to take in as many of the going bicycle concerns whose past record, present condition and future possibilities would make desirable, to join in and add strength to the combination. Therefore an invitation has been sent out very liberally to nearly all the smaller as well as the large American bicycle makers, and negotiations are now pending that would indicate the probabilities that 90 per cent. of the entire bicycle manufacturing plants of this country will be brought into this combination."

#### Origin of the Combination.

More specific details have been learned from a reliable source. It appears that some time during December last three of the largest manufacturers in America were approached with an offer to combine their plants. All were agreeable, but the preliminaries dragged to such an extent that the deal was eventually declared off.

Colonel McCook happens to be a neighbor of Mr. Spalding's, and during a conversation, one day in January, let drop this remark:

"Now that money is so plentiful, and combinations are in the air, it seems to me that a bicycle combine would be a splendid thing to float."

The real significance of this utterance did not strike Mr. Spalding at the moment. It was only after telephonic conversation a few days later that he gave serious thought to the proposition. A few days' work showed that it would be a comparatively easy matter to secure the necessary capital to carry out such a stupendous deal. That part satisfactorily arranged, the next move in the game was a talk with one of the largest of western makers, who was so favorably impressed that he prepared a proposal for the sale of his business the next day. A second and a third western concern fell in line as quickly.

#### Another Syndicate at Work.

Strangely enough, there was, at the same time, a representative of another syndicate at work on a similar scheme. He called on at least two Chicago houses, but was not heard of afterward.

There had been such ready acquiescence on the part of all the persons approached that it was decided to offer every reputable maker, whose business was considered sound, an opportunity to come in. A letter was pretty generally circulated, inviting proposals to sell for cash, Mr. Spalding offering his personal pledge of absolutely confidential treatment of all facts and figures submitted.

All this has occurred inside of a month. Options are now coming in by every mail.

Mr. Spalding is, as has been stated, the representative of a syndicate of bankers. It is his part of the work to provide, for their inspection and acceptance or rejection, options on all or as many as possible of the paying bicycle factories of the United States. Each applicant is required to present facts concerning the earnings of his business, his plant and the amount asked, and to agree to continue in the employ of the new company for five years. As the options come in they are handed to Mr. Simpson, an expert accountant selected by Messrs. Alexander and Green, attorneys for the capitalists, for examination. All of the work is done at the rooms at the Waldorf, in strict accordance with the promise of secrecy made at the outset.

#### Examination of the Books.

When all are in the accountant will visit each of the houses, make an examination of books and verify the statements. Then the whole matter will be referred to the capitalists who will pass judgment upon the fairness of the amounts asked.

This shows just how near the combination comes to completion. The promoter is unable yet to state, with certainty, the name of a single participant in the enterprise.

Most of the concerns interested feel, now that the news has been given to the public, that it is unnecessary to remain silent. One of them talked freely with a Cycle Age man and gave interesting information concerning his ideas.

#### To Control Ninety Per Cent of Product.

"We expect to obtain," said he, "90 per cent. of the successful bicycle factories, large and small, and to control at least that percentage of the output of the United States."

"Is it true that some of the factories will be closed?"

"I think not. On the contrary I believe their capacity will be increased. The work of some of them may be changed, however. Some may be employed on a particular style of machine, some on pedals, chains and other parts. There will probably be little change in the factories of the well known makers, however."

"On what do you base your expectation that the output will increase?"

#### Possibilities in Foreign Markets.

"On the possibilities of foreign trade. Our relations with other countries are constantly improving. With the capital at our command we may be able to cover the markets of the entire world. The saving of expense in that direction alone will be enormous. When we go into a foreign country now, who is the competitor we find there? Not the English, French or German, but our next-door neighbor. The result is such competition in the matter of price that there is no margin left. We can produce more cheaply than any other nation and can probably sell foreign buyers all the bicycles they need."



"In what other direction do you expect to economize?"

"In selling expenses, advertising, avoidance of price cutting, purchasing, collections and—well, the possibilities are beyond expression at the moment. These are matters of detail which it is impossible to discuss until the thing has been completed and we settle down to a consideration of ways and means."

#### Possible Control of Parts Factories.

"Is the control of parts factories contemplated?"

"Possibly; we are in this thing to make it as complete as possible."

"How will the present employes be affected?"

"If you look over the list of similar combinations you will find a well satisfied lot of men. The tendency of a combination like this is to enable the maker to increase wages and decrease prices by reason of the decrease in expenses in other directions. There will be plenty of room for every man with brains and energy."

"But what of the concerns from whom you purchase supplies? Will not their business be injured?"

"I think not. Such orders as we can give them will enable them to run under lower expense because they will run steadily the year round."

#### Protection for Legitimate Agents.

"If you succeed will not the number of agents be largely reduced?"

"If some of them, who might be doing better in some other line, were forced out it would be doing them a kindness. For the curbstone agent we have no thought. It is far from our intentions to hurt legitimate dealers, however. We can't afford to. We shall cultivate their friendship and strengthen their positions. We shall insist on maintenance of advertised prices and stop cut-throat competition."

"Will the combination exert a tendency to fix patterns and, to some extent, eliminate the necessity of a shut-down in summer and a rush in winter?"

#### No Shut-Down—Fewer Patterns.

"To some extent, yes. In the northern countries there is bound to be a quiet time. But in the southern and some foreign markets the riding season is at its height while our winter is on. The cultivation of those markets will enable us to run our factories instead of piling up losses because of idle machinery, unproductive rent, insurance and many other fixed charges."

#### What Manufacturers Think Of It.

Following are some opinions received by the Cycle Age concerning the proposed combination:

#### Heartily Favors a Combination.

I am heartily in favor of a combination on the right kind of a basis. In my judgment there could be a very great saving in expenses and in manufacturing. We could sell goods at what they cost now and pay 10 percent dividends on the capital required to form the combination. I think it would not only make bicycles cheaper than they are today, but that it would be much more profitable to all the bicycle makers to form

such a combination. From the raw material to the closing of the sale, at every step, there could be a large saving made by centralization of all the bicycle plants. Such a combination would control the business, as no maker, singlehanded, could attempt to fight so large a combination. I believe that everybody would make more money, be happier, and the public would get their goods for less money than they pay for them today.

I am opposed to trusts which are started to raise prices, but I am not opposed to trusts where their object is to reduce the cost and at the same time give the public goods cheaper than ever before.

In conclusion, will say I am heartily in favor of the effort now being made to form a combination, and hope it will be successful.

H. A. LOZIER.

Cleveland, O.

#### Would Benefit Makers and Dealers.

Our opinion of the proposed combination of bicycle manufacturers is that it would be a very desirable thing if properly handled. The benefit, in our opinion, would be felt alike by the manufacturer and the dealer. If one big combination were handling the whole bicycle business, the general expense could be made much smaller. The selling expense in the bicycle business has always been much too large. The cost of manufacturing could also be reduced by the right kind of a combination. We would be decidedly in favor of such a combination.

FULTON MACHINE WORKS.

Chicago.

#### Advantages of Organization.

In the absence of any definite information as to the methods proposed by the trust, and as the question covers such a wide range, it is difficult to make a candid and unbiased statement. The condition of the bicycle trade at the present moment is a peculiar one. From the close of last season up to within a short period, the prospects for an unusually successful season were never more promising. All indications pointed to an early as well as large demand from the jobbers, and, based upon this, many of the manufacturers ran their plants to their full capacity, making wheels ahead in anticipation of this demand. Nearly all the manufacturers of standard goods have orders booked ahead of their capacity, but we find with perhaps some few exceptions that orders so placed are held for specifications, tying up the capital invested, and in view of the near opening up of the small trade (which is most profitable), creating fears of a congested and unsatisfactory condition to the manufacturer later on. Those who have ample capital can stand this, but others must suffer either in strained financial conditions in extending loans, or by forcing goods on the market in order to realize, thus not only injuring themselves, but also weakening others through the forced cuts in values.

Under these conditions, and this latter has been a weak feature of the business for the past few seasons, any combination formed that will control and protect the general trade would be of undoubted advantage, and we believe none appreciate these conditions more than the makers of the so-called high grade wheels. The trade, both makers and sellers, want stability in prices and output; otherwise we have a constantly disorganized condition.

But will the creation of a pool or combination secure the golden results? The making of wheels has reached a point where small profits and good workmanship are the principal factors, and the public has been educated up to the knowledge that first-class wheels can be made and sold at a price that will reach the public's ability to buy. There are a large number of the makers of this class of goods who will be reluctant to surrender a good profitable business ahead of them and will be disposed to combat any interference with their rights. A combination that does not include all will fail of its ob-

ject, and a combination that does include all will be a very heavy undertaking and open the field for new business. If amicable arrangements can be entered into whereby prices can be maintained with those who do not wish to surrender their business rights and yet who will live up to an agreement reached of this kind, then the pool, trust, combination, or whatever name be given to it, would be most welcome and would infuse new life into the trade; but any combination looking to the extermination of the outside manufacturer would soon meet a condition of things worse than that of '97 or '98, when bankrupt wheels kept the trade poor and demoralized not only the makers and dealers, but the individual rider also.

In the general acceptance of the term trust, it is a proposition not favored by the people as a class, and yet a combination that will permit moderate returns of capital invested, give stability and permanence to the trade, means much to the community. It means regular wages and steady employment to the thousands who are in workshops, safety and security to the investor, and a benefit to the rider, who will be assured of honest work and faithful guarantees with his purchase. We know nothing of the proposed trust, nor of its contemplated way of dealing with the situation now confronting the trade, but, from the high standing of those whose names are prominently mentioned, we believe some happy medium can be reached whereby none may be injured and all who believe in true business methods may be benefited. Owing to the many labor saving devices controlled by this company and having a good financial backing, we feel that we are able to compete with any conditions that may arise; yet we, in common with all others, feel the ill effects caused by the weak concerns and unfortunate conditions. With this in view, we would be glad to see some plan perfected that would be to the mutual interest of all.

NATIONAL AMERICAN CYCLE CO.

Akron.

#### Will Benefit All Concerned.

We are inclined to favor such a movement and would lend it our support if it can be carried out on a sound basis. It cannot be doubted that it will affect beneficially all the interests concerned.

LEAGUE CYCLE WORKS.

Milwaukee.

#### Everything Depends on Management.

We prefer to suspend judgment on the question of the proposed \$50,000,000 bicycle manufacturing combination until we have all of the facts accurately before us. A combination of this kind properly and ably devised and executed would prove of great benefit to all concerned; otherwise a curse.

DAY MFG CO.,

Lake View, N. Y.

#### Would Join Only for Protection.

We view with alarm combinations of capital in all branches of trade, as it is a menace to the people of the United States. We would only join a combination of this kind for self-protection.

ADIRONDACK CYCLE CO.

Buffalo.

#### Price Cutting is Rampant.

The present season, as well as previous years, has witnessed quite a considerable cutting in prices in bicycles to the dealers and jobbers, and in many cases below the point of making any profit. We believe something ought to be done to stop this wholesale cutting of prices.

THOMAS MFG. CO.

Springfield, O.

#### Would Meet With Success if—

While the writer does not feel disposed to offer an opinion as being that of the Albany Mfg. Co., personally I am of the opinion that a combination composed of the manufacturers of bicycles and bicycle sundries,

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EL PASO, TEXAS, February 26th, 1899.

WAGNER & CHABOT, Wholesale Bicycles and Supplies.  
SAN ANTONIO, TEXAS, February 6th, 1899.

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Gentlemen:—We received a card from you on which was printed a testimonial from a cycle dealer in San Antonio, which we think is very good, but as this is a very much harder place on tires than that part of the state, we beg to say a good word in behalf of the MILWAUKEE TIRES. They are the BEST that money can buy. We have had the smallest tire you turn out on a Road Tandem, and it has never been punctured and has been in service for one year. We have the best and most reliable wheelmen in El Paso riding the tire and never any sign of a puncture. People that we used to get from one to two dollars a month from, that are now riding Milwaukee Tires, never call for any repairs at all, and it is common for the tires to go from one to six months without pumping. No one using MILWAUKEE TIRES in El Paso will hesitate to recommend them upon request. Yours,  
McCUTCHEON, PAYNE & CO.

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Gentlemen:—We are pleased to state that the pair of tires you sent us about six months ago have been giving excellent satisfaction. We believe the hardest test on a tire is to put same on the rear wheel of a tandem. We put one of the tires on the rear wheel of our tandem and the other on the rear wheel of a Collector's wheel, who uses his wheel very hard. Neither of these tires has yet had a puncture and are giving excellent satisfaction. We believe you to have the best tires of their kind made and for this reason have taken the exclusive agency for this section. As we have duplicated our order to you within the last 30 days you can know we are doing well. Will be pleased to recommend same at any time. Yours truly,  
WAGNER & CHABOT.

Representatives Wanted. Write for Prices and other information...

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# THE CYCLE AGE

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

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ALL remittances should be made to THE CYCLE AGE COMPANY.

## BRAZED OR MECHANICAL JOINTS

If there is any method of uniting one thin steel tube with another that combines strength with lightness in as high a degree as brazing, neither the manufacturing world nor the public have yet arrived at the point of believing in it with that deep faith which prompts final and decisive action. There may be a lingering hope of some day seeing a perfect mechanical joint, but in all the English, German or American mechanical joints, which have so far seen the light of publicity—except perhaps the “hydraulic” joint which has other disadvantages—there has been a plain showing of special provisions against rupturing the very tubing or lugs which were to be joined, and these provisions always meant an addition of metal and weight which did not strengthen the bicycle frame to endure the work for which it was built, but acted solely to resist new strains which were permanently put into the frame and made part of its constitution by the joining process.

Small binding surface with its attending dangers of rupture, or superfluous weight massed at the joints with the unavoidable accompaniments of disagreeable vibrations and “dead” running of the bicycle, have in the public’s judgment appeared to be objections fully as important as any that may be raised against brazing, even in England where the somewhat general use of tubing of small diameter and heavy gauge makes the mechanical joint more acceptable than it would be here.

Liquid brazing has now further removed the only valid objection which from the rider’s standpoint may be raised against brass as a joining agent. The danger of burning the steel tubing has been almost completely eliminated by the dipping process; and there seems to be little doubt that the process will be developed to the point where only a uniformly thin coating—if any—will be left on the joints and tubing externally. If this coating may then further be used as a substratum for nickeling or other forms of finish, there would seem to be little use for any other manner of making joints, even from the manufacturer’s point of view.

The whole question of frame building, however, will of course ultimately be determined by the relative economy of the different working methods by which generally satisfactory results may be obtained. If a mechanical joint were devised which would inspire the public with confidence and would merit it, and it also proved preferable for turning out a large quantity of bicycles in a short time or gave a better chance for attractive finish or relieved the small builder of the necessity of having a brazing equipment, it would undoubtedly gain popularity. This time may be far off yet, but the following communication from Henry Souther, well known to the trade as an expert on steel tubes and bicycle tests, will show that the idea of supplanting all brazing in bicycle frames with mechanical joints is not considered as premature by all to whose opinion practical connection with the bicycle industry and scientific training lend weight. Mr. Souther writes as follows:

To the Editor:—In your issue of March 16 you have rather an interesting article on a so called new way to remove brass from a brazed joint. A year or two ago while I was in the employ of the Pope Company a thing of that sort was hinted to me and finally thought out and tried.

Ordinary nitric acid attacks brass very rapidly, so it does steel. Very strong nitric acid attacks brass even more rapidly than the weak, if possible, and strange enough does not attack steel at all if kept cold. If action once sets in, however (it will if the acid is heated), the reaction is very violent, approaching the nature of an explosion, or at any rate being so violent as to cause the solution to boil over from a containing vessel.

Here then was a process that seemed perfect and likely to be a bonanza. It was tried; the thin layers of brass were removed

perfectly; but there were some large lumps of brass at several points as is usually the case. To get these off the whole joint was left in the acid; they came off all right, but while the acid was eating them off it ate itself into the nicely brazed joints where it was not wanted. The process was therefore a failure under the existing condition of things. If someone will only braze so as to leave a thin uniform layer of brass where it is not wanted, then the above scheme will do the work. It will be disagreeable to the workman and troublesome as all pickling methods are; but the manufacturers are so accustomed now to such troublesome things that they are regarded as being unavoidable and the only practical way. The best way to get rid of the brass left on the tubing after brazing is to do away with the brazing. With it will disappear pickling and filing.

Many so called mechanical joints have been made and tested here and abroad and have proved mechanical successes. As far as I know they have not proved commercial successes and it is quite possible that the trade is not yet ready for this radical change.

I cannot think that the manufacturer or the consumer will continue to believe much longer in the barbarous method of brazing with its necessary pickling and filing. In connection with brazing the delicate tubing used is submitted to the worst forms of maltreatment possible. First a high heat in contact with melted brass without subsequent treatment to restore it to the fine condition in which it was when it reached the brazer. Second pickling, which is most injurious to steel, and a fact acknowledged by all those familiar with the process. Finally the file, which at one misplaced stroke may cut half way through the thin walls of the tube, and then be skillfully covered up by some careful filing.

Believing as I do in the intelligence of our manufacturers, I cannot think they will continue this method with the easy way of avoiding it above referred to, even if they have to modify their commercial wishes for a while.

## CAPITAL FOR MOTOR VEHICLES

It seems not impossible that capitalists whose participation in the motor vehicle industry has been solicited in favor of steam, gas or electric vehicle construction may have been deterred by observing the aggregation of moneyed forces which are engaged to boom compressed air motors—an alleged competitor among forms of driving power. Capitalists are not anxious to enter into competition with a capital that overshadows their own.

It is also said that mercantile houses which had figured on replacing their horse stables, teamsters and freight wagons with automobile vans have halted in their deliberations and negotiations under the impression that the auto-truck syndicates in process of formation might soon be in position to contract for hauling merchandise at a figure which no individual firm could afford to overlook. All anxiety on this score seems, however, absolutely unwarranted, when it is realized that air motor syndicates have no more to do with the motor vehicle industry than have the fluctuations in cable car or trolley line street railway stocks. The money which has been—conditionally—subscribed for the syndicates is enlisted in the noble art of franchise grabbing. The political deals which lie back of them are organized with a view to insuring the votes of city fathers and the freedom of city streets. The locomotion contemplated is rail locomotion, preferably. The auto-trucks and air motor carriages stand in the background as words to conjure with, but represent in reality a form of automobilism which would not draw any capital on their commercial and mechanical merits, as compared with electric or other self-propelled vehicles. Were it otherwise, the stock of the syndicates would not have fluctuated, as it did, before any vehicles had been completed. The fluctuations would have waited on public and indisputable tests of fitness.

There is undoubtedly a large business in store for successful builders of self-propelled freight wagons. In the large cities stable room is costly, and the expenses go on from day to day independently, or almost so, of the variations in volume of work. Many commercial houses, therefore, prefer to contract for their freighting with companies that make this class of work their exclusive business. But the inconveniences of this system are many and grievous. The automobile freight van promises relief.

Its advantages are strictly those which recommend it for individual ownership, and it seems extremely doubtful if any syndicate will be able to offer sufficient inducements to secure hauling contracts from any but very small wholesale houses, after once the competition among motor vehicle constructors shall have produced a choice of suitable vehicles for this class of work. In this competition the compressed air syndicates hold the most remote chance of coming out ahead.

## REPAIR PRICE SCHEDULES

### Adopted by Organized Dealers and Repairmen in Minneapolis, Buffalo and Des Moines

Minneapolis, March 20.—At a recent meeting of the bicycle dealers and repairers of this city a strong organization was effected under the name of the Minneapolis Cycle Trade Association. Fully 80 per cent. of the dealers and repairmen of the city have already signed the constitution and by-laws of the association, and the majority of the others have signified their intention to do so.

The object of the organization is to promote the common interests of the members. A schedule of prices has been adopted, which is fair both to the dealer and rider, and every member of the association is required to deposit a specified sum with the treasurer as security for the payment of fines that may be assessed by the committee appointed for this purpose for any breach of rules of the association.

#### Only Members Secure Dealer's Prices.

Membership cards will be issued which will entitle all members to the privileges of the association and secure for them dealers' prices from local jobbers who are co-operating with the movement.

One object of the organization will be to induce jobbers to sell only to members of the association who are in good repute, and some system will probably be adopted of reporting to the association those wholesale dealers who sell to non-members at dealers' prices.

Meetings will be held the second Tuesday in each month, and a suitable meeting place will be decided upon that may develop into a general rendezvous for the bicycle trade.

Dues and membership fees are provided for, which, with fines assessed, will furnish a liberal fund for carrying on the work of the association.

#### Adopted Schedule of Repair Prices.

The following list of repair prices has been signed by sixty-six dealers and repairers of this city, and the association is hopeful of having them generally lived up to. Various associations in other parts of the country have secured copies and intend to duplicate them. It is quite certain that the cycle dealers of St. Paul will adopt the schedule complete:

#### Frame Repairs, Enameling Extra.

Cutting down frame and increasing drop . . . . . \$5.00 up  
Cutting down frame, no drop . . . . . 4.00  
Putting in new tube . . . . . 3.00  
Brazing broken tube . . . . . 2.00@3.00  
Joint . . . . . 1.50  
Rear fork ends, each . . . . . 1.50@2.50  
Rear stay tip . . . . . 1.50  
New head in . . . . . 3.50 up  
New seat post bracket in . . . . . 3.50  
Rear bent fork stay in . . . . . 3.00  
New upright stay in . . . . . 3.00  
And finishing new crank bracket . . . . . 5.00  
Lining up frame . . . . . .75@2.00

#### Repairs to Forks.

New fork stem . . . . . \$2.50  
New fork sides, each . . . . . 1.50@2.50  
New fork crown . . . . . 3.00  
Repair fork side . . . . . 1.00  
Repair fork stem . . . . . 1.00@1.50  
New tips, each . . . . . 1.00@1.50  
Truing fork front . . . . . .50  
Fork front and head stem . . . . . .75  
Head stem . . . . . .50

#### Enameling.

Plain enamel . . . . . \$3.00  
Transfers (extra) . . . . . .50  
Rims (extra) . . . . . 1.00

#### Lacing and Fitting Dress Guards.

Lacing ladies' machine all over . . . . . \$ .75  
Mud guard . . . . . .50  
Chain guard . . . . . .35  
(These prices include mohair cord.)

Fitting wire chain guard . . . . . .25  
Rear wheel guard and chain guard . . . . . .75

#### Repairs to Chains.

New link . . . . . \$ .25  
New link, each, additional . . . . . .15  
Cleaning chain . . . . . .25

#### Mending Handle Bars.

(Materials extra.)

New stem . . . . . \$ .75  
Turning over bar (nickeling extra) . . . . . .75  
Making new bar, finished . . . . . 3.50  
Cementing one grip on . . . . . .10  
Two grips on . . . . . .15

#### Sprocket Repairs.

New front sprocket, 22 teeth and less . . . . . \$2.50 up  
New rear sprocket . . . . . 1.50@2.00  
For each additional tooth in each, extra . . . . . .10  
Brazing sprocket to shaft . . . . . 1.00

#### Repairs to Wheels.

New front hub, at list; labor extra . . . . . \$2.00  
Read hub, at list; labor extra . . . . . 2.50  
Set best grade spokes, front . . . . . 2.00  
Set best grade spokes, rear . . . . . 2.50  
Rim and best grade spokes . . . . . 3.00  
Rim put in, plain . . . . . 2.00  
Rim put in, laminated . . . . . 2.50  
Rim put in, enameled, extra . . . . . .50  
Rim put in, G. & J. and Dunlop . . . . . 2.50  
Truing wheel . . . . . .25@1.00

#### Cleaning Machine and Bearings.

Cleaning wheel bearing . . . . . \$ .25  
Hanger . . . . . .50 up  
All bearings . . . . . 1.00  
Outside and oiling . . . . . .25

#### Putting in Spokes.

One spoke . . . . . \$ .25  
Each additional spoke . . . . . .10  
(Extra charges for special spokes.)

#### Cranks Finished.

Plain crank . . . . . \$ .75 up  
Spider crank . . . . . 1.25  
Two-piece crank . . . . . 1.50@2.50  
Special two-piece crank, at list, time charge . . . . . .50  
Crank key put in . . . . . .25  
Straightening crank . . . . . .25  
Straightening pedal pin . . . . . .25  
Plugging or welding crank end . . . . . .75  
Splicing crank . . . . . .75@1.00

#### Replacing Axles With New.

Hanger axles . . . . . \$1.50@2.00  
Wheel axles, each . . . . . .50

#### Lathe Work.

Old cones, dressed down . . . . . \$ .50  
New cones . . . . . .75@1.00  
Ball cups . . . . . .75@1.50  
Bolts . . . . . .25@ .50  
Nuts . . . . . .10@ .25  
Pedal pins . . . . . .75@1.00

#### Crating Bicycles.

Uncrating and adjusting new machine . . . . . \$ .50  
Crating machine . . . . . 1.00

#### Tire Repairs

Vulcanizing one place, tire on bicycle . . . . . \$ .75@1.00  
One place, tire off bicycle . . . . . .50@ .75  
Old stem hole and inserting new stem . . . . . .75  
Each additional place on same tire . . . . . .35  
Plugging, any tire . . . . . .25  
Each additional hole . . . . . .15  
Patching inner tube, tire on rim . . . . . .35 up  
Inner tube, tire off . . . . . .35  
Inner tube, and recementing tire . . . . . .50  
Clincher tire on rim . . . . . .25  
New valve and stem on inner tube tire . . . . . .50  
Cap . . . . . .05  
Inserting metal stem . . . . . .50  
Common valve . . . . . .25  
New inner tube put in, add to list . . . . . .25  
New end on inner tube . . . . . .50  
Cementing on tire . . . . . .25

#### Storing Bicycles.

Per month, not cleaned . . . . . \$ .50  
Per month, cleaned . . . . . .75

#### Rental Rates.

Week days—Single machines: First hour, 30 cents; each additional hour, 20 cents;

evenings, 50 cents, afternoons, 50 cents; one day and evening, \$1; one week, \$3; one month, \$8.

Sundays—Single machines: First hour, 35 cents; each additional hour, 20 cents; one day, \$1.25; afternoon, 75 cents; evening, 50 cents.

Week days—Tandems: First hour, 50 cents; each additional hour, 30 cents; one day, \$2; one week, \$5; afternoons, \$1; evenings, \$1; one month, \$12.

Sundays—Tandems: One day, \$2.50; afternoon, \$1.50; evening, \$1.

### BRIGHT PROSPECTS IN IOWA

#### Improved Industrial Conditions and Reduced Lists Will Increase Sales—Agents Hustling.

Des Moines, March 20.—Present trade conditions indicate that more standard bicycles will be sold here this season than cheaper grade machines. Agents are disposed to carry a better grade of machines than they have for the past two years. This is brought about apparently by the trouble and expense they have been put to in keeping the cheap wheels formerly handled by them in condition. In certain localities where nothing but cheap machines have been sold heretofore, however, an honest high grade bicycle is hard to find.

#### Laboring Men Become Purchasers.

Indications also point to many more sales of bicycles this year than heretofore. About 1,500 new bicycles were sold in Des Moines last year and the trade will probably increase fully twenty-five per cent. Laboring men are all employed and at higher prices than have been paid for some years. Since the prices have been reduced they are buying bicycles. Business generally is in good condition and bicycle agents are using every means to increase sales. Some of them are sending their salesmen out to canvass from store to store for possible purchasers.

Bicycles retailing at from \$35 to \$50 will sell best here. No curbstone agents have arrived on the scene so far this season. Thirty-inch wheel bicycles are not being sold nor does the prospect look encouraging for this model. More chainless bicycles will be sold than last year, however, on account of the reduction in price.

#### Experienced Dealers Have Reduced Lines.

Fourteen agents are now carrying bicycles in stock, each handling from two to thirty-four different makes. But agents with years of experience in the bicycle business are carrying but two or three standard makes, believing it easier to talk more intelligently on these than on two or three dozen. Many customers become confused when taken through a store and shown many lines at different prices and varied construction.

Most of the dealers have all their '99 samples on the floor and a fair number of sales have been made. As soon as bright, warm days come large numbers of sales are anticipated.

#### Renters Will Become Buyers.

Since the prices of bicycles have been reduced the returns from renting of singles and tandems will be materially less because riders who used to rent them will buy their own machines.

A great many second-hand bicycles were taken in exchange or as part payment for new ones last year, and the prices that were allowed were generally too high, necessitating agents to sell them at no fixed price, which resulted in losses to many. This year the dealers have united and pledged themselves not to allow more than \$15 for any second-hand bicycle taken in trade.

#### Schedule of Repair Prices Adopted.

The following schedule of repair prices was adopted by the local dealers and repairmen, and there has been very little

deviation from them since the schedule went into force:

Axles, front or rear, die made.....	\$.50
Front or rear, lathe made.....	.25
Crank, plain.....	1.50@2.00
Cleaning all over.....	1.00
Crank hanger bearings.....	.25@.50
Front wheel bearings.....	.25
Rear wheel bearings.....	.25
Head bearings.....	.25
Pedal bearings.....	.40
Chain and oiling.....	.25
Cranks, each.....	1.25@1.75
Cementing on tires, each.....	.25
Cone, crank hanger, stationary, not threaded.....	.75
Crank hanger, threaded.....	1.00
Crank hanger, stationary, threaded.....	1.00
Crank hanger, adjusting.....	1.00
Front or rear wheel.....	.75
Chain link or part of link put in.....	.25
Cotter pins, each, put in.....	.25
Enameling frame.....	4.00
Rims or refinishing same.....	1.00
Fork tips, each.....	1.00
Per pair.....	1.50
Straightening fork.....	.75@1.00
Lining rear fork.....	.75@1.00
Fork sides, each.....	1.50
Per pair.....	2.50
Grips, per pair.....	.25
Each.....	.15
Pair, put on.....	.35
Each, put on.....	.20
Repairing broken handle bar, without plating.....	1.00
Repairing broken handle bar and plating.....	1.50
Lacing chain guard.....	.25
Rear mud guard.....	.25
Punctures, per hole.....	.25
Rims, plain.....	.50
Laminated.....	1.00
Plain, put on.....	2.25
Laminated, put on.....	2.75
Spokes, each.....	.05
Per dozen.....	.50
Single, put in.....	.25
Two put in.....	.40
Three put in.....	.50
All new, single wheel.....	2.00
All new, two wheels.....	4.00
Sunbeam, single wheel.....	2.50
Sunbeam, two wheels.....	5.00
Steering head repaired when broken	1.00
Striping frame.....	1.00
Vulcanizing, single hole.....	.75
Valve stem.....	1.00
Valve stems, metal, put in.....	.75
M. & W., put in.....	.35
Valve, M. & W., put in.....	.25

**REPAIR PRICES IN BUFFALO**

Dealers' and Repairers' Association Adopts Last Year's Schedule with Few Changes.

Plugging single tube tires.....	\$.25
Vulcanizing, plugs.....	.50
Patches or rim cuts.....	.50 to \$.50
Valve stems.....	.50
Valve stems and new valve.....	.75
Metal base valves put in.....	.50
Patching double tube tires.....	.50
Putting in new inner tubes, tube not included.....	.50
Valve caps and washers.....	.10
Valve springs and plungers.....	.15
Cementing on tires.....	.25
Inserting tire fluid, each.....	.50
New valves put in.....	.25
Axles, front and rear, each.....	.75
Crank axle.....	2.00
Brazing, frame and fork (when set up complete).....	1.50
One new tube in.....	3.00
Two new tubes in.....	4.00
Enameling above.....	1.50
Brazing fork stem.....	1.50
New fork crown, enameling and nickeling.....	3.00
One new fork side.....	2.00
Two new fork sides.....	2.50
One fork tip.....	1.00
Two fork tips.....	1.50
One joint in frame and enameling	3.50
Chain bolt.....	.10
Seat post bolt.....	.15 up
Handlebar bolt.....	.15 up
Building frame, material furnished.	6.00
Chain link.....	.25
Chain link, extra.....	.10
Cones, each.....	.75 up
Cases, each.....	.75 up
Cranks, plain.....	.75
Cranks straightened.....	.25
Cotter pin put in.....	.25
Cementing grips, pair.....	.10@15
Cleaning wheels.....	1.25
Enameling frame and fork, plain...	2.25
Frame and fork, striped.....	2.50
Frame and fork, white and delicate colors, plain.....	3.25
Frame and fork, white and delicate colors, striped.....	3.50
Frame and work, white and delicate colors, transfer.....	3.75
Enameling fork.....	.40
Rims.....	.75
Spokes.....	.50

Guards.....	.25
Frames remodeled.....	6.00
New fork nickeled and enameled...	3.50
Guards, dress, with fittings.....	.75
Chain, with fittings.....	1.00
Dress, laced.....	.50
Chain, laced.....	.35
Chain, laced all over.....	.75
Hubs put in, price of hub not included, each.....	1.75
Lining frame.....	1.00
Front fork.....	.50
Nickeling, fork crown and tips.....	.50
Fork crown.....	.35
Fork crown, fork complete.....	1.00
Sprocket.....	.50
Handlebar.....	.50
Single crank.....	.25
One-piece crank.....	.50
Spokes.....	.02
Seat post.....	.25
Hubs, per pair.....	.75
Pedals, per pair.....	.50
Cases and cones.....	.10
All nickel parts of machine.....	5.00
And enameling whole machine.....	7.00
And enameling whole machine, less wheels.....	5.00
Rims put in.....	2.00
Sprockets, rear.....	.75 up
With spider.....	2.50
Put on, price of sprocket not included.....	.50
Spokes.....	.10
Truing wheels.....	.25 up
Time, per hour.....	.50

**WINONA GETS IN LINE**

Forms an Association Including Every Dealer But One—Repair Price Schedule Adopted.

The bicycle repairers of Winona, Minn., have met and organized the Winona Bicycle Dealers' Association, the object being to maintain a just schedule of prices on repairs. The following officers were elected: President, W. A. Sorg; vice-president, E. J. Davis; secretary, Frank Vila; treasurer, T. J. Heller. Every bicycle dealer in town with one exception has joined in the movement, even including the department store. In addition to regulating repair prices the association has arranged a system of checking up the delinquent purchasers, so that every dealer can have a complete list of bad customers in his vest pocket.

The use of a pump will be freely granted to riders, but a charge will be made for pumping up tires.

The list of repair prices is as follows:

Axles, front or rear.....	\$.50
Bolts in handle bar clamps.....	.25
In seat post cluster.....	.25
Balls, sizes up to 3/8, each.....	.02 1/2
3/8 and up, each.....	.05
Putting in.....	Extra
Chain adjusters, stampings, each...	.25
Forgings, each.....	.25
Chain, one link put in, block or sides.....	.20
Taking out one link.....	.10
Cotter pin, one, sold at retail.....	.10
Put in and fitted.....	.15 up
Cup, for common hub.....	.50
Made to order.....	1.00
Cone, common hub, made to order.	.75
For crank hanger, made to order, each.....	1.00
All adjusting cones made to order	1.00
Cups for head, made to order.....	1.00
For head sold at retail.....	.50
Welding cranks, each.....	1.00
Cranks, new, each.....	1.00
Crank shaft, old style, 2 key way..	2.00
Adjusting nut on.....	.35
Cleaning bicycle, inside and out...	1.00
Outside and oiling.....	.25
Oiling only.....	.10
Cleaning spokes when rusty.....	.25
Dress guard, lacing same.....	.50
Chain guard, lacing same.....	.25
Dress and chain guard, lacing both	.75
Chain guard put on.....	.75
Dress guard put on.....	.75
Fork stems spliced.....	.75
New fork steps.....	1.50
Fork crowns, arched.....	1.50
Plate crowns.....	2.00
Fork sides, each.....	.75
Fork tips, each.....	.75
Forks, complete.....	3.50
Enameling forks, extra.....	.50
Head lock nut and washer.....	.50
Upper tube.....	2.50
Lower tube.....	2.75
Seat post tube.....	3.50
New head lug.....	2.25
Rear stays spliced.....	2.00
New rear stays.....	2.50
Seat post cluster.....	3.00
Hanger bracket.....	4.50
Rear fork ends, each.....	1.00
Braces in the rear forks.....	.75
Splicing seat post or handle bars..	.50

Common grips.....	.25
Leather, turned or covered.....	.50
Puncture, double tube tire, wheels in frame.....	.50
Double tube tire, wheel out of frame.....	.35
When inner tube is out of casing	.25
Patching inner tube when hole is located.....	.10
Clinchers on wood rims.....	.25
All other clinchers, by the hour....	..
Punctures, single tube tires.....	.25 up
Puncture cure, one tire.....	.50
Two tires.....	.75
Front sprockets.....	2.00 up
Rear sprockets.....	1.25 up
One new rim put on, with old spokes and hub.....	2.00
Enameled rims, extra.....	.35
Clincher rim put on with old spokes and hub.....	2.50
Rim and spokes.....	2.75
Per pair.....	5.25
One spoke, front wheel.....	.25
Two spokes, front wheel.....	.35
Three spokes, front wheel.....	.45
Each additional spoke.....	.05
One spoke, rear wheel.....	.25
Two spokes, rear wheel.....	.40
Three spokes, rear wheel.....	.50
Each additional spoke, rear wheel.	.05
Full set of spokes for a pair of wheels.....	2.00
Spokes sell retail for the first five, each.....	.05
Each additional after first five.....	.02
Sunbeam spokes, double price at present.....	..
Truing up wheels, per hour.....	.40
Tires cemented on rims, each.....	.15
Two for.....	.25
Inner tubes, plain, put on.....	1.50
Quick repair, put on.....	1.75
When not put on, inner tubes sell for 25c less.	..
Vulcanizing.....	.75 up
Valve and stem.....	.50
Metal base.....	.50
Valve only.....	.25
Valve stem only.....	.25
Using old valve.....	.35
Rent of Bicycles—First hour.....	.25
Three hours.....	.50
One-half day.....	.75
From 7 a. m. to 6 p. m.....	1.00
Evening.....	.50
Tandems, double rate.	..

**REFUSE TO COMBINE.**

Dealers of Lynn Decline to Join Movement in Surrounding Towns to Uphold Repair Prices.

The bicycle dealers of Lynn, Mass., have been approached by representatives of a combine formed by the dealers of Salem, Beverly, Danvers, Peabody, and other surrounding towns, but the Lynn men have refused to join. The object is to insure a uniform rate of prices for repairing bicycles and furnishing stock.

The repair business is very important to Lynn dealers, as many riders pass through the city. Two previous attempts to form a combine of the Lynn dealers proved ineffectual. The prices adopted by the dealers of the neighboring cities and towns are as follows, on the repairs most generally called for:

Repairing puncture, 50 cents; plugging or quicksealing punctures, 25 cents; new inner tubes, butt ended, \$1.50; endless inner tubes, \$2; new spokes, 25 cents apiece, for two; over two, 15 cents apiece; new chain links, 25 cents; enameling, from \$3 to \$5, according to the fancy work; cleaning, \$1.50.

Lynn dealers will not make repairs on manufacturers' guarantee. All parts of standard bicycles will be furnished at catalogue prices, with the labor added, but new machines will be sent to the manufacturers for repairs.

**Warwick Creditors to Receive Dividend.**

The Warwick Cycle Manufacturing Company of Springfield has been ordered by court to pay a 5 percent dividend to its creditors in addition to the 10 percent dividend previously ordered. All preferred creditors not paid were ordered paid in full.

The Colorado legislature has a bill before it which provides that the second Saturday in June shall be a public holiday, to be known as "Wheelman's Day."

## BICYCLE MAKERS TO COMBINE

(Continued from page 633)

with proper officers and judicious management, could not fail to meet with success. But it should be the purpose of a corporation of this magnitude not to endeavor to obtain extortionate prices to realize fictitious profits, as in all cases of this character it is usually only a question of time that they become failures. I am of the opinion that combines should rather be a means of lowering prices to a fair and legitimate profit than otherwise, and when carried out on that line it cannot help but succeed, and at the same time prevents irresponsible concerns without capital or credit from entering into the business with only one view, and that to ruin prices, obtain all of the goods they can on credit and wind up with an assignment before the close of the season. I believe a combine such as is contemplated will do away largely with just such concerns and keep them out of trade, for they certainly are of no benefit either to the public or other manufacturers.

There can also be a great saving in the running and management of a plant or plants of this character in many ways too numerous to mention. I had, before entering into the tube business, about twenty years' experience in the jobbing trade, and I am well satisfied that our profits could have been largely increased and goods sold at a closer margin had there been a combination in our line such as the one contemplated.

ALBANY MFG CO.

Albany, Ind.

### A Combination That Would Win.

We have not heard much of the proposed combination of bicycle manufacturers. There are combinations which succeed and those which do not. We believe a combination in the interests of the bicycle manufacturers which would maintain a regular price, regulate the number of bicycles to be manufactured, cut off a large number of traveling men, reduce the expense of selling, and thereby reduce instead of increase the cost to the consumer, would be a good thing for all interested parties, and would be a combination which would win. We do not believe in a combination which throws a lot of watered stock on the market for the benefit of a promoter which must be paid for by an increased cost to the consumer, if paid for at all. We do not see that such a combination would affect tire makers one way or the other.

INDIA RUBBER CO.

Akron, O.

### Would Help the Rim Business.

Relative to a combination of bicycle manufacturing interests, wish to say our opinion is that it would be a good thing. Have not the time to give our reason and arguments, but we have a lot of them. We think it would help the rim business, and it is much in need of help.

Eaton, Ind.

EATON MFG. CO.

### Combination Will Benefit Everybody.

We are heartily in favor of such a move. We believe it will check the growing tendency to run down the bicycle business and establish it on a firmer basis. We are certain it will be a benefit in the end to every manufacturer, jobber and retail dealer. It will prevent cutting of prices and equalize prices.

BLACK DIAMOND CYCLE CO.

Kutztown, Pa.

### All the Year Round Manufacture.

It would undoubtedly produce a stability in the manufacture of bicycles which would enable bicycle makers, as well as those who manufacture accessories, to run their establishments through the entire year, and in that way be an advantage not only to the manufacturers, but also to the laborers em-

ployed in the various establishments. So far as its effect upon the line that we manufacture is concerned, we think it would be an advantage, because we would not be obliged to run our establishment over time during six or eight months of the year, but could make the goods with more deliberation by working the entire year.

WESTERN AUTOMATIC MACHINE SCREW CO.

Elyria, O.

### Much Money Required to Control.

We have so few details in regard to the proposed combination of bicycle manufacturing interests that we are not in a position to speak intelligently upon the subject. The newspaper accounts differ so materially that we are unable to understand just what the combination's objects are.

A combination of manufacturers to control the bicycle manufacturing business would find it very difficult to accomplish the desired end. It would seem to us that it would be necessary to control not only the output of tubing in this country, but also the European products. Unless this were accomplished it would be necessary to buy out all of the fittings people, as there are so many houses who inside of a week could commence building bicycles. There are many factories making complete fittings for bicycles, and, with a stock of tubing, nothing would prevent their manufacturing wheels in quantities.

Heavily capitalized trusts or combinations in any line of business are usually of great benefit to the controlling interests; that is, the larger concerns swallow up, as it were, the smaller ones, giving stock in the syndicate for appraised value and business of the smaller concerns and controlling this stock as they may see fit in the future. Small concerns, as a rule, are much better off to stay out of large combinations, unless they can sell out for cash. Stock issued by a syndicate may or may not be valuable, and is often manipulated to the extent that the smaller holders are compelled to dispose of their stock.

We cannot state what the effect of the proposed combination will be upon any part of the bicycle industry until we have fuller details than we now possess. The bicycle industry is spread over so large a field that it would in our opinion require a great deal of cash capital to control it.

Chicago.

GEORGE G. BRANDENBURG.

### Difficulty of Adjusting Values.

We have an idea that, owing to the probable difficulty of satisfactorily adjusting values, the combination will hardly materialize. However, as to its effect on builders and the cycle trade in general, in our opinion it would affect neither to any great extent as long as the demand for wheels and the excellent financial condition of the country continue as at present.

Cleveland, O.

W. E. KELLY MFG. CO.

### Hostile to Parts Makers.

We hardly think that the combination could be accomplished, especially when the parts men are offering to all who have money to pay any individual part or complete parts for a bicycle at such prices as now prevail. It is certainly ridiculous the way things are going in the bicycle trade. We know of mechanics working in iron works sending for parts and making their own wheels. All repairmen are now manufacturers of bicycles. You cannot crush these out. After the combination they will spring up like mushrooms all over the country, and there is enough of them now in every town to supply local trade.

If the combination of bicycle interests, with a capital of \$50,000,000, could crush out

the parts people, both finished and unfinished, it would be a good thing, but we do not think that could be accomplished. Still, there is no knowing what can be done until a trial is made. The gratuitous distribution of promiscuous parts through the guarantee does much to demoralize the bicycle trade. Ninety-nine bids fair to be worse than '98 as '98 was worse than '97; what the end will be is hard to say.

CYCLOID CYCLE CO.

Grand Rapids.

### Other Combines May Arise.

Any objections on the part of non-interested parties would be of no avail whatsoever, as the era of trusts and combines is upon us and there is no way of escaping its baneful influence, its consummation being inevitable. Every large interest will eventually be controlled by a trust of some character, especially for the purpose of reducing general expenses, an item which in itself will indirectly increase prices, although an advance will not actually take place.

This combination, if accomplished, will naturally force other branches of the industry to adopt similar tactics in order to protect their individual interests against the possible dictatorial manifestos of the other combine. It is but a question of the saying, "The big fish eat the small," being changed to "The whale eating the big fish," when trusts will have become general and the policy of "everybody for himself and the devil take the hindmost" will be exemplified in an organized plan.

INDIANAPOLIS DROP FORGING CO.

Indianapolis.

### Would Not Care to Enter Combine.

We do not think that we would care to enter a combine and be tied down to doing business on the basis that the combination seems to lay down. For instance, they seem to be inclined to agree to not sell their wheels below a certain price. Our objection to such a proposition as that would be this: While we know our goods are just as good and better than a great many, at the same time the fact of these people who compose the combination having lots and lots of capital at their disposal, they would have the advantage over the manufacturer who did not have unlimited capital to back him up in pushing his goods to the extent these other people are able to do. We would not have capital enough to advertise so extensively, nor to hire traveling men to cover every piece of territory that these people could afford to do; so therefore we think we would be putting our neck in a noose by tying up on any such agreement.

We do not think that they can make a success of it without the trust buys up the smaller manufacturers and the parts men, or have some combination formed with the parts men to prevent them from selling to the small dealers. We feel that it is immaterial to us whether they form a combine or not, as we are pretty certain that we can hold our own with the best of them in regard to quality of goods and price. We think really if they form a combination, we shall find it beneficial to us if we keep out of it, as we certainly would be able to get lots of business that the members of the combination would have to refuse.

Chicago.

SUDAN MFG. CO.

### Saddle Makers Are Silent.

We are only manufacturing bicycle saddles and are not in a position to give an intelligent opinion in regard to the proposed formation of a combination.

Chicago.

CUTTING-KAESTNER CO.

### Would be Productive of General Good.

The proposed combination of cycle manufacturers, in our opinion, would result in good to the general trade. Prices can be maintained, which will assure a living profit; many undesirable trade features can be eliminated; options, which do no earthly good and create endless expensive compli-



TRADE MARK



100



MANUFACTURERS ARE FURNISHING

# DUNLOP DETACHABLE TIRES



On their wheels AT NO EXTRA COST, either wholesale or retail. Agents should see that the manufacturers whom they represent are among this number. Write us about it.



1899 WILL BE A DUNLOP YEAR



THE AMERICAN DUNLOP TIRE COMPANY



BELLEVILLE, N. J.

CHICAGO, ILL.

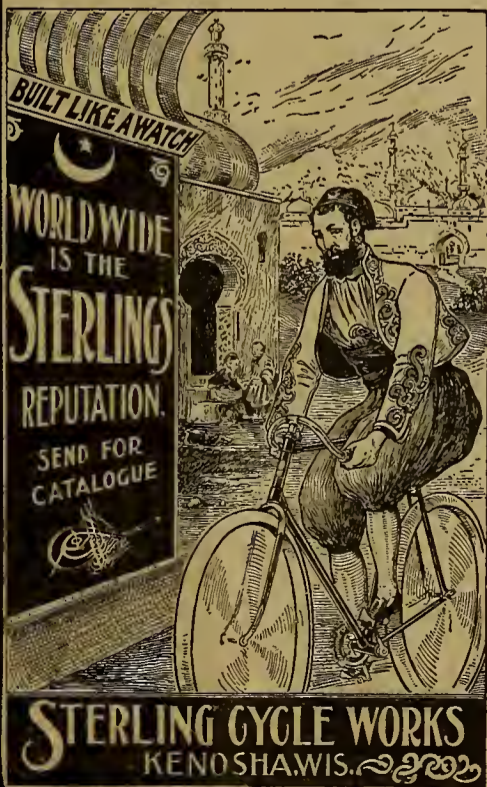


TRADE MARK



# THE STERLING

"BUILT LIKE A WATCH"



ANYONE CAN BUILD A BICYCLE,  
Run a hotel, paint a picture, or play a trombone,  
BUT THERE IS A DIFFERENCE.

Paint and plate will doctor a cheap bicycle into an excellent imitation of the high grade article, but a month's usage of each will discover a difference, the parallel of a donkey to a race horse.

The intelligent purchaser will not be deceived into squandering his money upon an unknown cheap wheel, when an acknowledged high grade can be bought for a few extra dollars.

STERLINGS are known as the HIGHEST STANDARD and the agency is a valuable franchise. Would you like to have our agency proposition?

## STERLING CYCLE WORKS

KENOSHA, WIS.

cations alike to manufacturer, jobber and retailer, can be restricted. The guarantee can be held at a point which will be fair to all. In short, we can see where even a partial unity of interests will be productive of advantage alike to manufacturers and the general public and will certainly do no harm to the dealer, as it will assure him a fair profit and fair competition, which he can not depend upon under existing conditions.

Toledo.

COLTON CYCLE CO.

#### Interests Are Too Diversified.

Anything that would lift the bicycle business, or help to do so, from its present condition would be a blessing. Nothing that we can think of can do it further harm, as it has already received all the body blows that in our imagination could come to it. If the idea could be carried out it would steady prices and regulate a lot of existing evils, but we hardly think it feasible, as the interests are too diversified.

Chicago.

MANSON CYCLE CO.

#### Waiting for an Invitation.

Personally I am very much in favor of a combination of bicycle manufacturing interests, and I hope that we will be extended an invitation to join.

NORTH BUFFALO WHEEL CO.

Buffalo.

#### Much Interested in the Project.

As this combination has just come to our notice, we are really not in a position to state our opinion until we are more familiar with the details of the project. We are much interested in the outcome of this combination, but do not feel that we can offer any arguments for or against the project.

WORCESTER FERRULE &amp; MFG CO.

Worcester, Mass.

#### Combinations Are Fashionable.

We have no comments to make, other than such combinations appear to be fashionable.

Akron, O.

DIAMOND RUBBER CO.

#### No Opinion to Express.

We have no opinion to express concerning the proposed combination.

Dayton, O.

DAVIS SEWING MACHINE CO.

#### Chain Makers Remain Neutral.

Since we are merely manufacturers of one of the parts used in connection with bicycles, we deem it advisable to remain neutral, and refrain from expressing any opinion whatever.

INDIANAPOLIS CHAIN &amp; STAMPING CO.

Indianapolis.

#### Strongly Approve the Project.

Without having time to give the proposed combination of bicycle manufacturing interests a great deal of thought, our opinion is this: We know of no trust already formed which would show as good results, on a capital such as proposed, as the bicycle trust, providing all the large makers, or nearly so, are included in it. The saving in the expense of doing business of itself would pay quite a dividend on the capital. It certainly would be a good thing for those entering a trust of this kind if admitted on a proper basis. It would not increase the price of well made bicycles to the consumer, and we are at a loss to see any losers in the formation of such a trust. Vast amounts of money are spent by large makers in self-defense, creating expenses, because competitors do likewise. It certainly would put the bicycle business on a firm basis, so that each year the trade would not be upset at the beginning or during the bicycle season by promiscuous quotations from unreliable houses, who quote in hopes of delivering the goods, but who find they can not after making the contracts or receiving orders.

As to how the combination will affect the bicycle industry and the retail trade, we should say that it would be better for the rider as well as for the maker. Houses like ourselves, who are capable of making large quantities of bicycles, pedals, hubs and all kinds of bicycle parts, would be converted

into the manufacture of what they could do best and most economically; other houses of the same nature would work on what they could do best, and, in consequence, the factories would be running the year around, making parts and bicycles for their own people, instead of making them up in large quantities ahead, before they know to whom they are to be sold. This would probably do away with the manufacture of wheels with antiquated parts, which are put on the market, and which the rider or agent would never be able to find parts for to make repairs. Agents would be shown their samples early in the season and they would be ready to place their orders at any time, which, we think, would be a great advantage to all.

We are heartily in favor of a combination of this kind, providing every concern is admitted on a reasonable basis, and that there is no underwriting or extravagant money paid to promoters on the outside.

Worcester, Mass.

SPEIRS MFG. CO.

#### Makers Could Not be Controlled.

Regarding the proposed combination of bicycle manufacturing interests, we beg to say that we cannot see how a combination of this sort is practical. Manufacturers of bicycle parts and fittings are so numerous that it would be impossible to hold them all in line. They could not be controlled. Furthermore, the manufacture of bicycles can be engaged in with too much facility to do more than correct trade abuses. Any material advance in price, or effort to maintain prices above the natural competitive level, would result in new people coming in. They would get the business, and the members of the trust would find they had defeated the very end they sought to secure. Whether the attempt is made to control the prices of bicycles in general, or of chainless only, the result would be the same.

Very few patents can afford absolute protection, even when the owner of them has unlimited capital with which to fight his case. As there always have been goods of varying qualities for sale at varying prices, so there always will be in the bicycle business as well as any other, and any attempt to restrict production, hold up or advance prices in a business so easily engaged in as the manufacture of bicycles will result disastrously to the trade in the end.

M. D. STEBBINS MFG CO.

Springfield, Mass.

#### EFFECT UPON ENGLISH TRADE

##### Possibilities Afforded by the Proposed Consolidation of American Bicycle Manufacturing Concerns.

Among the arrivals from England on Saturday last was F. E. Baker, a member of the Cycle Engineers' Institute, who as editor of the Cycle Referee in London made a close study of American methods and products and is better qualified, perhaps, than any other man connected with the trade to express a reliable opinion on the possible effect of the cycle combination on the British industry and its prospects of success in the market. Indeed, one of the objects of his visit is to consult with an American manufacturer who purposes the establishment of a branch in London. Mr. Baker writes as follows:

In order that the possible effect upon English trade, and the probabilities of an extension of exports of American bicycles to that country as a result of a consolidation of American capital and manufacturing facilities, may be fully considered, it is necessary to first arrive at a conclusion as to the dominant characteristics of English trade from individual and collective standpoints.

First in importance must be cited the radical differences between the origin and nature of the factory methods of the two countries. The repetition production of American cycle factories is, presumably, the outcome of the unique developments of the same system of manufacture in the watch, typewriter and sewing machine factories. On the other hand, the practices adopted in the English machine shops are the direct outcome of traditions and experiences of the early school of English engineers. That

means that the shop equipment at first consisted, and in some cases still consists, largely of ordinary screw cutting and sliding lathes, modified of course in some instances by the ingenuity of the charge hands employed. Until recently, and even now in at least one notable instance, the method of production followed was entirely similar to that pursued in English engine practice, where a fitting shop is interposed between the machine shop and finishing department. In this fitting shop the bicycles were assembled in the grey—that is, prior to enameling or plating. When completed, each machine was stripped and the parts numbered; so that when finally assembled after finishing the same set of parts could be located in the same order.

It will be observed that this method was tantamount to the construction of individual machines, and as a natural consequence it was customary to build each bicycle in accordance with each individual customer's requirements and specifications. Traveling men, instead of, as in modern times, starting out to sell a standard output, called upon agents and collected detailed specifications of customers' requirements. This will serve to indicate the manner in which the cost of production of English bicycles has been far in excess of the requirements of the public.

The customs referred to have had another and equally disastrous effect upon the market. The ordinary buyer in England has become the most exacting in his demands, so far as detail of refinement in construction and equipment is concerned, of any buyer in the world. This disposition on his part has been further encouraged by the development of the assembler. This latter is a modern factor in the economies of the English cycle business, and, owing to the progressive policy pursued by manufacturers of parts, there is excellent reason for believing that the aggregate output of assembled bicycles exceeds that of the factory made machine. The parts are produced by repetition methods in splendidly equipped factories, none of which probably is surpassed in America. The parts are better designed, are more elegant and contain more talking points than the products of the average bicycle maker. The English method of construction from machined fittings lends itself to the easy assembling of parts and trivial adaptations demanded by the idiosyncrasies of the builder or customer.

If the foregoing assertions are analyzed it will appear that the only possible deductions from the conditions at present prevailing are: First, that among educated cyclists, as distinct from the new buyer, the demand is such that repetition methods or productions are, if not impossible, at least incapable of being utilized to complete advantage except in the production of parts; second, that a bicycle produced by repetition means will not meet with as complete success in England as in other markets. A superficial study of these statements might lead to the conclusion that, consolidation or no consolidation, the field for the exploitation of American cycles in England will always prove limited. Such, however, would be an entirely erroneous assumption, which fact I will endeavor to demonstrate.

An Englishman will view with equanimity a diminution of home production in any industry, granted that the product itself is cheapened when delivered to the customer, the basis of the argument being that it is advisable to produce only such goods as can be manufactured more cheaply than they can be purchased. Should any given article be produced in a foreign country at a price with which the home producer cannot compete, the latter will gradually divert his energies into channels where they can be more profitably employed in the production of goods which will, either directly or indirectly, be traded for that product which first engaged his attention.

It is at this point that the possibilities afforded by the proposed consolidation of American bicycle companies become apparent. There is in England a huge population, of athletic and healthy temperament but comparatively restricted wage earning capacity, which, at the present moment, offers an unexploited field to men of enterprise who can and will place on the market in sufficient numbers an efficient bicycle to retail at prices ranging between \$25 and \$50. Those figures are well within the reach of American makers, although, at present, almost impossible for the English manufacturers.

It goes without saying that in order to insure success the same must be deserved. The requirements and natural prejudices of the market should necessarily receive strict attention. In that connection one is bound to recognize an exceptional opportunity afforded the proposed company, inasmuch as with the unique facilities at its disposal it would be in a position to employ at least one of its factories on goods expressly designed and exclusively manufactured for the market under consideration.

It is not for the writer, an Englishman with a strong national bias, to enlarge on the possible consequences of such a procedure if backed by ample capital, aggression and organization, but with a knowledge of the facts already referred to, the possibilities appear illimitable.



**PUBLIC REFUSES THE BAIT  
BIG BARGAINS FAIL TO DRAW**

**Sellers of Low Grade Bicycles in Buffalo  
Becoming Desperate—Trying Hard  
to Unload.**

Buffalo, March 20.—Judging from the fairy stories that are being told in the advertising columns of the local press by the concerns selling the cheaper grades of bicycles and the amount of space taken up in expatiating upon the virtues of their respective cycles, trade with these firms is in a very bad way. Meanwhile the public continue to "fight shy" of the much lauded bargain bicycles, realizing the fact, as one man put it, "that something is very much amiss when it requires so much advertising to sell an article for which there is the universal demand that exists for the bicycle."

The advertisement of a recent addition to the retail ranks reads as follows:

This is the time of the year when almost everyone is looking for a wheel, and the fact that — has cut the price on every wheel in his store has set the people thinking and the dealers wondering.

Last week he sold a carload of \$30 wheels for \$17.50 each. This week he has just received a carload of very fine high-grade wheels that sell for \$45 and decided to offer these wheels on Friday and Saturday at the low price of \$26.85.

The dealers will all tell you that they are no good, and that they won't wear. But just remember that we are a responsible house, and that we guarantee every wheel we sell.

Our line is the largest and finest in the city and no matter what dealers tell you, we want you to call and examine them.

We want to sell 3,000 wheels and we want to make just \$3.00 on every wheel, so come and take your choice.

We sell on easy terms.

**Looks Gloomy for Cheap Dealers.**

That the riding public is not to be tempted with the same bait twice, seems to be just dawning upon these people. They are beginning to see the handwriting on the wall now, however, and an epidemic of fear has spread among them and as a last resort the advertising columns of the newspapers are pressed into service with all sorts of ridiculous stories in the hope that the public can be made to believe that "no better" bicycles were ever made and that they are "going so fast" that the supply will be exhausted before dilatory buyers arrive to claim the "bargains."

The following is a fair example of the desperate straits in which the dealers in this class of machine find themselves, and of what may be expected later on:

**A \$50 BICYCLE FOR \$25.**

With Complete 1899 Equipment.—Guaranteed Tires, choice of Gear, Handle Bars and Colors. If you can't spare the cash, we'll give you time. It will cost a trifle more, but it will be a big bargain just the same. \$5.00 down, the balance at \$1.50 per week.

These wheels are going fast. Come quick if you want one. Bring along your 5-dollar bill and take your wheel.

**Buyers Want Quality Now.**

But the people have been through all this before and are no longer tempted by such bait. They know where good, reputable bicycles can be bought and they are not looking for the other kind at any price. Last week the "big store" came out with the announcement that it had already sold 5,000 bicycles of its make at wholesale and that its bicycles were:

**NEW BICYCLES FOR \$25.**

Not old wheels carried over from last year, but new, up-to-date machines of our own manufacture and only just from the factory. For years we've been setting the pace in regard to bicycles—this spring a greater stride ahead than ever before. We insist that we have as good a wheel at \$25.00 as any machine made anywhere at any price.

**Invited to Join the Combine.**

Among the Buffalo makers who have been asked to go into the projected bi-

cycle combination is the Buffalo Cycle Manufacturing Company. George C. Sweet, vice president of the company, when approached on the matter, said: "I am not at liberty to give much information in regard to the combination. It is in an embryonic state as yet, but inside of a week or two we may be better able to give some definite news."

"Have you given an option on your plant?" he was asked.

"Not exactly. We have been asked to go into the deal. It is too early to discuss the details of the plan. There is no intention on the part of the promoters to raise the price of bicycles. The sole object is to reduce the expenses of the business. Only the strongest companies will be invited to go in."

A few other Buffalo makers have been asked to go into the combination. They declined to discuss the question because negotiations had not progressed far enough for them to speak intelligently or for them to give options on their plants.

**Retribution Came Quickly.**

Buffalo, March 20.—Patrolman Schultz of the Buffalo police force shot and seriously wounded the driver of a moving van last Friday. Schultz and his wife were run down, while riding their bicycles, by the van driven by the injured man, which was racing with another van. The patrolman, who was in citizen's attire, attempted to arrest the driver for violating the city ordinances, and was struck on the head with a piece of gas pipe used for moving pianos, making a six-inch scalp wound. The officer was knocked to the ground, and while in this position drew his revolver and shot the driver.

**Overman Declines to Talk.**

Springfield, Mass., March 20.—A. H. Overman, president of the Overman Wheel Company, when seen by a Cycle Age representative regarding the proposed trust of bicycle makers, refused to discuss the matter. He declined to state whether or not he favored a combination of makers such as is reported to be in progress and also to give any information as to whether the Overman company had been approached in the matter or not. Just now, he said, he was intensely interested in his motor vehicle.

**Week's Exports from New York.**

Exports of cycles and cycle material from the port of New York for the week ending March 14 are recorded as follows:

	Bicycles.	Materials.
Germany .....	\$17,836	\$ 4,882
France .....	15,320	4,358
Denmark .....	10,291	2,256
England .....	11,307	1,557
Sweden .....	11,873	315
Russia .....	2,074	10,781
Africa .....	6,078	99
Belgium .....	4,670	1,048
Italy .....	1,847	3,672
Holland .....	2,267	1,575
Argentine Republic .....	2,325	.....
British East Indies .....	2,568	.....
Brazil .....	1,712	146
British West Indies .....	1,280	391
Australia .....	720	639
Hong Kong .....	801	.....
New Zealand .....	240	459
Cuba .....	487	113
Ireland .....	289	.....
Chile .....	40	170
Uruguay .....	130	.....
Danish West Indies .....	100	.....
Mexico .....	.....	72
British Guiana .....	.....	60
U. S. of Colombia .....	57	.....
Turkey .....	38	.....
Porto Rico .....	26	.....
Austria .....	21	.....
Totals .....	\$94,397	\$32,593

Austria's production of cycles rose in 1898 to 70,000 machines. Her exports increased 69 per cent. over the previous year, and the imports 37 per cent. for the same time.

**COMPETING WITH THE SPECIAL  
PROFIT IN BUILDING TO ORDER**

**Dealers can Retain Trade and Make Repair Department Pay by Catering to Customers' Whims.**

Great inroads into the retail bicycle business have been made by the Repair Shop Special. The business done by the small repairmen in these "bicycles built to order" is inconsequential in individual cases, but amounts to considerable in the aggregate, a fact that is readily apparent from the great volume of business done by jobbers of fittings and supplies in catering to just this class of trade. The repairman has been able to divert this current of trade to himself by building to suit the personal preferences and whims of the riders without making exorbitant charges for such special work, being enabled to compete with the larger builders possessing better facilities and obtaining lower prices on material and equipment by placing a low valuation on his time.

**Can Be Made a Source of Profit.**

While this repair shop building was in its infancy it was ignored by the regular agent and dealer in standard machines as too insignificant to be worthy of attention, but since it has grown to such large proportions regular dealers have begun to take cognizance of it and to think that if there is money in it for the repairer it should afford a profit for the dealer also, who enjoys a greater prestige, is more favorably located and has larger resources at his command, and that in the work of building special machines to order may be found the solution to the vexed question of how to make the repair department pay expenses. As the dealer is under the necessity of maintaining a repair shop in conjunction with his store, the labor, space and tools that are otherwise idle a portion of the time and unproductive of returns, could in this way be made profit earning, while at the same time the dealer would be combating a steadily growing competition that is cutting into his own trade.

In several of the larger cities, where 75 to 100 of the special makers present a style of competition that is hard to combat, some of the dealers have adopted tactics that would seem to offer a satisfactory solution of the matter. This consists of meeting the repairman on his own ground, and when a customer is found who insists upon having a "special" they make it for him.

**Large Makers Recognize the Demand.**

The lower prices on standard machines this year and the general tendency of manufacturers to include 30-inch wheel machines and other unusual constructions that have before come under the head of "specials" in their lines, have brought the business to a point where many makers of special machines see the futility of competing. As a consequence these assemblers have taken the agency of one or more lines and will give the selling portion of their business more of their attention than the manufacturing. Particularly is this so in the smaller towns, where the "special" maker never has thrived as well as in the big centers.

**Converts to Fast Freight.**

To the Editor:—We are in such hearty accord with the protests against the exorbitant charges of the express companies and with the proposal to use fast freight that we now use the latter whenever we can.

Indiana.

STEWART BROS.

Cyclists in an Austrian town have been forbidden to hold meetings in order to protest against the cycle tax imposed.

# EXPERIMENTAL STORE LIGHTING

## Satisfied User of Acetylene Gas Volunteers Facts for Retailers—Points in Its Favor

To the Editor:—The last editorial paragraph in the Cycle Age for March 9, anent the "Cost of Illuminating Stores," reflects with noteworthy timeliness the lack of exact and satisfactory knowledge upon the subject named among the great majority of retail cycle dealers, and presents an opportunity heretofore less directly and broadly offered by a representative publication of its class for the contribution of individual opinion and experience to the trade's discussion of illumination and illuminants. The matter is of prime present and future importance, not only to the retail wing of the American cycle industry, but to nearly every branch of general merchandizing. That further-extended consideration should be bestowed upon the question of illumination by those whose business makes them the majority among the readers of your paper is evident, since sales of a great many bicycles and sundries are made in the evening—especially in the smaller towns and rural districts. I herewith contribute my experience with acetylene. W. P. H. Boston, March 17.

### Nature and Properties of Calcium Carbide.

In detailing an individual experience with acetylene gas for illuminating purposes in cycle stores, it would be prejudicial to clearness and completeness to take for granted an exact knowledge on the part of the retailer of all the facts concerning the nature and operation of this latest gaseous product, for there are many districts far from the large cities where acetylene and its application are known by name and in theory only.

Acetylene gas, though it has been known to chemists for a long time, is in the practical sense new, since the method of producing calcium carbide at a cost which permits its common use was discovered only recently and by accident. As this compound has very marked advantages over what is familiarly known as "gas," it has been coming very rapidly into use during the past twelve or eighteen months. In its normal condition the carbide is grayish black in color, having a roughish surface of apparent porosity, and resembling gas coke in appearance. It is a very unstable compound, having a greedy affinity for moisture, which it will absorb from the air unless kept tightly closed.

The action of water upon carbide is in reality a double decomposition, each disturbing the other; the carbide has its carbon separated from the basic calcium, and the water in turn has its oxygen and hydrogen separated, the reason being that when the four are brought into company, each of them finds a new association which it prefers to the old and promptly "dissolves" in order to reunite. The carbon of the carbide and the hydrogen of the water seize hands (figuratively speaking), forming the hydro-carbon gas known as acetylene; the calcium in the carbide joins the oxygen of the water to form the residuum of slacked lime, the apparent character of this refuse depending on the proportion of water used.

There are several apparatuses for bringing water and carbide together. These are broadly distinguished as "wet" and "dry" generators. In the former, a small quantity of carbide is brought into a large quantity of water; in the latter, the water is allowed to come periodically in small quantities into contact with a maximum quantity of carbide. Each method has its evident advantages and disadvantages, its advocates and its opponents. Sometimes the gas pressure itself is made to automatically regulate the flow of water to the carbide, by opening and closing the channel through which the water flows;

sometimes the pressure—in "wet" generators—is made to regulate the periodical dumping of small fixed charges of carbide into a mass of water; again, the pressure is made to open and shut the water-supply cock; sometimes there are reservoirs or gasholders, and sometimes (especially when the apparatus is on a small scale, as in a bicycle lamp), the gas is consumed as fast as made.

### Description of Generator.

When the writer installed an acetylene gas generator more than a year ago, the project was in the nature of an experiment, or ticklish venture, and the former means of illumination was retained for use in case of emergency—which has, however, as yet failed to materialize. The Criterion Automatic generator, manufactured by J. B. Colt & Company of New York city, was chosen. The type was that listed at \$100, No. 20, the dimensions being: Height, 6½ feet; floor space required, 3x5 feet; number of ½-foot burners, 25; charge of carbide, 20 pounds.

The following additional information is carefully condensed from the com-

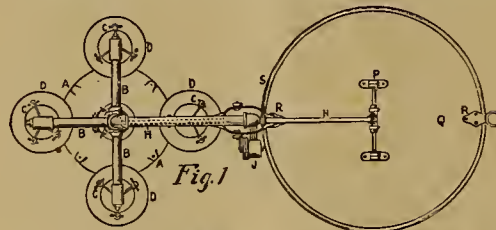


Fig. 1

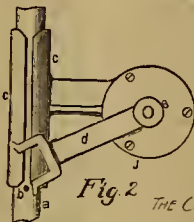


Fig. 2

Fig. 1.—Plan Diagram of Generator.

- A—Stand.
- B—Radial arms.
- C—Bolt screws.
- D—Carbide holders.
- H—Gas pipe to condenser.
- J—Water regulator.
- N—Lever.
- P—Lever link.
- Q—Gasometer.
- R—Guide arms.
- S—Tank of gasometer.

Fig. 2.—Detail of Water Regulator.

- a—Sliding rod.
- b—Pin.
- c—Guide.
- d—Fork arm.

pany's circular which prompted the purchase and trial of the machine—a description which is doubtless, in its essential features, typical of first-class generators as a whole: This generator consists of a stand for carrying the carbide holders, and a gasometer for regulating the supply of water, keeping the gas pressure constant and taking care of the surplus gas. (See plan diagram.) A condenser for cooling the gas is at the base of the gasometer. The water-regulator is placed on the side of the gasometer, from which the water supply is taken, except in very large generators, in which a separate water tank is used. The carbide holders are made in various sizes and are attached to the stand by pipes which radi-

ate from a central upright, but each holder is on a different level from the others; four, eight or twelve of these holders, according to size, can be conveniently arranged in sets of four, one set above the other, the gasometer being of the same capacity for any number of holders of a given size. The gasometer is of the capacity best suited to the number of burners and the size of the carbide holders. A suitable blow-off is provided in case the gasometer should rise too high, thus allowing any extra gas to pass off outdoors. This, however, rarely occurs. The condenser has ample surface for cooling the gas, and its size is large enough to allow the products of condensation to accumulate for some time; they can then be conveniently removed by means of a stop-cock. The water regulator is especially designed so as to move with the greatest ease; it is perfectly free from sticking, and leakage is prevented by having double openings, so that two leaks must occur at the same time before any water can get into the carbide holders when the regulator is off. The latter is so arranged that in case of a large leak of gas, or in case more burners are used than the generator is intended for, it will shut off the supply of water, and electric contact can then be provided so as to give warning of the fact.

### Observations on Results.

The generator was placed in the cellar immediately under the store, and careful and studious attention was given to the directions sent with it. I was much pleased to discover that no especial knowledge was required for its operation, and that in fact only a few minutes' care at the most convenient time during the day was sufficient to prepare for an evening's lighting. The system was absolutely clean and not troublesome; and soon it became a permanent instead of an experimental part of the store.

The gas was found to be of light specific gravity, as gases usually are. Its photometric gauge—or degree of intensity of its light—is very high, making it the most powerful illuminant yet known, the electric arc excepted. It burns almost without smoke or residuum and is intensely white, being as white as the electric arc, or as ordinary gas when used with the Welsbach mantle at its best; and, like both of them, the acetylene light is unpleasantly strong to the eyes when directly faced. It is poisonous to inhale, but its peculiar odor gives instant warning of its presence. This odor impresses different people differently. Some are exceedingly hostile to it, but the writer (who has handled carbide considerably) finds it much less disagreeable and noxious than ordinary natural or artificial illuminating gas. Strange to say, its flame is less hot than that of ordinary gas; on the other hand, the decomposition of the carbide produces heat. This is so noticeable that merely rolling a handful of carbide lumps about, with no moisture present but that ordinarily in the atmosphere, will soon produce the sensation of warmth by the oxidation of their surfaces.

### Some Objections Answered.

Many objections are still urged against the use of acetylene gas. The most common one is, of course, that it is dangerous, which it certainly is—so is every other gas or illuminating agency. It is explosive, when mixed with air in cer-

Radiant	Cost per thousand	C. P. Hours	C. P. Hours for \$1.00	Cost of 1,000 C. P. Hours	Equal to City Gas per thousand at	Saving in favor of Acetylene
City Gas, Argand, Cubic feet	\$1.25	3,200	2,560	.39	\$1.25	Per Cent 62
Gasoline, Argand, Cubic feet	.75	2,400	3,200	.31	1.00	52
Electricity, Watts.....	.25	400	1,600	.62	2.00	76
Acetylene, open flame, Cubic feet.....	7.50	50,000	6,700	.15	.48	

Garford

Hunt

The Wheeler  
EXTRA

Brown

Gilliam

P & F

By This Stamp

You May  
Know  
Them

**W**HEN you see an attractive saddle you generally look for the name of the maker, and nearly every time you find that it bears one or another of the familiar stamps here shown.

A saddle to be satisfactory must have beauty, style, durability and correct shape. These attributes are absent unless the goods are manufactured by experienced workmen under the supervision of men who make a study and have a thorough knowledge of the business, and who have the capital and the facilities to put together the finest materials in the best manner known to the art.

The American Saddle Company makes saddles that *satisfy*.

The evidence of it lies in the fact that such an overwhelming majority of the riders buy them, ride them and believe in them.

It is safe to trust the judgment that is so nearly universal and be governed by it in laying in your stock.

Buy the products of the American Saddle Company and you will need few others.



**American  
Saddle Company**

American Trust Building

Cleveland, Ohio

tain proportions, but so is any hydrocarbon. The most ready and natural use of it is in isolated places where other gas is not available or is excessively costly, in which cases it is an easy matter to pipe a house or a store and install a generator in the cellar or yard. There is a choice of generators and a choice of positions for placing it. The generator is hardly supposed to have been perfected yet, and the subject is still in course of evolution as to its underwriting hazards. It is unnecessary to go further into the details of generating plants, but one broad and eternal warning should be observed with all—namely, use intelligent care, not fear, when handling acetylene gas. Say to yourself concerning a generator as you would to a customer concerning a lamp working on a smaller scale, though on much the same principle, "Whoever wishes to try it should begin not by being afraid of it, but by using a little care and patience to understand, at least, the instructions for use."

**The Matter of Cost.**

As to cost, my experience leads me to believe that acetylene gas, after the plant has once been installed, is the cheapest of all satisfactory lights for dwellings or stores. The following tables are clipped from the already named circular of J. B. Colt & Company. The percentages of savings named "in favor of acetylene" are of course, inspired to the superlative degree by the natural enthusiasm of its makers seeking to awaken the utmost interest in their products. Divided by 2, however, my experience leads me to endorse the percentages as being, in my opinion, practically correct. "So-much-a-night" calculations are not reliable and show such striking variations as are noted in the paragraph in the Cycle Age which called forth this response. Having established the fact of its cheapness over other forms of lighting, its friends can afford to rest their case in that particular and leave the verdict to be rendered by individual judgment.

**Store Lighting Without Cost.**

To the Editor.—We have experimented with several lighting methods, including a number of acetylene gas generators, which did not give satisfaction, but we have a generator now that pleases us. It gives no trouble, as it works automatically and needs no chimneys, mantles or fixtures and it costs only half a cent an hour to run a half foot burner, which makes a beautiful light.

We purchase our calcium carbide very cheap and expect to purchase carbide for less than half what we are now paying, which would make the expense of lighting in proportion to the price of carbide. We sell large quantities to riders who use gas lamps. We make more than a double profit and figure that our lights do not cost us anything, as the extra profit on carbide more than pays the expense; in other words, the profit on carbide would soon pay for the generator, which can be bought at dealers' prices by taking the agency.

Any party buying acetylene gas generators will expect to purchase their carbide from the dealer, and through the sales of generators and carbide dealers will make more money than they can in handling bicycles, as there is a demand for better and cheaper light.

Indiana. POWER CYCLE CO.

**Grand Rapids Dealers Adopt List.**

The dealers of Grand Rapids, Mich., have entered into an agreement to regulate prices for the season. Nearly every dealer in the city has signed the agreement. Among those whose names are found on the list are: Heth Bros., Jarvis & Daniels, Perkins & Richmond, Grant &

Co., W. F. Stadel, A. M. Maris, C. J. Bronson, Beelbee & Phippen and about twenty others. The selling prices of chains, sprockets, seat posts, nuts, pins, guards, etc., will remain about the same as last year.

The list of the prices which have already gone into effect has been printed and will be hung up in all the shops in the city. Charges for the most common repairs are as follows: New quick repair double tube tires, put on, \$7; pair plain inner tubes put in, \$3.50; new casings put on, \$2.25; valve and stem, 25 cents extra; punctures repaired, 25 cents and up; vulcanizing, 50 cents and up; respoking one wheel, \$1.50; single spoke put in, 5 cents; straightening fork, 35 cents and up; new fork stem, \$1.

**Low Range of Trading-In Prices.**

Trading-in prices on second-hand machines will not range high in Chicago this season if the figures quoted by one of the leading agencies in the city are to be taken as a criterion. On the best high class machines the maximum limit will be \$12, it is said, and this amount will be allowed only on a machine of last year's production which has had the very best of care. From this figure the prices will range down to \$5, below which nothing will be handled. No second-hand machines will be accepted in exchange on chainless models, which must be paid for in cash. On all other models trades will be made. Orders for twenty chainless machines have already been booked by this one agency and in all cases the purchase has been for cash.

**Indianapolis Dealers Reorganize.**

The Indianapolis Cycle Trade Association has been reorganized, the following officers being re-elected: President, Thomas Hay; vice-president, C. G. Fisher; secretary, Frank Staley; treasurer, F. I. Willis; directors, Arthur McKee, E. S. Sterne, Frank Bissell, Conrad Mueller and John B. Orman. It was decided to keep the stores open at night until the summer months set in. The matter of giving sundries to purchasers of machines, the question of credits, and other matters of interest to the trade, were referred to an executive committee. The general expression of the dealers at the meeting was one of confidence in an excellent season.

**German Gas Lamp Prices to Rise.**

According to the report of a German contemporary, the prices of acetylene lamps will increase, on account of a rise in the prices of the material, especially brass, the price of which has increased 50 per cent., while the metal used for brazing is now 60 per cent. dearer. The latter, however, will make little difference as the quantity used is small. German manufacturers have already taken steps for combined action looking to increasing the price of lamps.

**Replevin Against Eck and Johnson.**

H. A. Lozier & Co. began an action in replevin in the district court at Minneapolis last Thursday against Thomas W. Eck and John S. Johnson to recover possession of twenty-two bicycles, tandems and triplets, etc., the value being placed at \$1,500. Stiles & Stiles, attorneys for the plaintiffs, state that Eck had stored a portion of the machines with Johnson, who was unwilling to give them up without an order from Eck, which accounts for Johnson's connection with the case.

**Savannah to License Dealers.**

An ordinance has been passed in Savannah, Ga., making the payment of a license compulsory on "dealers in bicycles and

supplies and repairers of bicycles." This includes all dealers engaged in the sale of bicycles in the city and was passed as a counter move against the new state law requiring bicycle companies in the state to pay a tax for each agent handling their machines, which is held to relieve the dealers from municipal taxes.

**Germany's Excess of Exports.**

According to official statistics, the exports of German bicycles for the first nine months of 1898 amounted to \$3,010,700. The same exports for the corresponding period in 1897 were \$2,094,400. It is estimated that the exportation of German bicycles exceeds the importations by about 50 per cent. From this it would appear that the demands for an increase of the present tariff to benefit German manufacturers are not well grounded.

**Favor Cycle Tax for Sidepaths.**

Pennsylvania wheelmen are interesting themselves in favor of the passage of the bill recently introduced in the legislature providing for a tax on bicycles to construct cycle paths along public highways. County organizations and individual wheelmen are using their influence with members of the senate and house to effect its passage. A monster petition is to be circulated among wheelmen of the state as a memorial praying for the passage of the act.

**Stranded Troupe of Poor Cyclists.**

The Girl from Paris theatrical company stranded in Toledo early last week. Six members of the troupe had been provided with Columbia chainless wheels for use on the stage, and when they found themselves without work or money they sold them at "bargain rates" to the local Columbia agency.

**English Exports for One Week.**

Cycle exports from England for the week ending February 24 are recorded as follows:

Adelaide . . . . .	\$ 820
Aden . . . . .	235
Albany . . . . .	345
Alexandria . . . . .	35
Auckland . . . . .	760
Bombay . . . . .	4,710
Boulogne . . . . .	2,055
Bremen . . . . .	320
Calcutta . . . . .	1,575
Cape Town . . . . .	400
Durban . . . . .	1,240
East London . . . . .	750
Flushing . . . . .	2,085
Foochow . . . . .	160
Freemantle . . . . .	100
Ghent . . . . .	780
Hamburg . . . . .	45
Hobart . . . . .	225
Hong Kong . . . . .	460
Kurrachee . . . . .	35
Madras . . . . .	575
Marseilles . . . . .	35
Mauritius . . . . .	500
Melbourne . . . . .	10,445
Mombassa . . . . .	185
Mossel Bay . . . . .	515
Nelson . . . . .	50
New Plymouth . . . . .	30
New York . . . . .	275
Oamaru . . . . .	120
Ostend . . . . .	60
Otago . . . . .	100
Penang . . . . .	700
Perth . . . . .	1,750
Port Elizabeth . . . . .	1,290
Shanghai . . . . .	295
Singapore . . . . .	110
Sydney . . . . .	360
Total . . . . .	\$34,530

A bicycle dealer in a Massachusetts town is openly offering to every purchaser of a machine a reduction of 10 percent of his list price as well as a similar commission on all machines he may induce his acquaintances to buy.

The municipal council of Leipsic has voted \$4,500 to establish good cycling roads round the town.

## COMMERCE IN FOREIGN MARKETS

### OUR BICYCLES POPULAR IN INDIA

English made cycles are distinctly the most popular in Calcutta among the better class of riders, although the Americans are pushing their machines very strong. Owing to the competition of Indian society, the appointment of Lord Curzon as viceroy is not altogether an unmixed blessing to the English cycle trade. The nationality of Lady Curzon is causing a run upon everything American, and just at the moment the American firms are getting a better chance than they have had before. Still, there is always the innate affection for England and things English, and, while the feeling may perhaps give the trade in American machines a spurt, as long as English makers maintain the quality of their goods they will be able to secure the bulk of the trade in India. The demand is for light machines, not necessarily cheap, but the lighter the better; and more than that the demand is growing. Makers should be careful to mark their prices in Indian currency, and make an allowance for variations in the rate of exchange.

### CARRYING SAMPLES IN SOUTH AMERICA

The carrying of samples in the South American market is a question of considerable importance, especially if the traveler wishes to cover an extensive territory. Indeed, the extra cost incurred during a limited trip through Argentina, Uruguay and Brazil by a mistake in this particular will increase one's expense account greatly.

In many foreign countries it is permissible regularly to bond the samples of a commercial traveler for a limited period, the obligation of the bondsman being released when the samples are cleared intact at the original port of entry. In Brazil the custom house authorities will not allow any such procedure. The traveler there must pay the regular duties on all samples which are in a salable condition, and he must be careful or he may be obliged to pay the duties more than once, or be put to considerable delay and expense in having the matter rectified.

Neither can travelers' samples be bonded in Uruguay. The traveler will find the Uruguayan custom house authorities more liberally inclined than in Brazil, and with the aid of an influential broker privileges can be secured which otherwise would be impossible in that country. Montevideo being the only custom port of entry of importance in Uruguay, there will be no occasion to prove that duties have been paid in another port of the same republic. Such samples as are required may be taken out of customs and the balance placed in storage until ready to leave; or should only a very limited number of samples be needed as a test of their possible sale, the authorities will allow them to be selected and passed through without charges if the valuation is small.

At Buenos Ayres, in Argentina, both the laws and those who carry them out are very liberal in this particular. By signing a solicitation after landing, indorsed by any local business firm registered in the municipal books as taxpayers, the traveler can have the free use of his samples during a term of from thirty to ninety days under a bond equal to the amount of the duties. Should the use of the samples be desired for a longer period, it is possible to have the bond

extended by making the proper application. The signer of the solicitation therefore becomes the bondsman and he would be held responsible for the amount of the duties should the samples be sold in the Argentine without notifying the authorities or should the traveler fail to report their clearance for another country. It is necessary that the work of securing these privileges be done by a custom house broker, as the application must be signed by many officials in various departments and go through a tiresome routine which an inexperienced person could not find out in a month's time. There are several custom house brokers in Buenos Ayres who will both sign travelers' bonds, put the application through and afterwards release and clear samples for a fee equivalent to about 5 per cent of the value of the goods.

The bonding of samples in the Argentine has the disadvantage of being a slow process, often requiring ten days from date of disembarkment before the goods are delivered into the traveler's possession. By paying the duties outright usually six days can be saved. It therefore resolves itself down to a matter of arithmetic, i. e., whether the duties to be assessed amount to more than a six days' hotel bill and expenses in addition to 5 per cent brokerage commission on the valuation of the samples. In favor of the bonding process it may be stated that the additional time can readily be well expended in making the acquaintance or interviewing the trade and thus gradually bring them up to the purchasing point—a matter which requires considerable time in any part of South America.

### THE BICYCLE AMONG NATIVE AFRICANS

In the border towns of Cape Colony, such as King Williamstown and Grahamstown, the native Africans have for many years taken their share in all branches of athletics, but it is only recently that they have added cycling to their other accomplishments, and the first native who had sufficient nerve to ride through the town on his wheel created a big sensation. When, however, the same fellow, faultlessly attired in regulation knickers, made his second appearance, and this time accompanied by a native lady, the excitement became intense, and the local paper devoted a column to the incident. This occurred about eighteen months ago and since then the number of Kaffirs who cycle has increased by leaps and bounds.

The Kaffirs in King Williamstown and Grahamstown now have their own cycling clubs, and on Saturdays and Sundays they may be seen taking jaunts into the neighboring country.

In Natal, there are now three native clubs. When these were first established they met with strong opposition from the Europeans, for the Natalian does not believe in allowing the Kaffir much liberty. However, this feeling gradually diminished, and the Natal Kaffir now stands on a footing with his colonial brother so far as the bicycle is concerned.

In Zululand the wheel has also caught on, and many of the missionaries own machines. Several of the native teachers, too, have bicycles on which they visit the members of their congregations. For this state of affairs Zululand has to thank a speculative Australian, who traveled into the country on his bicycle and took orders at all the trading stores and mission stations he came across. It was a most successful venture, and after he re-

turned to his native country the seed he had sown took firm root, and the bicycle is as much appreciated in Zululand today as it is in any more enlightened country.

The South African native is of a thrifty disposition and puts by every penny he earns, and those who turned their attention to cycling were sufficiently well provided with funds to supply themselves with the necessary outfit. The machines used by the natives are, as a rule, the best that can be obtained, as one individual of a speculative turn of mind, who invested in a stock of broken-down machines which he tried to unload on the unsophisticated natives, found to his cost. The Kaffirs would not even look at his goods, and at length in despair he deposited his goods in an empty shed for "safe keeping" and shook the dust of the too enlightened town from his feet.

An attempt was made about nine months ago by two Kaffirs of unusually adventurous disposition to introduce the bicycle among their brethren in Johannesburg. The result was not all that could have been desired, from the natives' point of view at any rate, as the first policeman they encountered promptly put a stop to the proceedings by knocking the "darksies" off their machines, and then taking the machines into the charge office. The bicycles were eventually returned to their owners, but they were given to understand that cycling was not for such as them but for their betters, and were ordered not to transgress in this way again.

### BICYCLES IN GUADELOUPE

In the island of Guadeloupe a possible opening presents itself for the sale of American bicycles. There is now under construction in the principal public square a bicycle track, at the city's expense. The duty on French bicycles is 25 francs paper, or about \$3.80, each; on American bicycles, 50 francs paper, or about \$7.60. The freight on a bicycle from Paris amounts to about 65 francs gold, or about \$12.40, while from New York the freight is from \$1 to \$2 each; thus leaving a good margin for the American machine. The French machines are of a grade that permits them to be retailed for a cash price of 350 to 400 francs paper, or from \$53 to \$60; but the usual mode is to sell them on monthly instalments of 10 francs, or \$1.50, charging from 450 to 500 francs in such case, or from \$68 to \$75.

Sales of a medium-priced machine could be made here. Bicycles should be light, strong, showy, and of good workmanship. Probably the best way to introduce them would be to send a certain number of machines, packed six in a crate, in light crates, to some reputable merchant, allowing him to sell them on instalments of, say, \$3 a month.

### AUSTRIAN CYCLE IMPORTS INCREASE

The Austrian customs authorities have just issued returns relating to the imports and exports of cycles during the past year. They show that the imports into Austria during 1898 amounted to 4,494 machines, valued at \$287,616, as compared with only 2,190 machines valued at \$266,240 in the preceding year.

The exports show a somewhat irregular result, the number of machines having increased, while the value has decreased. The total for 1898 is 8,625 machines, of an aggregate value of \$345,000, as against only 8,160 machines, but of a value of \$366,000 in 1897.

## SAGER GEAR AND FITTINGS

### Four Popular Forms of Bicycle Gear—Generated Gears and Roller Gears—Design of Fittings

The four principal forms of power transmission gears which will be in more or less general use during the coming season are the chain and sprocket gear, the bevel gear, the Sager gear and the various roller gears. The last named form a class to which the Sager gear does not really belong, although it is provided with roller studs in the form which it is before the public and is commonly called the Sager roller gear. There is the important difference, however, that the Sager gear would run almost as well without rollers as with them. The rollers do not belong to its constitution but merely compensate for such inaccuracies as are inseparable from all practical manufacture.

A gear wheel with fifteen teeth may be designed with such curves on its teeth that it will roll perfectly in mesh with, say, another gear wheel with fifty teeth, but if it were brought in engagement with a third gear wheel with twenty teeth, though the pitch be the same, the curves on its teeth would be slightly inaccurate. Straight faced gear wheels and bowl faced gear wheels do not possess their boasted scientific accuracy and perfect roller motion unless they are mated. They should be made and sold and used in pairs.

A change of gear in a bevel gear bicycle or a Sager gear bicycle should be accomplished by changing two gear wheels; one is not sufficient.

#### Line Contact in Generated Gears.

It is the characteristic of scientific gears that they are generated by the action of planers or cutters which imitate the motion of the intended mate for the gear. The form of the teeth is not

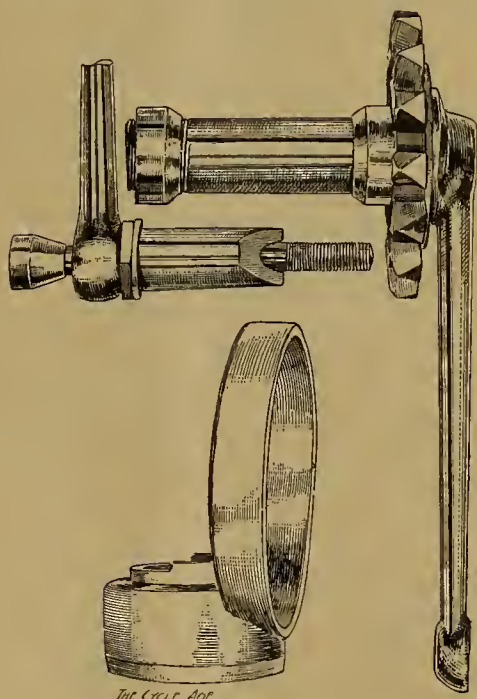


Fig. 1—Hanger Mechanism.

arbitrarily chosen, as is the form of the teeth in real roller gears, but is the result of the abrasion caused by a milling cutter which is gradually brought into the same relations to the gear blank as the teeth of the mating gear would hold.

The contact in such gears is therefore line contact. In true roller gears the contact is point contact, more or less

obscured through the choice of form of the rollers.

It is another characteristic of the generated gears that they do not become absorbed and inoperative when their angles are near to the limit. The bevel gear blends into a spur gear as the angle approaches zero and into a crown gear when the angle approaches 180 degrees. The Sager gear is a straight faced cam meshing with a pin gear at one extreme, and at the other limit again merges into the same form. The intermediate stages represent the

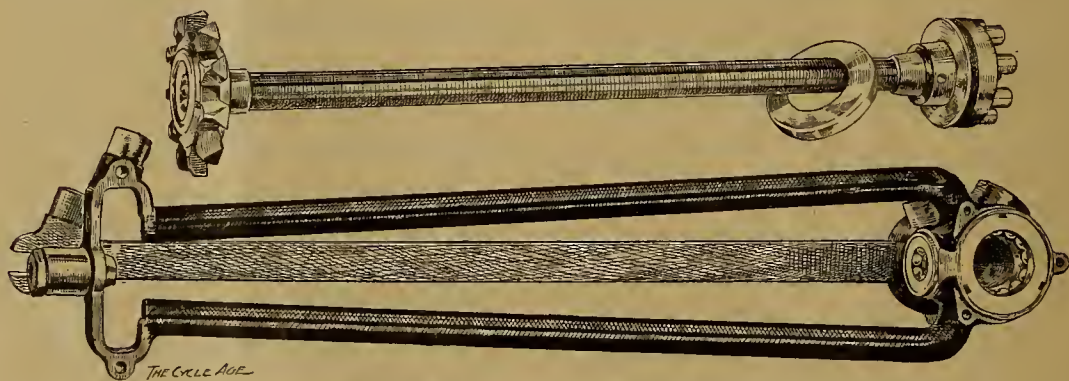


Fig. 2—Showing Shaft, Pinions, and Frame.

Sager gear as it is known, which is generated by rotary corrugated cylindrical cutters eating their way into a blank while both the blank and the disk holding the series of cylindrical cutters are revolved on their respective axes in contact with each other and without slip.

The rollers on one of the interacting pinions of the finished gear need not revolve in order to mesh properly, if the rotary cutters have done their work, but they serve the useful practical purpose of permitting a very close adjustment of the gear in the bicycle so that the backlash, or play between the gear teeth, may be reduced to a point where vibration and chattering ceases.

#### The Waltham Company's Design.

The application to bicycles of the Sager gear was brought most prominently before the public when the world's mile record was lowered on a machine which was provided with this gear and was designed by the Waltham Mfg. Company especially for this gear.

The Imperial Company of Boston has since then undertaken to market and eventually manufacture the gear fittings of this patented design as shown in the accompanying illustration and The Cycle Age is indebted to this company for the opportunity to sketch the parts and thus give the cycle trade at large the first public presentation of the construction.

To enter into all the minor details of this construction would be superfluous and tedious. In this progressed stage of cycle manufacture it is a matter of course that bearings, locknuts, washers, etc., are employed by every first class manufacturer in accordance with best usage in various places where they obviously belong. The following description has therefore reference only to those features which must be specially mentioned in order to understand the workings of the construction.

#### Front Portion of Mechanism.

In Fig. 1 is shown the crank shaft mechanism with the toothed driving gear secured to it, and below it the aluminum

casing which encloses the gear wheel and the roller pinion on the front end of the driving shaft.

The aluminum plate which slips on over the crank and closes the face of the casing, is left out in this illustration as well as in Fig. 4. It is simply a flanged plate with a circular opening for the crank boss and abuts against a felt ring on the face of the gear wheel.

The construction of the crank shaft will be recognized as essentially the same that is used in Orient bicycles. Before the crank shaft is inserted in the hanger, the gear casing is placed in position on the latter and secured by three screws, the holes for which are plainly indicated in Fig. 2 in the three lugs extending from the band which surrounds that end of the hanger and carries the double fork arms. The casing for the roller pinion, being in one piece with drive wheel casing, is at the same time pressed into its position to the rear of the ball-bearing in which the driving shaft front cone is

received. In this position the case abuts against a flange on the fork arm fitting. A lid covering the rear end of the case is shown resting against the shaft in Fig. 2.

Longitudinal adjustment of the front pinion on the shaft in relation to the drive gear wheel is secured at the factory and may in any emergency be readjusted as the pinion is threaded on a sleeve brazed to the side shaft.

The ball cups in the hanger are firmly connected by a sleeve surrounding the shaft, and the left cup is threaded in the hanger so that when it is screwed in or out the cup on the gear side follows.

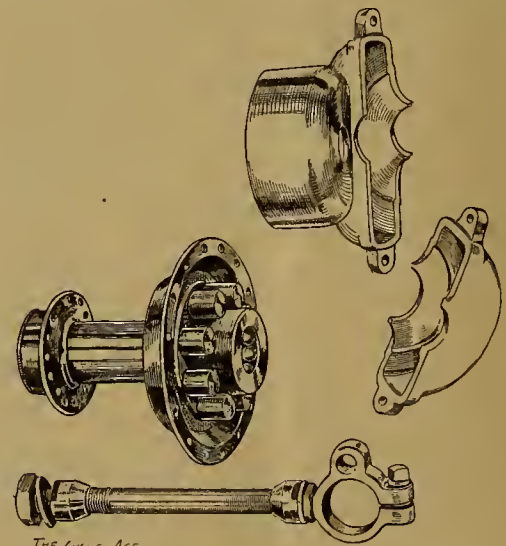


Fig. 3—Rear Hub and Axle.

By this arrangement the lateral adjustment of the crank shaft gear in relation to the side shaft pinion may be regulated, independently of ball-bearing adjustment which is accomplished by the adjustable cone on the left end of the crank shaft.

At the hanger it is the lateral adjustment which is the most important, and at the rear hub the longitudinal adjustment, and these are therefore the adjustments which are placed most readily

# FINISH....



The finish of the '99 BARNES BICYCLES is in keeping with the excellent material, mechanical features and improved methods used in their construction.

The white enameled frames with royal purple steering heads and fork crowns have set the fashion for the year. ❁❁❁

## RIDE THE ELEGANT BARNES

The Agency for  
the Barnes is a Valuable One.  
Write Us.



THE BARNES CYCLE  
COMPANY

SYRACUSE, N. Y.

within reach of the rider. Longitudinal adjustment at the hanger and lateral adjustment at the hub are never vital to the running of the gear.

### Rear Part of Gear.

The rear pinion is a toothed gear wheel smaller than but otherwise similar to the drive gear. It is bored out to receive a bearing cup and balls. This bearing, like all the other ones, is provided with a ball retainer.

When the front cone upon the driving shaft has been inserted in its bearing, bringing the front pinion into its casing and its rollers in correct mesh with the crank shaft gear, the rear end is adjusted by means of the cone which operates in the rear bracket as shown in Fig. 2. This cone is a solid piece of cylindrical steel, cone shaped at the front end, and screw threaded in a bearing sleeve that forms part of the bracket. At its rear end it has a square hole into which fits a lug on the wrench which is furnished with each set of gear fittings. A lock nut is threaded onto the rear end of the cone piece and bears against the sleeve.

The double fork arm and the right upper stay of the bicycle are brazed to the bracket piece, and the two screw holes, above and below on the bracket indicate how the rear gear casing, shown in Fig. 3, is fastened.

### Rear Hub and Axle.

In Fig. 3 are also shown the rear hub with its gear and the rear axle. In the hub is noticed the cup-shaped extension of the right spoke flange. By adopting this design a double object has been attained. In the first place it makes it possible to spread the spokes on the gear side just as much as on the other side, so that the wheel is not flatter on one side than on the other, and secondly the cup-shape protects the junction where the

hub revolves in contact with the circular edge of the gear case against mud and water. A felt washer is further used to render this junction dustproof and when this felt washer is of the right thickness to bring it in contact with the edge of the casing, the protection at this difficult point should be very efficient.

### Dust Proof Casings.

Dust proof casings are among the most important properties of chainless bicycles. Where revolving parts are not in contact, as where the casing shown in Fig. 3 are screwed against the rear bracket, as shown in Fig. 4, or where the axle pierces the casing, the dust is readily excluded by the use of a little rubber solution at the meeting edges. Where



Fig. 4—Assembled Mechanism, Minus Forward Face Cover.

there is a rotary contact in these Sager gear fittings—at the hub—the two shaft ends and around the crank boss the forms of the meeting edges have been adapted to produce good protection against anything but fine dust, and felt washers saturated with thick oil are used for excluding the dust.

### The Clamping Sleeve.

To the right hand end of the axle is permanently secured a clamping sleeve, as seen in Figs. 3 and 4, by which the axle is secured to the bearing sleeve carrying the rear shaft cone. This clamping sleeve is at an angle with the axle corresponding to the angle of the driv-

ing shaft, and can be adjusted in and out on the sleeve so as to bring the hub pinion in exactly correct relations to the shaft pinion, longitudinally. The adjustment is accomplished by a differential screw-bolt which enters into a threaded hole in the bracket with its coarse-threaded front end while the fine-threaded portion operates through the upper lug on the clamping sleeve. Screwing the bolt in, therefore, draws the axle nearer to the bracket and brings the gear in closer engagement. Lateral adjustment is provided by the manufacturer and need never be tampered with. In case of necessity it may, however, be easily accomplished by adjusting both cones on the axle.

When the clamping sleeve is in posi-

tion on the cone-bearing sleeve of the bracket the axle remains automatically parallel with the crank shaft when the gears are adjusted, but it must of course be observed that the axle nut on the opposite end is left loose while gear adjustment is made, so as not to strain the parts. Similarly the clamping screw at the extremity of the clamping sleeve must not be tightened till adjustment is made, lest the thread of the differential screw should be stripped. With these simple precautions the adjustments are readily made by any intelligent rider, the order in which they are mentioned in this article being observed.

## CHANGEABLE BEVEL GEAR

### Jocelyn's Construction of a Bevel Gear Bicycle with Two Speeds and Neutralized Lateral Strains

As a result of the studies and work of A. H. Jocelyn of 319 Hancock street, Brooklyn, N. Y., a new bevel-gear bicycle construction has passed the scrutiny of patent examiners and has been launched on the market with seventeen distinct claims to novelty and merit, which may be summed up in the following objects which it has been the aim of the inventor to realize: To remove lateral strains from the front bevel gear and free the crank shaft from stresses due to this cause, and thereby be enabled to construct these parts much lighter than in other bevel-gear bicycles; to connect the driving power with pinions on either side of the rear hub and thereby produce a changeable gear; to mount and adjust all of the gearing independently of the bicycle frame, to provide a compensation for wear of gears and bearings; to make the gears more readily accessible than in other chainless machines while yet protecting them against dirt and dust; and by the same construction facilitate repairs.

Mr. Jocelyn places his invention at the disposal of manufacturers on the royalty plan.

The accompanying illustrations show the construction as follows: Fig. 1 gives a horizontal cross section through the bearing parts. Fig. 2 is a side view of the lower end of the frame bars with the parts of casings which are attached thereto. These require no special explanation. Fig. 3 is a side view of the gear boxes, which are attached to the casings. Fig. 4 represents the clutch shifter employed to change the power transmission from the pinion on one side of the hub to that on the other side and thereby change the gear.

#### Guard Flanges—An Innovation.

The crank shaft bevel gear is central and double-faced meshing with pinions on both sides, and the inventor provides guard flanges extending to the pitch lines of the teeth on all the pinions and intended to roll in contact. These flanges working upon opposite sides of the large gear entirely balance the lateral strain upon the gear and prevent end thrust upon the crank shaft.

The inventor does not mention that any special material is to be used for these flanges which it may prove somewhat difficult to machine so accurately for use in a bicycle if steel or other metal is used, that the projected rolling contact will be uniform and continuous.

#### Change Gear Mechanism.

To operate the changeable gear each of the rear pinions is fitted movably upon the hub and provided with notches, and the hub has clutch teeth upon which the notches fit. The pinions are coupled by tie rods which extend movably through perforations in collars secured to the hub and these collars thus serve as guides to the transverse movements of the pinions while carrying them around continuously with the hub. A shifting collar is attached to the rods and when pushed in one or another direction by the shifting lever of which the lower attachment is shown in Fig. 4, brings one or the other pinion in engagement with the clutch teeth on the hub and in mesh with the shaft pinion on the same side. The shifter may be held in three different notches at its upper end corresponding to the two gears and an intermediate

position that disengages both hub pinions and permits the rider to coast with his feet on the pedals.

It is worth observing that in this change-gear mechanism the notches in the hub pinions are always in line with the teeth on the hub so that there is no wear on either and a change of gear may be effected while the machine is in slow motion without much danger of breaking gear teeth. It is another question if bevel gear pinions are made so scientifically accurate that side thrust from the shaft pinion upon the teeth of the hub pinions will not push the latter away, incidentally bending the shifting rod; especially during the act of shifting before the two pinions have reached the depth of complete engagement. Stout construction of the parts shown in Fig. 4 would to some extent obviate this possibility, and it might be advisable to remodel the lower end of the shifting rod so as to remove from it any strain that might be caused by the tendency referred to.

#### Rigidity Unnecessary.

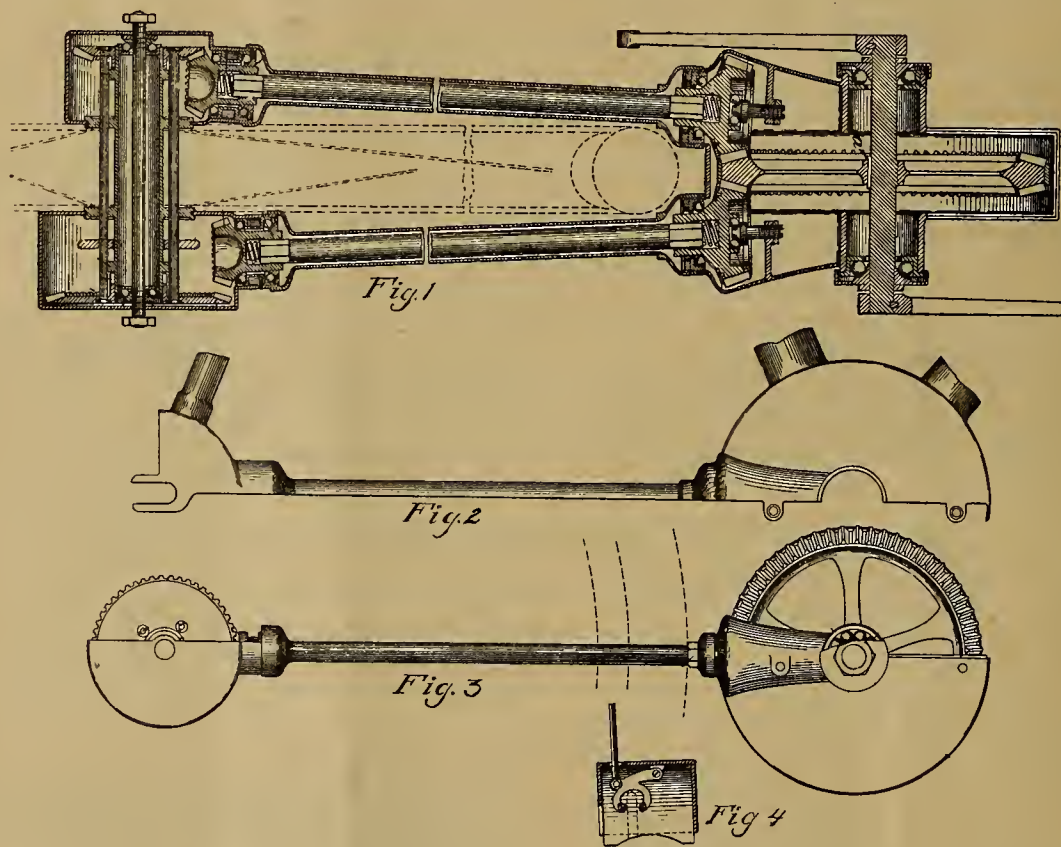
The shaft pinions are connected to the driving shafts by means of hexagonal

by two different means. The pinions may be moved forward with their ball races in a manner readily understood from Fig. 1, but when they become worn the contact between the guard flanges makes an adjustment necessary by which the guard flanges are not caused to approach or press hard upon each other. This adjustment is effected by an arrangement for moving the crank shaft and its ball races horizontally forward in the hanger. The guard flanges serve as guides to make the adjustment correct, as they prevent the gear wheels from getting too close to each other, notifying the operator at once through increased friction or irregularity of friction when the desired adjustment has been exceeded.

#### No Provision for Wear of Teeth.

Under the supposition of the inventor that the guard flanges roll without friction and therefore without wear, it seems, however, that they must nullify any adjustment of the gear wheels so far as proper mesh of the teeth is concerned. If this objection is correctly taken, adjustment to take up wear of teeth is precluded; and adjustment to offset misalignment of the frame is also excluded through the necessity of having the guard flanges on both sides revolve in absolutely parallel planes.

The inventor applies his construction also to a bicycle without changeable gear, in this case using a blank bevel roller instead of one of the front shaft pinions to support the lateral strain on the driving gear, and, of course, omitting



sockets which allow the hexagonal ends of the shafts a slight play to compensate for the torsion or yielding of a bicycle frame during riding. Spiral springs are placed in the bottoms of the sockets so as to hold each shaft elastically and make adjustment of the pinion at one end of the shaft independent of the adjustment at the other end.

An adjustment of the shaft casings is provided for the purpose of securing parallelism between crank shaft and rear axle, but it is not seen that much adjustment of this nature can be indulged in without affecting the rolling contact between the guard flanges of the front bevel gears.

#### Adjustment of Gears.

Adjustment of the front shaft pinions in relation to the driving gear is effected

the change gear mechanism on the rear hub. The patent is No. 620,929, dated March 14, 1899.

#### Threatened Suit Over Bevel Gear.

It is reported that the Demorest Manufacturing Company of Williamsport, Pa., is likely to bring suit against the Pope Manufacturing Company for alleged infringement of patents on bevel gearing for bicycles granted to Hugh MacDonald, superintendent of the Demorest works, November 8, 1898. The patent claims cover an improvement consisting of an independent sleeve for the easy adjustment of both front and rear gears of chainless bicycles, to hold them perfectly in mesh, and to make it easy to adjust the gearing if occasion ever requires it. The parts are so geared that three teeth



# WHAT WOULD YOU DO?

The only sensible way to coast is the safe way. The safe way is possible only with perfect control of the bicycle. The minute the feet are off the pedals the control is lost—coasting then becomes a danger.

Eclipse Cycles Fitted with

The Morrow Automatic Coaster and Brake

Make coasting a safe pleasure. It enables riders to hold the



pedals stationary while coasting. A slight back pressure of the pedals applies the brake. The bicycle can be stopped on the steepest hill in the shortest time and smallest space. Any wheel thus equipped can be sold—easily. All the particulars if you want them.

Eclipse Bicycle Co., ELMIRA, N. Y.

# Plain Talks on ANDRAE Cycles

XIV.

Those catalogue comparisons are great things—for Andrea agents.

If you're not selling Andrae cycles what are you going to do when the Andrae agent proves to your possible customers that the Andrae had in 1897 the very features you are trying to sell your '99 bicycle on?

You're going to lose the sale.

Now look at it from the other side. Suppose you're the Andrae agent. You're going to get the sales the other fellow loses.

Look up a '97 Andrae catalogue and compare the '97 Andrae tandem, the '97 Andrae seat post cluster, etc., with those in the other '99 catalogue.

Then think a bit.

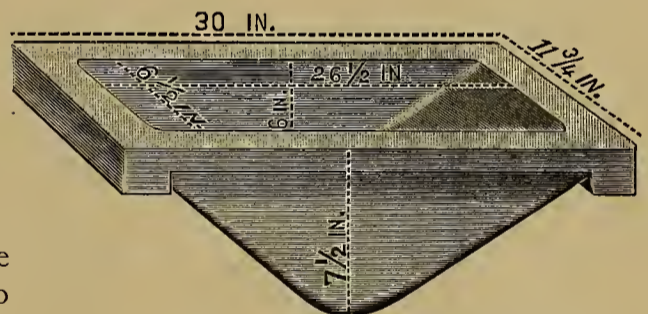
Our monthly paper, "The Andrae Agent," free.

THEY NEVER DISAPPOINT....

Julius Andrae & Sons Co.

MILWAUKEE, WIS., U. S. A.

# The Vital Part

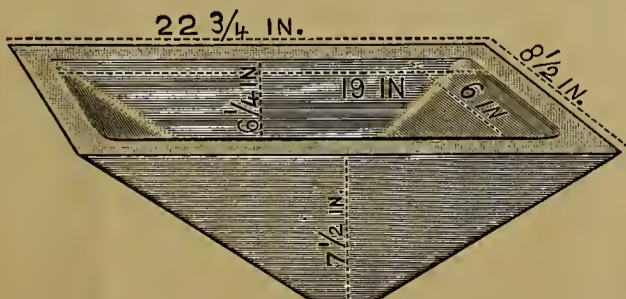


of an Immersion Brazing Furnace is the crucible. It means a waste of money to use any but the best.

*Our Line Comprises* an assortment of the highest class

# PLUMBAGO CRUCIBLES

designed to meet the requirements of all forms of furnaces.



SPECIFICATIONS AND PRICES UPON APPLICATION

## Bridgeport Crucible Co.

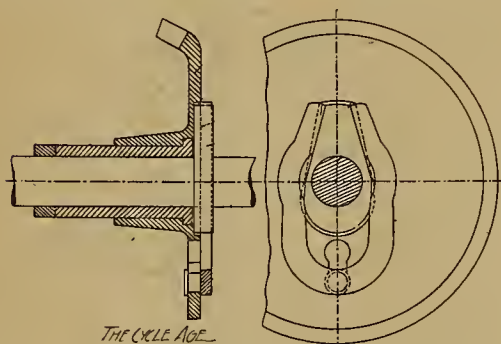
BRIDGEPORT, CONN.

of the best hardened steel are in mesh constantly, making it impossible to break a tooth and greatly reducing the wear.

The Pope company had advertised the same independent adjustments for the Columbia bicycle, it is asserted, but did not, however, claim patents on them. Since the announcement of the granting of patents to Mr. MacDonald, the Pope company, has, apparently, ceased to advertise the improvements mentioned.

#### Elastic Bevel Gear Transmission.

In order to avoid disagreeable vibrations arising from the inelastic driving connections in bevel gear bicycles, two inventors of Copenhagen, Denmark, have devised the flexible connection between the crank shaft and the driving gear which is shown in the accompanying illustration, and have received United States patent for it. They mount the bevel gear wheel on a steel sleeve around the crank shaft and form the crank bars so as to enter into a recess of the wheel. It does not fill this recess entirely, however, but is allowed a limited rotary motion in it against the resistance of a U-shaped spring secured at one point on the outer face of the wheel. The crank boss acts as a double lever with a long arm which acts upon one of the free ends of the spring when the crank shaft is rotated, and a short arm which concurrently presses against the other branch of the spring nearer to its fixed point. The resistance of the spring is, of course, always equal to the power required for ro-



tating the gear wheel and driving the bicycle, but there is a maximum of spring tension which is reached when the levers are turned to such a point as to reach the walls of the recess and drive the gear wheel directly. The inventors state that "during even riding the strain upon the spring will be constant, but by riding up and down steep hills it will change and thus offer the elasticity desired." It is obvious, however, that the strain on the spring will vary according to the position of the cranks, being greatest when they are horizontal, so that the spring will be in constant motion during all riding that requires application of any power at all.

#### New Sundries at Riders' Meetings.

A new plan which will be of interest to the manufacturers of cycle accessories has been introduced into some of the branches of the Century Road Club of America, and may be adopted by the members in the vicinity of New York city. With the object of promoting the comfort and convenience of the members, as well as to create a demand for the goods of the various concerns, samples of the new accessories as they appear are shown at the monthly meetings of the organizations. The idea has proved a paying investment for those makers who have availed themselves of the opportunity.

#### Machine for Tapering Rods.

A machine has been patented for the Morse Twist Drill and Machine Company of New Bedford, Mass., by which it becomes possible to give slender steel rods

a perfectly accurate gradual taper. The main improvement consists in a work-support which always backs the work against the turning-tool, preventing the rod from sagging under the pressure of the latter. It may be useful for turning pedal spindles as well, when unusual accuracy is required. The patent is No. 620,955.

#### LOZIERS MAY ENTER FIELD

Naphtha Engine Building Believed to be the First Step Toward Motor Vehicle Production.

Toledo, March 20.—H. A. Lozier & Company's venture into the naphtha engine building field is looked upon by bicycle men here as nothing else than an initiatory step into the motor vehicle business. The Loziers are building a large addition to their plant here, in which will be manufactured the naphtha engines invented by Superintendent Burwell.

Mr. Burwell, when asked what prospects there were of the Loziers engaging in the manufacture of motor vehicles, replied:

"There is no doubt that at some future time the Lozier company will engage in the business, if the popularity of the machine increases. H. A. Lozier, Jr., is now on his way home from Paris and is bringing with him two 'horseless' carriages. In France it is not an uncommon thing to meet \$3,000 machines on the road, and the question of their adoption in this country is only a matter of good roads. As fast as roads are improved just so fast will these vehicles become popular. I cannot say that the Loziers contemplate adding this branch of work to the Toledo factory. The matter is being discussed and as the Lozier people are always first in the field of progress it is natural that consideration should be given to this subject."

#### FREIGHT VEHICLE CONTEST

Liverpool Association Advances Date for Contest from September to July 31.

The honorary secretary of the Self-Propelled Traffic Association of Liverpool, England, E. Shrapnell Smith, has now issued official notification containing conditions of the second contest trials of motor vehicles for heavy traffic to be held under the auspices of the association, as recently mentioned in this paper, and will send printed copies upon application.

It was originally announced that the contest probably would be held in September, but this has been changed. The trials will begin on the morning of Monday, July 31, and will conclude on the evening of Wednesday, August 2. Trial runs will be made from Liverpool over distances from thirty to forty miles. There will be four classes of vehicles eligible, the minimum loads being 2 tons, 3½ tons, 5 tons and 6 tons (2,240 pounds to the ton). The vehicles must be propelled by mechanical power alone, but there will be no restriction on the source of the power or the nature of the agents used. The hope has been officially expressed that vehicles from the United States will take part in the competition.

#### New Handle Bar Co. in Cleveland.

The W. E. Kelly Manufacturing Company of Cleveland, O., has been incorporated with \$25,000 capital stock, by William E. Kelly, Edmund B. Weed, Albert H. Weed, Walter D. Meals, and Ferdinand L. Black, to make bicycle handle bars.

#### Duped by the Larkins.

A correspondent writing from Lincoln, Ill., with regard to Marshall and Patrick

Larkin, 332 Cornelia avenue, Chicago, states that he sold a farm wagon to one Patrick Larkin last June, taking his note, the purchaser giving as his security Allen Larkin, who made a written statement that he owned three flats worth \$30,000, with \$15,000 incumbrance. When the note fell due the Larkins could not be found and the flats had been sold. He thinks this is the same Patrick Larkin whom the Cycle Age warned the trade about last week under "Hint to Credit Men," on page 606.

#### ALMOST A MILE A MINUTE

French Count Breaks All Existing Road Records on His Electric Motor Vehicle.

A Parisian automobilist, Count Chasseloup-Loubat, broke both the standing and flying start kilometer motor vehicle records March 4. The trial was on a road near the outskirts of Paris and was witnessed by a large crowd of automobile enthusiasts and cyclists. Three official timekeepers timed the trial, which comprised a ride of two kilometers, the first being taken as the record for a standing start kilometer, the second for a flying start record for the same distance, and the whole as a standing start trial for two kilometers. The time made was as follows: First kilometer, 48 3-5 seconds; second kilometer 38 4-5 seconds; total for two kilometers, 1:27 2-5. This is much faster than the previous existing record held by Jenatzy, whose time for a flying start kilometer was 44 4-5 seconds, and whose total time for two kilometers was 1:41 3-5.

Count Chasseloup-Loubat's speed for the second kilometer is equal to a 1:01 per mile gait. After this trial several other motocyclists made attempts at the same record, but though some very creditable runs were made none of the other performers came dangerously near the count's time. After the trials were over Jenatzy stated that he would himself make another trial soon and felt confident that he could travel at the rate of 75 miles per hour.

#### Wet Blanket for Light Vehicles.

The French motor manufacturers have proposed to their government to fix the following import duties on foreign made motor vehicles: Vehicles weighing less than 500 pounds, \$45 to \$50; from 500 to 1,000 pounds, \$30 to \$35; 1,000 to 4,000 pounds, \$20 to \$25; more than 4,000 pounds, \$10 to \$12.50. Parts for motors will be taxed similarly according to weight. Apparently the object is to discourage competition of light weight American vehicles, judging from the ratios of fixed duties to weights.

#### American Bicycles Wanted in France.

There have been several demands for American bicycles at the United States consulate at La Rochelle, France. This should be of particular interest to those makers of cycles who have no agents at Paris. Bicycles with chains which could sell for \$40 to \$50 and chainless machines that could be put on sale for \$70 to \$80 would doubtless find a good market here.

#### Trustee for Rouse, Hazard & Co.

At a meeting of the creditors of Rouse, Hazard & Co., held in the federal court room in Peoria last Saturday, Referee McCulloch appointed Col. John McClure trustee, the creditors having been unable to agree upon a suitable person.

Two motor vehicles valued at \$4,513 were shipped to London from New York city recently.

# What you get for your money —

IS AS IMPORTANT AS THE AMOUNT YOU PAY.

Have you ever thought of that? Follow out the theory and what result do you get?

Buy a pair of shoes for \$2.50. They are shoes. You get some wear out of them. (All that you pay for.) Are they comfortable, well turned and sightly? Do you have to get them repaired soon?

Add 40 per cent. to that price and buy another make. What do you get? As good a shoe as is made, don't you? One that will give you good and long service without repair; that is good looking and suits you. You've had value received in both cases, but isn't the latter the cheaper in the end?

MR. DEALER, when you select your leading bicycle for 1899 don't be penny wise. Look to your net results at the end of the season.

A...  
National  
Rider  
Never  
Changes  
His Mount.

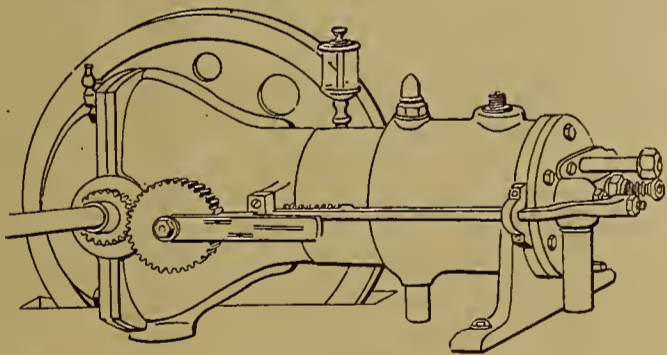


What  
Does That  
Mean?

# GASOLINE MOTORS

THE ONLY RELIABLE MOTORS FOR HORSELESS VEHICLES.

OURS can be run at cost of less than 1-2 cent per hour (2 horse power—larger ones same ratio). SPECIAL MOTORS and TRANSMISSION GEARS for Carriages and others to construct THEIR OWN VEHICLES.



**W**E believe this to be the very best Gasoline Motor ever placed on the market for simplicity, durability, more power and less weight than anything ever produced. Especially adapted for Motor Wagons.

Boats, Small Electrical Plants, Elevators, Machine Shops, Optical Works, Printing Presses, Feed Cutters, Carpenter Shops, Lathes, Emery Wheels, Corn Shellers, Laundry Machines, Pumping Water, Ice Cream Freezers, Irrigation Machinery, Ventilating Fans, Hay Presses, Cream Separator, Sewing Machines, Mining Machinery, Sawing Wood, etc., etc.

These Motors are manufactured horizontal or upright. They are absolutely safe, and cannot explode or cause damage, and are always ready for instant service. They require no mechanical experience or licensed engineer.

Our 2-horse-power Motor weighs but 89 pounds, and occupies a space 24x11 inches; runs at high speed and high compression.

Working parts are all tightly enclosed; one sight feed oil cup lubricates all bearings. Our ignition devise is perfect, and all wearing parts are especially strong and substantial.

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THE ST. LOUIS GASOLINE MOTOR CO.

822 CLARK AVE., - ST. LOUIS, MO., U. S. A.

# While the Sun Shines



Now is the time to make sure of the bicycle harvest—and, later on, of the richer MOTOR CARRIAGE harvest. The great factories at Indianapolis that have made possible for 1899 so glorious a bicycle as the

\$40  
Waverley

have at last, after long experimenting, brought to perfection models of electric motor vehicles at moderate cost that will cause the days of the horse's usefulness to be numbered.

WAVERLEY  
ELECTRIC MOTOR CARRIAGES

are stylish, serviceable, easily handled, and perfectly practical. We are far past the experimental stage, and are now ready to manufacture in quantity. Those Waverley agents who are in position to handle motor vehicles efficiently will be given first preference. Write

INDIANA BICYCLE CO.  
INDIANAPOLIS, IND.

# THE PASTIME AND SPORT

## RACING MATTERS IN A MUDDLE

**Press Agents Issue Contradictory Reports  
—Track Owners on the Fence—  
Climax Impending.**

In the battle for supremacy between the L. A. W. and the newly formed National Cycling Association there must soon come a show down when one side or the other will be found to have made some very remarkable misstatements. At present the riders hold the balance of power, and should the one hundred men reported to be under the ban of the racing board succeed in holding a solid front for three months more they are almost certain to win in the struggle for supremacy. But in case of a break in the riders' ranks there will be a landslide to the League. The L. A. W. is devoting its energy to the retention of control over the despised professional racing men. Meanwhile the track owners sit on the fence waiting to jump on the safe side. Few will commit themselves at the present time. The opening of the season, May 30, will probably bring things to a climax and clear the atmosphere. The track owner, with an investment of thousands, must cater to the side on which he can make money, and to draw large gates he must have star attractions, which at present are all arrayed on the side of the L. A. W. opposition.

### Press Agents Waging the War.

Statements made by both sides in the L. A. W.-N. C. A. controversy are most misleading. For instance, it is asserted on the one hand that Charles River Park track will loyally support the L. A. W., while on the other hand the management of Charles River Park denies that it will go contrary to the action of the National Cycle Track Association which voted to join the National Cycling Association. Again, statements are made that McDuffee and Elkes have asked to be reinstated by the League, while counter statements come from an excellent source to the effect that both of these riders and their aggregation of pacemakers will support the N. C. A. in their racing interests.

### Approaching the Racing Men.

Overtures are already being made to the racing men for the early match races of the season. According to the statements of one side, these offers are made on the condition that the men return to the League, and the riders have begun to ask for reinstatement. The opposition denies this, and claims proof, which the original claimants do not show. Thus the situation is complicated in the extreme.

### West to Have Some Racing.

It is the evident intention of the National Cycling Association to start its "grand circuit" in St. Louis, probably July 8, then carry it through Chicago, Racine, Indianapolis, Louisville and Cincinnati to the east. Peoria may be included, according to present plans. Chairman Batchelder of the board of control has been in correspondence with St. Louis people regarding the matter.

### New Racing Board In Action.

The newly appointed racing board held a three days' session in New York city last week. According to press agents

of the League the board received applications for reinstatement from the owners of the Berkeley Oval and Manhattan Beach track in New York, the Pleasure Beach, at Bridgeport, Hampden park at Springfield, and Charles River Park track in Boston, which it restored to good standing last Tuesday, the fines having been paid. It has also been given out that a number of the prominent outlaws have asked to be reinstated and that they have been informed that their request will be granted as soon as the fines imposed upon them have been paid in full. William Martin, now in South Africa, will be reinstated, as his fine has been paid to the ruling cycling organization in the country where he is located at present.

## L. A. W. TO PROMOTE TOURING

**First Step Taken to Popularize Country Riding—  
Will Furnish Routes and Information.**

The new executive committee of the League took a step at its first meeting held in New York city, March 13, which if followed by energetic action will prove a stimulus to League life and will help it to win new members without having to avoid as much as possible the question, "What do I get for my money?" The action is nothing less than the organization of a national touring department to be conducted on lines similar to those followed by the touring club of France.

The first work of the touring committee, of which Paul Aldrich of Boston has been appointed chairman, will be to arrange routes for this country so that wheelmen traveling from one state to another will be able to secure all desired information at the headquarters of the touring committee. It is expected that President Keenan will make a trip to Europe in the near future in the interests of the touring department and with a view to making its scope and usefulness international. The committee will then be in a position to inform tourists going abroad as to railroad and hotel rates and to supply all other information desired by cyclists intending to travel in Europe. The touring department will have a press committee of its own with members in New York, Boston and Philadelphia and perhaps also in other large cities.

### Gimm's Recovery is Slow.

Louis Gimm still lies in bed at St. Luke's hospital in San Francisco. He is sadly emaciated and two enormous abscesses have formed, one on the thigh, the other on the hip. He has lain helpless for weeks and it will be weeks before he will be able to get up. Gimm makes the declaration, "I know who handed me the stuff. I thought it was for the best. In a few minutes I realized what had been done to me, for my legs stiffened above the knees and my power was all gone." Gimm and his trainer, Leonert, know more than they are telling, but which may some day come out, so they say. Leonert is following every clue, but will reveal nothing of what has been learned. Gimm seldom smiles, but when he does smile it is with satisfaction over what he has learned of the true facts in the matter. "I cannot see," said he, "why anyone should want to do me, when I have always been an honest competitor with all and willing to live and let live."

## COAST TRIP A BAD VENTURE

**Heavy Losses of A. C. R. A. Due to Newspaper "Hold-Ups"—Riders Merit Little Sympathy.**

The American Cycle Racing Association lost \$9,000 on the six-day and twenty-four-hour races in San Francisco. The members of the association included Brady, Kennedy and Powers. A. G. Batchelder, now the chairman of the board of control of the N. C. A., resigned his membership previous to the coast trip, believing there was no money to be made in the transcontinental trip. The loss was due to various causes, but mainly to the antagonism of the westerners to anything from the east. It is said to have cost the association \$3,600 in exorbitant rates, "hold-ups," etc., to advertise the six-day race in the San Francisco papers. The purse for the race was nearly \$5,000; the bonuses and expenses of Michael, Elkes, Bald and Fournier amounted to almost \$3,000, the sprint race prizes, while small, amounted to \$1,000, and the track cost more than \$2,300, while rent of the building and labor brought the grand total up to \$22,000. The receipts were but \$13,000.

### Racing Men Were Improvident.

Statements are made by some of the racing men returning from the coast which reflect upon the integrity of the promoters. Many of the men started west without proper contracts with the promoters to furnish them tickets back east. These men spent their money as fast as it was received. The failure of the promoters did not increase their generosity and the actions of the racing men in going into print with derogatory statements entitled them to no consideration from the promoters. Consequently many of them tell a hard luck story which has but little essence of truth. Yet it is true that many of the men were openly abused and the treatment which they received would hardly bear investigation. The promoters had the men in their power. Races were arranged in which many of the sprinters had no chance of winning. None but handicap races were placed on the programme, although scratch races were repeatedly requested. In their settlements the men took what the promoters cared to give them, just as they rode the style of races the promoters felt inclined to run. Starvation purses and starvation rates for pacing prevailed and few if any of the men who left New York returned with aught to show for their trip. The six-day men received all that was coming to them from the purse of \$5,000, divided into eight parts, less their expenses, of course. Still, most of the racing men lost their money on horse racing, and few deserve the slightest sympathy.

### Sedative Administered to Buffalonians.

Buffalo, March 19.—J. Stuart Kelley of this city has been appointed a special representative of the national racing board, L. A. W. Mr. Kelley is a well-known wheelman and is popular with all classes. His new position will vest him with authority to grant sanctions and to have all the other powers of the regular members of the racing board except the power to cast a vote in their meetings. To a certain extent, this appointment may serve to placate the feelings of the local newspaper writers, who have felt

# Get on an Orient and Spin...

## CHAIN OR CHAINLESS.

Many wheels spin beautifully on a bicycle stand; but to get on and spin out 278 World's Records in one season and one mile in 1.31 4-5 is a different kind of spin. ❁❁❁❁



WALTHAM MANUFACTURING CO., - Waltham, Mass.

LUTHY & CO'S  
NEW POPULAR PRICED WHEELS

# The Fairy King

MADE IN THE LUTHY FACTORY

- UP-TO-DATE - BEAUTIES - SELLERS

AGENTS WANTED EVERYWHERE.

LUTHY & CO. PEORIA ILL.

MAKERS OF THE LUTHY WHEEL



## THE LONG BEAM BICYCLE LAMP

Has a reflector built on same principle as a locomotive headlight.  
Result—throws light 300 feet.  
Feeds by capillary attraction.  
Result—not affected by jolts and jars.  
The burner will not clog as in other acetylene lamps.

SUMMARY: The first gas lamp to give absolute satisfaction.

JOBBER: Write us before cataloging inferior lamps.

THE LONG BEAM LAMP CO. - HILLSBORO, OHIO, U. S. A.

that President Keenan's slight when dealing out the appointments on the national press committee was altogether intentional. When, contrary to all precedent, the name of Miss Edna Bean of the Chicago Record was included in this committee, sentiment crystallized and some of the cycle writers openly expressed their disgust in the columns of their papers. It is certain that the appointment of no other person as a special representative in any capacity could give more general satisfaction than the selection of Mr. Kelley.

#### Chairman Will Return to Chicago.

Chairman Gerlach, who has been in the east for the past week gathering up the loose ends of his work and sizing up the situation, has about concluded that the complexion of affairs is not so serious as he had been led to suppose, and he will therefore not spend much time either in Philadelphia or New York, but will manage the business of the racing board almost entirely from Chicago. At last week's meeting in the eastern metropolis the plan of campaign was outlined, and as it was evident that each member of the board had an excellent idea of the racing situation in his own section, the chairman concluded to exercise his supervising powers from his home headquarters in the Windy City.

#### To Train at Fountain Ferry.

Louisville, March 20.—Tony Landenwich, manager of Fountain Ferry track, is preparing to care for a colony of racing men this spring. The buildings are being put in order and early next month the riders will begin to gather for training. Bald, McFarland, Stevens, Kimble, Cooper, Kiser and others have been heard from. The report that the Fountain Ferry management would refuse to allow the outlaws to train here is apparently without foundation, as the track is a member of the National Cycle Track Association which allied itself with the National Cycling Association, and Kimble, who is an outlaw, has been allowed to train on the track this winter.

#### Warburton Comes to Train Michael.

James Warburton, son of "Choppie" Warburton, the renowned trainer of old, has arrived in New York city, having come to this country on the cabled request of Jimmy Michael, whose trainer he will be this season. Michael's engagement of Warburton practically settles the question of whether the Midget will continue to race on bicycles or not. Choppie Warburton trained Michael in '94, '95 and '96, and Jimmie accompanied him constantly. It is probable that the younger Warburton learned some of the secrets of his father, and that for this reason Michael sought his services. Michael, it is said, will be under the management of W. Brady this season, and will shortly leave for Louisville to train at Fountain Ferry.

#### Cape Girardeau After Racing Men.

Cape Girardeau, Mo., March 20.—Frank Dunlop, manager of the quarter-mile board track here, is anxious to have the Cape made training headquarters for the racing men this season. He has made unusually low rates for board, rooms and Turkish baths. "Bill" Hyland, former trainer of Fred Loughhead, is in charge of the baths. The track and training quarters are now completed and being located within less than 200 yards of the hotel, are most convenient.

#### Washington-Baltimore Path Plans.

Washington, D. C., March 18.—Local wheelmen are evincing a lively interest in

the project to build a cycle path between Washington and Baltimore. The plan now is to form two associations, one in each city, for the purpose of raising funds to build the path. The Baltimore association has already been formed and has begun an active canvass of the city in behalf of the proposed path. The local association will be formed some time during the present month. When the two organizations are in complete working order it is the intention to form similar associations in the towns through which the path will run. These associations will be incorporated and will issue stock at the par value of \$1 per share. A share of stock makes the owner a member for a year and entitles him to all the privileges of the path for that period.

#### Outdoor Season Opens in France.

The first important outdoor races of the season in France were run at the Marseilles track March 5. A large and appreciative crowd saw the match race between Jacquelin, the popular favorite, and Deschamps. Jacquelin won the first and third heats, the second heat being lost to Deschamps, who made a long sprint during which Jacquelin lost a pedal. After these heats had been run Jacquelin rode and won a race with a tandem team, his opponents being Leynaud and Girardet.

#### NEWS IN BRIEF.

"Abe" Powell, the veteran handicapper for the Philadelphia district, has been reappointed.

The Detroit Wheelmen are much disposed to leave cycle racing entirely alone in the future, the club having already, according to reports, dropped \$10,000 in the game.

Frank G. Peck of Yuba City, Cal., one of the prominent amateur riders of the coast, was burned to death March 10 in a conflagration at the Marysville (Cal.) Woolen Mills.

Angus McLeod, the Canadian rider, has accepted the challenge of John S. Johnson to ride a mile race in three heats paced by triplets. McLeod suggests the posting of \$100 forfeit by each.

The executive committee of the Southern Cyclists' Association has taken action toward the affiliation of the association's interests with those of the N. C. A. and other outlaw racing organizations.

For some time past negotiations have been in progress for the erection of a quarter mile board track at the base ball park in the northern part of the city of Washington, but the deal has now fallen through.

"Old Eagle Eye" Gideon, who for several years refrained from connecting himself with any bicycle club for fear of possible complication, has applied for membership in the Century Wheelmen of Philadelphia.

Racing Board Member Dimon of Philadelphia has already received upwards of thirty applications for sanctions for meets in his territory during the approaching season. Twelve of them are for places on the National Circuit.

It is currently reported that the New York-Pennsylvania interstate circuit recently established, with Binghamton, Reading, Williamsport, Bloomsbury, Wilkesbarre and Allentown as the racing points, is to be backed by the A. R. C. U.

There is lively talk of a match between Orlando Stevens and E. C. Bald, Stevens having issued a sweeping challenge to meet any man in the world for \$1,000 a side in a mile race, and Bald having signified his intention of accepting the challenge.

It comes from across the pond that Lesna, the French rider, has given up cycle racing in order to devote his entire time to the management of a motorcycle business in Berlin. Lesna is well known in this country, having competed in races here on several occasions.

E. A. McDuffee has written to Floyd McFarland, asking for a match race on Decoration day or in June at the Charles River park track, the distance to be fifteen miles and the pace by tandems. McDuffee was delighted with the showing made by McFarland against Elkes, whose defeat of the

Bostonian last fall still rankles in the latter's mind. In addressing the Californian McDuffee gave him the title of "middle distance champion" and his own evident intent is to regain the title.

Canadian custom house officers at Windsor, Ont., are trying to stop the smuggling of bicycles that has been going on for some time past by the citizens of Windsor. It has been the custom to buy bicycles in Detroit, ride them a few days there, and to then take them into Canada as old machines not subject to duty.

John Chapman and Tom Barnaby will soon leave San Francisco for Chicago, riding tandem. They were among those who spent all their earnings on the coast and then made a demand upon the A. C. R. A. for return transportation. They will follow the line of the Santa Fe railroad and hope to reach Chicago in time to take part in the proposed six-day race.

John West, the veteran trainer, is said to be interested in a scheme to build a cycle track in Chicago for the use of the outlaw riders, the promoters being more willing to affiliate with the N. C. A. than with the L. A. W. West also proposes to run a six-day race upon the track, should it be erected. The location chosen is the old west side ball park.

Jack Prince, who has been conducting race meets at Houston, Tex., has moved to Galveston, taking his aggregation of riders with him. The team includes such men as Walthour, Bob Miller and Burt Repine. Prince seems enthusiastic over his quiet little southern circuit and believes that he can encourage the racing interest in that section of the country.

Secretary Lumsden of the Chicago Cycle Board of Trade has intimated to officers of the Associated Cycling Clubs of the city that the board will allow them to canvass among the trade for prizes for the Decoration day road race. This assurance, coupled with a \$500 cash prize donation said to have been given the race committee, makes a good list of prizes for the annual road event seem probable.

The managers of the long-distance race to be run in Paris in May have reduced the duration of the race to 50 hours on account of the many protests expressed after the last three-day race. The prizes for the race range from \$300 down to \$40. An extra prize of \$60 will be awarded the leader at 24 hours and also the rider having the greatest mileage at 48 hours, providing the Roubaix record is broken. The race starts May 30.

Tom Cooper is anxious to begin training and has written to Earl Kiser, asking him to start for Louisville with him at once. Cooper and Kiser will travel together throughout the Grand circuit. Neither has done any training this winter, preferring to rest up for a hard season. Cooper has looked after his business interests, which are considerable now, in telephone and Portland cement stock. Kiser is also interested in a small way in the Detroit telephone stock.

Frederick Michael, the long distance champion of Europe, known in this country as Fredericks, and James W. Nawn, the Irish champion, left San Francisco late last week for France, where both will compete in the long distance grinds of May in and around Paris. Their first start will be in the fifty-hour contest at the Roubaix track, starting May 7, their second in the ninety-six-hour race at Paris, starting May 19, their third in the Paris-Bordeaux road race, and in June and July there are a number of contests in which the pluggers will ride. Both riders will return to America in the fall.

It is practically settled now that Cincinnati will see a middle distance race on Decoration day between Harry Gibson and Floyd McFarland, who have been matched at fifteen miles, both competitors to be paced by motorcycles. Gibson is now in California under the charge of Charles Ward, who will bring his string of racing men, including Gibson, Freeman, Ziegler, Frank Cotter and probably Hardy Downing, east to train at the Chester park track. This track will give racing under N. C. A. auspices every Sunday during the coming season.

President A. C. Newby of the stock company owning Newby Oval, Indianapolis, feels that there is a chance to revive cycle racing in that section of the country, and that under proper management a circuit of several of the western cities could be formed which would not only help the Newby Oval to retrieve past losses, but would yield some profit to the promoters in the other cities of the circuit. Mr. Newby wants nothing to do with the outlaws and is satisfied to stick by the League, even though racing under L. A. W. colors in the future must be maintained by an entirely new set of riders.

## RETAIL MISCELLANY

## General Information Concerning Cycle Agents and Repairmen Throughout the Country

## Alabama.

The Hunt, Hunt Special and Iron City are the three models made by H. L. & E. E. Hunt, 1904-1906 Third avenue, Birmingham. They also carry the largest line of sundries of all kinds to be found in the city. Their repair department is an extensive branch of the business. Mr. Hunt created a sensation last year by actually selling good bicycles as low as \$5 each. The secret is easily explained. These machines had been in the rent department until they had more than paid for themselves.

## California.

Leffert & Hilb have just opened a new bicycle store at 938 Sixth street, San Diego. They carry a full line of Columbia, Hartford and Vedette models, deal in supplies and do repairing of all kinds.

## Connecticut.

L. J. Gladding of New Britain has engaged the basement of R. O. Clarke's hall, where he will start a bicycle repair shop.

Major Taylor, the champion bicyclist, rode ten miles against R. M. Alexander in the windows at Alexander & Elmer's bicycle store at their opening which was held at Hartford. Every lady attending the show on ladies' day received a souvenir hat pin. All of the latest styles of Reading, Orient, Stormer and other standard machines were on exhibition.

## Idaho.

The Capital Cyclery, Boise City, has reopened under the management of Ed. G. Fanning, a capable mechanic, who "doctored" so many of Boise's bicycles last year. The shop will be a branch office of the Rambler company.

E. C. Bickford & Co., 910 Idaho street, Boise City, announce that they have purchased the bicycle shop known as The Cyclery, formerly owned by Bibbins & Brown, and are prepared to do all kinds of repair work.

## Illinois.

Whitson & Craigmile, the proprietors of a general store in La Grange, who carried bicycles as a side line, have dissolved partnership.

H. W. Snyder has rented a room at 205 Court street, Kankakee, and will open a general repair shop where bicycles can be repaired in short order.

The hardware and bicycle business formerly conducted by Helm Bros., at Algonquin has now passed into the hands of John L. Helm.

The death of Jas. D. Sarver, of the firm of Sarver Bros., Le Roy, is reported.

E. D. Scott has gone out of the bicycle and hardware business in Spring Valley. He has been succeeded by Dalzell & Co.

George Kaseburg succeeds Mrs. C. Kaseburg & Sons in the hardware business at Venice. Bicycles are a part of the line handled.

Fortier Bros. will succeed Fortier & Stedman in business at Piper City. They sell bicycles in connection with a general line of merchandise.

M. Bohner & Son have rented the Schechter building in Oregon and will open a first-class bicycle store. Not only will a complete stock of high-grade bicycles be handled, all kinds of repairing done, etc., but the firm will keep machines for rent.

A. A. Cole of London Mills has been succeeded in business by L. F. Tharp. He was agent for Crescent bicycles.

## Indiana.

M. D. Jones of Hammond has purchased A. Wyson's interest in the bicycle business and will move his headquarters to the opera house building. He will do general repair work as formerly and handle a general line of bicycles.

Eller & Irwin of Oxford have gone out of business and F. Menefee succeeds them. Bicycles and hardware are the goods handled.

William Rogers has opened a bicycle and general repair shop at Dana.

## Iowa.

Bobzien & Foster succeed A. D. Craven in the hardware, furniture and bicycle business at Kellogg.

Hy Gilbert & Co. succeed F. C. Foote in the hardware and bicycle business at Goldfield.

I. N. Holmes of Decorah has sold his bicycle business to E. W. Hoyt.

Ira L. Thomas & Co. of Oskaloosa, dealers in bicycles, etc., have dissolved partnership. They were agents for World, Syracuse, Crescent and Crawford models.

## Kansas.

The Carr Bicycle Co. of Wichita is building a tandem pacer to be used at the Wichita meet in August.

Edward A. Ayers has sold out his hardware and bicycle business at Washington.

## Kentucky.

The Danville Dry Goods Co. succeeds Roberts & Farris in the dry goods business at Danville. Bicycles constitute a part of their stock.

## Louisiana.

W. P. Longino & Son of Homer have gone out of business. They carried a line of bicycles.

## Massachusetts.

Clarence Curtis will open a bicycle store under the Adams express office in Lenox.

Chas. B. Woodworth, a bicycle dealer of Newton Highlands, has had his store finely refitted and has taken a stock of various makes. He also attends to repairing.

Horace E. Goodrich of Brighton has started in the bicycle business again, not at the old stand, however. He has removed from his old store to the Brighton cycle store, 354 Washington street, where he also does repairing.

## Michigan.

C. E. Norton will open a bicycle store in Dimondale.

The bicycle dealers and repairmen of Lansing have held a meeting and elected the following officers: F. J. Cole, president; Chas. Rork, secretary, and Smith Clawson, treasurer.

A new bicycle shop has been established in Cadillac by C. D. Shepard & Co. Apparatus of the latest design and most approved pattern for enameling, brazing and vulcanizing—in short, for the perfect performance of all kinds of bicycle work—has been procured. The firm are agents for the White and Columbus machines.

A. Hutton & Son succeed the firm of Hutton Bros. in Oscoda. They handle hardware and bicycles.

A drawing for a \$50 Yale bicycle was held at Tierney Bros.' bicycle store in Saginaw. Over 6,000 persons had visited the store and written their names in a register and received a numbered ticket. A small boy was perched upon the counter and, blindfolded, drew the numbers from a box. The fiftieth number drawn was the winner. Tierney Bros. exhibit the largest line of good bicycles in Saginaw. They have a complete assortment of sundries and a first-class livery and repair shop in connection.

## Minnesota.

I. O. Brown has been purchasing tools and machinery for a bicycle manufacturing establishment to be opened up at Wheaton in the near future.

C. Litzky is reported to have purchased the interest of Mr. Fawkes in the Northwestern Cycle Co. of Pine City.

Knott & Stob of Raymond have dissolved partnership. Bicycles comprised a part of their stock.

The Haynes Trusty Cycle Co. of Minneapolis, which handled the Tiger and Tempest models, has dissolved.

Moore & Newcombe, hardware dealers at Hutchinson, have sold their business to Hunderle, Zila & Co. They will deal in bicycles.

R. S. Swarthout of Pine Island has moved his jewelry store into the Stoffel clothing store, where he will have more room for his increasing bicycle repair business.

The Northwestern Cycle Co. of Minneapolis has leased a new brick block, 121 Sixth street, S., for the handling of its wholesale business. This enlargement was rendered imperative by the company's rapidly increasing jobbing business. The retail business will be conducted as formerly in the old store, corner of Sixth street and First avenue, S.

## Missouri.

Kern & Hollyman will succeed Markell & Hollyman in business at Palmyra. They

handle bicycles in connection with their hardware business.

## Nebraska.

Newman & Cox, of Hampton, have dissolved partnership. Bicycles were included in their line.

## New York.

Lockwood & Adams will open a bicycle store and livery on Park avenue, near Oneida square, Utica. They have received agencies for the Sterling and Hermit bicycles.

L. H. Durland, Son & Co. succeed the firm of Durland, Smith & Co. in Watkins.

Harry J. Moss has opened a bicycle sales-room and repair shop at the Oneida Square Bicycle Academy, Utica. An expert machinist has been engaged and a full line of cycles and sundries will be kept on hand.

George W. Nichols, who was in the sewing machine and bicycle business at Rochester, is dead.

## North Dakota.

The store room occupied by W. G. Carter at Grand Forks has been remodeled. The room has been extended 14 feet farther back and a hardwood floor laid, the walls repaired and new counters put in. The back room will be used as a repair shop and a stock of bicycles will be displayed in the front.

Cavaller is to have a first-class bicycle repair shop. L. B. Wheldon has rented the machine shop formerly occupied by D. J. Egan and will open about April 1.

H. J. Hadley succeeds G. A. Luce in the hardware and bicycle business at Hope.

## Ohio.

George Hamilton expects to return to Montpelier about April 1, when he will open up his bicycle store and repair shop.

Clint Redfern will open a bicycle repair shop in Fostoria on April 1.

A recent fire in Toledo originated in the bicycle factory of Norman Devaux. The fire was caused by the explosion of the gasoline brazer at which Charles Brooker was working at the time. Mr. Brooker was slightly burned about the face and hands, but was not seriously injured. The stock of finished parts and bicycles was almost a total loss, amounting to nearly \$2,500, with no insurance.

Cantwell, Kinsley & Elder is the name of the new firm which will succeed Cantwell & Brinckley in the hardware and bicycle business at Kenton.

J. M. Naylor & Co., hardware dealers, Tiffin, have dissolved partnership. They sold bicycles.

F. W. Dickinson has opened up his bicycle repairing establishment on North Broadway, Geneva, after having made extensive alterations. He has ordered a large supply of all kinds of sundries. He will give prompt attention to bicycle repair work, in which he is an expert.

## Pennsylvania.

William H. Cameron, the well known bicycle repairman, has opened his factory at 225 Elm street, Oil City, for the coming season. A complete line of bicycle sundries and equipments is kept in stock, and any attachment or part of a wheel can be secured on short notice.

A recent fire in Tunkhannock originated among a lot of excelsior and other inflammable material in the bicycle repair shop of T. S. Burson. Mr. Burson's actual loss is not stated, but he had insurance to the amount of \$1,000.

When the local bicycle dealers of Pittsburgh held their annual banquet business was thrown to the winds and everything was talked about except bicycles.

## Rhode Island.

B. J. Foy of Newport has his new store on Thomas street well fitted for his bicycle business. His window display is attracting considerable attention.

## South Dakota.

A. A. Woodward, an enterprising dealer in Clark, has an electric motor which runs a bicycle standing in the window.

## Texas.

C. P. Wilson & Co. of Ennis have sold out their hardware and bicycle business.

## Utah.

J. C. Jensen has received a large stock of bicycles and has reopened his repair shop in the rear of his establishment on First South street, Salt Lake City. Mr. Jensen has made a name for integrity that places him in the front rank of dealers.

## Washington.

R. J. Carnell is starting a bicycle store at South Bend.

## Wisconsin.

A report is current in Port Washington that the water power owned by the Denetts at Grafton will be used the coming summer by a bicycle supply manufacturer.

# INFORMATION FOR BUYERS

## GREAT SUCCESS WITH ELECTRO LAMP.

Acetylene gas lamp dealers have had a great deal of trouble in New York city over the calcium carbide situation. There has been no difficulty whatever with the underwriters, but the commissioner of combustibles took up the matter and compelled those desirous of handling carbide to provide an iron fireproof safe for the same, and limited them to twenty pounds to be carried in stock at any one time. This of course handicaps the carbide lamp business in a way. Greene & Haskell, distributing agents for the Electro lamp, at 1 Union square, hope to conform to the regulations by April 1 by introducing a safe which has practically been accepted by the commissioner of combustibles, enabling one to carry about 100 pounds of carbide.

This firm is now shipping carbide in large quantities from the factory in Niagara Falls, which manufactures and controls the output of carbide for the United States. It is also building a repository in New York city where it will carry in stock two or three carloads in one, two and five-pound cans, as well as a heavy stock of charges for the Electro lamp. This will enable it to make prompt shipments to all parts of the country.

Greene & Haskell state that their business has been unprecedentedly heavy, much in excess of what they anticipated, as they have already taken orders for more than 25,000 lamps. The Electro lamp last year met with great success. The makers discovered, however, in the year's business that there were a few slight defects in manufacturing construction, which in the improved lamp have been entirely remedied. One of the greatest troubles was caused by the carbide contained in cartridges for use in the Electro deteriorating in quality by being carried too long in stock, so that the full four hours of actual work was not gotten out of it. This year, however, it is being put up in an entirely different form, which keeps the charges fresh for an indefinite time. The makers have an additional feature, also, of a handsomely constructed metallic cartridge which can be utilized in the lamp for burning loose carbide, which is favored by some and is slightly less expensive than the other method.

## ADDENDA TO POPE'S SPECIFICATIONS.

Through a misunderstanding of the use to which it was to be put, the information furnished by the Pope Mfg. Co. of Hartford, Conn., which was published in the Cycle Age tables of Current Cycle Manufacture, did not contain the specifications of the two leading Columbia models, 59 and 60, which are the latest improved models of the Pope bevel gear chainless machines. As an addenda to that list, therefore, the specifications of these models are here published, as follows:

Model 59, Men.—Price, \$75; weight, 26 lbs.; height of frame, 22, 24 and 26 in.; tread, 4 1/4 in.; joints flush, crown special, drop 2 3/4 in., rear fork round, rear stay round, lugs on bottom bracket 4, lugs on seat cluster 4, crank shaft one-piece, handle bar fastening internal, seat post fastening internal, cranks round, gear bevel, crank length 7 in., pedals special, rims special, saddle optional, tires Hartford and options, color black.

Model 60, Women.—Price, \$75; weight, 26 lbs.; height of frame, 22, 24 and 26 in.; tread, 4 1/4 in.; joints flush, crown special, drop 2 3/4 in., rear fork round, rear stay round, lugs on bottom bracket 4, lugs on seat cluster 4, crank shaft one-piece, handle bar fastening internal, seat post fastening internal, cranks round, gear bevel, crank length 6 1/2 in., pedals special, rims special, saddle optional, tires Hartford and options, color black.

All the other Columbia models and the Hartfords are built in 22, 24 and 26-inch frame heights, while the two Vedette models are made only in 22 and 24-inch. The chain adjustment throughout the line of chain driven machines is oblique and the chains, pedals and rims are all special. Liberal options are allowed on sprockets, the choice of 7 to 10-tooth rear sprockets in combination with 21 to 25 and 21 to 23 tooth front sprockets, respectively on drop and diamond frames, being offered throughout the line, with the exception of the Columbia Model 49, on which choice of 18 to 20 tooth front sprocket is given, and the Vedette Model 22, supplied with 22 and 24 tooth front sprocket.

## VERNON MODELS TO MEET ALL DEMANDS.

The Vernon Wheel Works, 79 Lake street, Chicago, whose catalogue showing seven models of Vernon bicycles has been recently issued, has endeavored in completing its line to list machines in such variety that the needs and requirements of all sorts of riders both in this country and abroad may be met. To fully carry out this plan each

model in the line is fitted, if desired and at a slight additional charge, with both front and rear mud guards and with front wheel brakes. Wood or steel rims for Dunlop, G. & J., Crescent or Continental tires will also be furnished.

The leading patterns in the line are the men's and women's \$50 Vernons, Models 30 and 31. These machines have flush joints throughout of approved form and are fitted with a two-piece hanger divided at the right end of the axle. The sprocket is of the star pattern. Model 32 is a thirty-inch wheeled men's roadster listing at \$50. In general construction it is similar to the two preceding models. Patterns 40 and 41 are a pair of \$40 machines of substantial, conservative design, and with outside frame joints. Models 42 and 43 sell at \$35 each. These models have outside joints and simple three-piece crank hangers.

## "PUBLIC WIND" MACHINE.

There is no doubt that keeping compressed air on tap in repair shops for free tire inflating is a valuable advertisement. Pumping up tires is work which no one enjoys and riders are bound to show favor to re-



pair shops at which they can inflate their tires without exertion or bother. Robt. Holmes & Bros. of Danville, Ill., offer four patterns of compressed air tanks for repair shop or factory use, each having a capacity of 120 gallons, sufficient for inflating 100 tires at 55 pounds pressure without refilling the reservoir. Each tank is complete with a double acting pump which requires no packing. Choice is afforded between four styles of power, the pumps on the different tanks being equipped respectively with belt driving arrangements, a hydraulic motor, an electric motor and a gasoline engine. The electric motor is wound for 110, 220 or 500 volts. In ordering the outfit with the hydraulic motor the water pressure to be used should be stated. The gasoline engine outfit costs but one cent per hour to operate and is very desirable for shops having no independent source of power. This machine is here illustrated. Each tank is furnished with two ten-foot sections of hose fitted with the company's new automatic inflating valves. The instant the valve is touched to the valve stem of the bicycle tire the inflation commences, and the instant it is dropped the air is shut off. The reservoirs are each five feet in height and two feet in diameter.

## CHAINLESS MODELS SELL WELL IN CHICAGO.

C. H. Larsen, agent for the Sterling bicycles in Chicago, reports a splendid run on these machines, especially on the chainless model. He stated last week that thirty or-

ders had already been booked for the latter model and that in the last ten cases the customers came in and left their orders for the "chainless made by the Sterling company" and did not even ask to have it explained or described. They took it for granted that whatever the company turned out was of sufficient value to warrant their investing their money in it.

Mr. Larsen is also agent for the Tribune and Trinity cycles. The latter was his leading machine last season, so has a certain following which is already making itself known. The Sterling is a new machine at the store, but is so well known locally that it needs no introduction, as is shown by the manner in which orders are being placed. From sales so far made, the chainless bids fair to have a larger run than was anticipated. In the Tribune the agency has a splendid machine, and one in which every confidence can be placed. It has not been pushed as energetically in Chicago as some of its rivals for popular favor, but it will win friends wherever sold.

## PREPARING FOR SEASON OF ACTIVITY.

The Chicago Tube Co., 217 East Washington street, Chicago, is making extensive arrangements to supply the trade throughout the country with a high class line of machines manufactured in an up-to-date plant at the lowest possible prices. The company has for a long time made most of its own stock, but carries everything that enters into the construction of a machine, either of medium or first class, the stock being manufactured by many different concerns, for whom the company acts as agent.

The line of bicycles which the company is particularly desirous of bringing to the attention of the trade is the Pirate AA, in which the best of everything is incorporated. President Waters of the company states that he has spared no expense in producing the machine and feels confident it offers the best value for the money. It has the Fauber hanger and Alpha hubs—the latter the product of the company, and guaranteed to give satisfaction. The chain adjusters permit the rear axle to be removed without disturbing the adjustment of the bearings. As they are secured to the frame and are movable, they are easily slipped over the axle when replaced, thereby making necessary only the tightening of the axle nuts. Expanders are used in both seat-post and handle-bar fastening.

A vital point that has received more than ordinary attention is the fork-stem. This has been heavily reinforced, so that no fear need be entertained from breakage. The company guarantees it for one year.

Besides the machine above described, the company has a line of three models comprising a regulation road machine with Fauber hanger and double rear forks and stays, a 30-incher and a triple crown machine, all three listing about the same as the first Pirate AA. They are the same in construction so far as material is concerned, but are of different designs. To supplement these models the company is producing a cheaper machine to list at \$25 in which the construction is the same, with the exception of the hanger and finish. The hanger used is the Waters two-piece, in which the left crank and axle are in one piece, the right crank being attached by means of a taper and screw.

In addition to the complete machines, the company carries a full line of Crosby & Mayer sheet metal fittings, tubes cut to length, saddles, pedals, tires and, in fact, everything that enters into the construction of a bicycle.

## DAYTONS WIN IN AUSTRALIA.

The Davis Sewing Machine Co. of Dayton, O., maker of Dayton bicycles, has received from its Australian agents a letter which furnishes gratifying proof of the popularity of the Dayton bicycle in the antipodes. The agents' letter is as follows:

"In the early part of the season we informed you that we expected to win for a second time the great Austral wheel race. The man we found and expected to win the race was L. B. Scharp, but by the action of the Melbourne Bicycle Club he was prevented from starting. The club was compelled to pay him the sum of \$1,500 as compensation for their illegal action. This was a great blow to our hopes, as instead of running first as we expected, we only secured fourth place.

"On Christmas day one of our riders, F. E. Fontaine, won the Castlemain Christmas wheel race of \$400, and on New Year's day S. E. Gordon followed this by winning the Castlemain New Year's wheel race, \$400, as well as a handicap prize of \$150, and on the following day also won the Eaglehawk wheel race of \$250. On the same day W. Mathews



won the Creswick wheel race of \$150 and the half-mile event at the same meet.

"On January 21, the League of Victorian Wheelmen held their annual meeting on the Melbourne cricket ground unbanked grass track. The biggest race of the event, the L. V. W. cup of \$500, was won by S. E. Gordon. The 26th of January is the Australian national holiday, and on that day the great Australian National Association fete is held at the Exhibition building, Melbourne. On this one day \$3,500 was given in prize money for cycle racing, \$2,200 of which is for the A. N. A. wheel race of two miles, being the largest prize given in Australia for any cycle race. This was won by W. Mathews on the Dayton in record time. The Federation handicap of \$335 was won by S. E. Gordon, with G. Carpenter second, both on Daytons, and the Australia cup of \$335 was won by G. Carpenter, with G. Bishop second. Out of \$3,500 prize money on that day Dayton riders secured \$2,500.

"We may mention that 280 men entered for the A. N. A. wheel race and more than 200 started. We had only nine Daytons on the track that day and only five men scored their record, being 14 firsts, 5 seconds and 2 thirds.

"These races were witnessed by more than 70,000 people."

**RACYCLE TRAVELING MEN RECALLED.**

Early this month the Miami Cycle & Mfg. Co. of Middletown, O., realizing that the orders already booked for Racycles would tax its manufacturing capacity, recalled most of its traveling force from the road. Although the capacity of the company's plant has been doubled in the last year, the increase in orders this season over those of last is in a much greater proportion. The firm states that the business already done is almost if not quite as heavy as that contracted up to May last year. The only men now on the road are the general representatives for the different sections of the country. These, with their present addresses, are as follows: N. S. Davis, 126 Washington street, Providence, R. I., New England; J. A. Worthington, Willmar, Minn., northwest; L. H. Stephenson, Paola, Kans., west; F. R. Grimes, southern states; J. F. Fowler, Portland, Ore., Pacific coast, and W. E. Houghton, 76 King street, west, Toronto, Ont., Canada. Many of the traveling salesmen who have been taken from the road are now acting as local agents for the Racycle in various smaller cities.

**ROUTE OF THE SOUDAN TRAVELER.**

The Soudan Mfg. Co., 488 Carrol avenue, Chicago, reports that its traveling representative, J. C. Maurer, is now making the states of Indiana and Kentucky. He carries with him three grades of Soudan bicycles. His route for the remainder of this month is as follows: Evansville, Ind., March 23; Henderson and Owensboro, Ky., March 24; Louisville, Ky., March 25; Cincinnati, O., March 28; Indianapolis, Ind., March 31. After finishing his business in these cities Mr. Maurer will visit the following places in Indiana: Anderson, Kokomo, Logansport, Peru, Wabash, Huntington, Fort Wayne, Warsaw, South Bend, Plymouth, La Porte, Elkhart and Goshen.

**READING CHAINLESS GEARS NOW READY.**

The Reading Chainless Gear Co. of Reading, Pa., which was burned out at the commencement of last season and thus unable to get its product on the market last year, is now fully re-established and is ready to ship either complete bicycles fitted with the gear or gear parts in sets ready to be assembled into bicycles by manufacturers. J. E. Blackman, general manager of the company, is now in Chicago for the purpose of establishing a western agency.

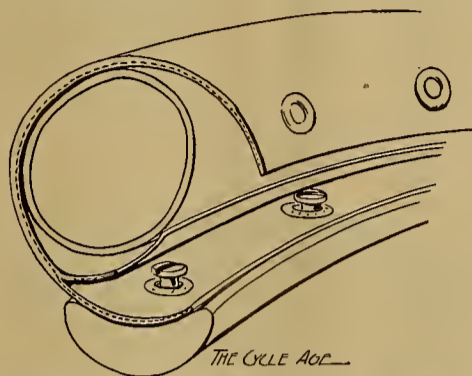
**BELLS AND CYCLOMETERS SOLD TOGETHER.**

It has been deemed necessary by the Bristol Bell Co. of Bristol, Conn., to keep on the road another traveling salesman in addition to C. W. Mallery, who is well known to the trade as a successful and enthusiastic business hunter for Peerless and Corbin bells. It has accordingly secured the services of M. J. Horton, who will look after the eastern territory. Mr. Mallery in the future confining his efforts to the west. The company has also made arrangements whereby its travelers will also represent the Veeder Mfg. Co. of Hartford, Conn. The two lines, bells and cyclometers, rank very nearly in the same class, and a selling combination on the two ought to prove very satisfactory to the trade.

**B. & L. DETACHABLE TIRE.**

The Berger & Larsen Tire Co., 152 Lake street, Chicago, is introducing the B. & L. Detachable tire, the general construction of which may be seen in the accompanying illustration. The tire is a new departure in the way of detachable double tubes, it not being held to the rim by grooves, beaded edges or wires, and not requiring a special rim for its attachment. J. A. Berger, secretary and manager of the company, is the

inventor of the tire, and to him a broad patent was issued in the fall of 1898. In each edge of the tire jacket or casing are eyelets securely fastened to the tire fabric and rubber. These eyelets are so placed that they may be hooked over the extension button ends of special spoke nipples. While the eyelets are large enough to slip easily over the nipple ends and thus accommodate themselves to slight variances in the drilling of the rim, the tire when inflated has



no tendency to loosen from its fastening, because the pressure of the air causes the tire jacket to pull one way on the buttons from one side and in an opposite direction from the other, and also because considerable downward pressure toward the rim is exerted by the inflated tire.

To that edge of the casing which is undermost or next the rim when the tire is in place on the wheel, a wide flap is secured which not only covers the other edge and prevents pinching of the inner tube in assembling the tire, but protects the tube from chafing on the heads of the extended nipples. If the user of the tire can locate the puncture without entirely removing the inner tube, it is a very easy matter to open the casing for a short distance in the locality of the puncture and thus expose that part of the tube. To remove the tube entirely the upper edge of the casing is unhooked all around the rim, but the other side is not disturbed.

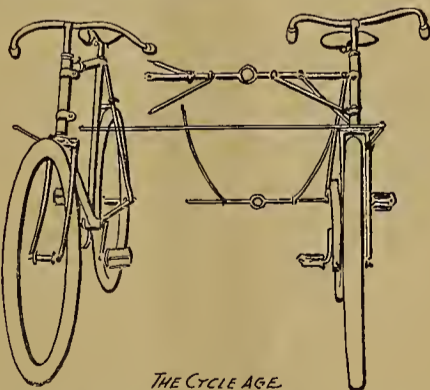
In order that the tires may be sold to dealers and repairers to use on old machines the company furnishes free with each pair of tires a sufficient number of the special nipples to fit out the rims of the wheels to which the tires are to be attached. The tires are now ready for delivery in standard sizes and will be furnished to match the number of spokes in wheels as specified by the buyer.

**CARBIDE DELIVERED DAILY TO DEALERS.**

The Cycle Syndicate, 320 Broadway, New York city, has opened a distributing depot for the sale of calcium carbide, packed in one, two and five-pound cans, prepared for all forms of acetylene gas lamps. It has established a system by which orders received one day will be filled the next day by wagons. This will no doubt be of great convenience to the hundreds of dealers in the vicinity of New York who sell acetylene gas lamps. Carbide is sold for cash only and is not delivered on rainy days.

**RIESS COUPLERS FIND GROWING FAVOR.**

The Riess bicycle coupler, advertised in this issue by the Riess Bicycle Co. of Zanesville, O., is reported to be having an extensive sale both in this country and abroad. The increased business which the company is



enjoying attests the growing popularity of the device with riders socially inclined. This coupler adds only five pounds to the weight of each bicycle. It is neat and graceful in appearance and can be attached to any style of bicycle.

**FAST EXPRESS SHIPMENT TO MEXICO.**

The Mexican Daily Herald of the City of Mexico, in its issue of March 3, gave an account of an unusually fast express shipment from the United States to that city. The shipment in question comprised a consignment of Stearns bicycles from the fac-

tory of E. C. Stearns & Co. of Syracuse, N. Y., to that company's Mexican agent, Mr. Hilario Meenen of Mexico City. The entire time consumed between Syracuse and Mexico was five and one-half days. The shipment was held for 24 hours in the custom house at New Laredo, thus making the actual time of the bicycles on the road less than five days. The superintendent of the Mexican National Express Co., which had charge of the goods after they left the care of the American Express Co., states that while the shipment broke all previous records, no especial effort had been made to bring the goods through in record time.

**HOFFMAN BRANCH FOR ROCHESTER.**

Owing to the large increase of its eastern business, the Hoffman Bicycle Co. of Cleveland, O., has purchased the good will and fixtures of its former agent, J. J. Mandery of Rochester, N. Y., who is retiring from the bicycle business, and will open a fine bicycle store at 69 and 71 East Main street, Rochester, where a full line of Hoffman bicycles will be carried at all times. New York state and vicinity will be supplied with goods from Rochester on regular stock orders. C. B. Achilles, who was formerly assistant to Mr. Mandery, will be manager of the store. A full line of accessories will be carried. This will be one of the handsomest stores in Rochester, the display room being 35x70 feet, with a fine front, and additional rooms attached for storage.

**HELPING CLEVELAND AGENTS TO THE FRONT.**

H. A. Lozler & Co. of Cleveland are supplying their agents throughout the country with handsomely enameled signs bearing the words, "Cleveland Bicycle Agency," and showing a picture of the Cleveland name plate to the left. These signs are finished with a royal blue background and white lettering, the latter relieved by a dainty scroll entwined among the letters. Some of these signs are made with a support adapted to be secured to the wall of a building or to a post where it will stand out prominently over the sidewalk and be seen by passers-by, while others are provided which may be nailed to a post or flat against the wall. The company is also sending its agents each a cloth banner large enough to cover the front or back wall of a 25-foot building announcing that Cleveland cycles are for sale within.

**TWO VALUABLE REPAIRER'S TOOLS.**

Bicycle repairers and small builders having much tube cutting to do have often wished for something more convenient than the hack saw of our fathers, and realizing this want, Ayes & Co., 58 Ellen street, Chicago, have placed in the market a tube cutter which sells at a nominal price, occupies but little room on a bench or table, and which is furnished to operate either by hand or belt power. The hand cutter is operated by a crank, the motion being transmitted to the cutter arbor through sprockets and chain. Another repair shop tool of easily recognized convenience manufactured by this firm is the sprocket wrench intended to aid in the removal of rear sprockets. The wrench takes 7, 8, 9 and 10-tooth sprockets, and by its use any sprocket, no matter how tight, may be removed from the rear hub without danger to the teeth. It should also be found very convenient in the assembling rooms of factories.

**THE MURRAY ACETYLENE GAS LAMP.**

William P. Murray, 533 Broadway, New York city, is the sole importer of the Murray gas lamp, which is a very uniquely shaped little acetylene lantern weighing but eleven ounces. The lamp sells at a reasonable retail price, with a good profit to the dealer. It can be readily taken apart for cleaning and other purposes and has the distinctive advantage that it can be lighted the instant the valve is opened. The reflector is of the parabolic type and is made of aluminum. The lamp has numerous other features which recommend it to those looking for a thoroughly reliable and substantial acetylene gas lamp which can be sold at a moderate figure.

**UNION WHITEHEAD CATALOGUE.**

The Union Cycle Mfg. Co. of Highlandville, Mass., recognizes the fact that the bicycle industry has advanced to a stage where the readers of catalogues are not interested in long descriptions of manufacturing methods and claims of the kind which can be applied as well to the product of one factory as to that of another. It has accordingly limited the reading matter in its recently issued catalogue to cover such points as are distinctive to Union manufacture. The catalogue shows the five models made by the company. The Union Whitehead, in men's and women's patterns, has the same lines and general construction which have given it a wide reputation. It lists at \$65. The Union Redhead is a new member of the line and in two models at \$50 each is offered as a strictly first class machine for agents to sell as a

lower priced supplement to the Whitehead line. The machine has flush joints and is fitted with Fauber pattern one-piece cranks and shaft, the hanger being manufactured in the Union factory after special designs of the company. The Whitehead is also made in a chainless pattern. It has the Sager gear and lists at \$75.

#### ARNSTEIN'S DIP ENAMELING PROCESS.

Eugene Arnstein, 86 West Lake street, Chicago, has been experimenting for some time with view to perfecting a process whereby colored enameling might be done by dipping and the cost of brushing on the several coats thus saved. The result is, he states, that by his method enameling in colors can be done as successfully as can that in black, to which finish dipping operations have been generally limited in the past. Mr. Arnstein invites correspondence from manufacturers and enamellers and is willing to give such the benefit of his experimental work and to put them on the right road toward the successful accomplishment of dipping frames in colored enamels by his method.

#### "3-KROWN" HUDSON CATALOGUE.

The trade mark of the Bean-Chamberlain Mfg. Co. of Hudson, Mich., is strikingly original and is quite fitting as an advertisement for the "3-Krown Bicycle Builders." It comprises a crown, the lower ring of which is of the regulation historical type used by kings and queens for centuries, but the upper open work portion is distinctive because composed of three arch fork crowns overlapping each other. The trade mark is simple but bold in effect and is used as the cover decoration on the recently published catalogue of the company. The catalogue shows the eleven models of Hudson, Lenawee and Nox-all bicycles manufactured by the firm. The specifications are brief and carefully compiled, and the illustrative work and typographical composition of the brochure are tastily and cleanly executed. One of the features of the line of models is the 0-inch pattern Lenawee, which is offered to dealers as a strictly reliable large-wheeled bicycle at a popular price.

#### ILION RECOGNIZES THE REMINGTON.

The Board of Trade of the city of Iliion, N. Y., held its third annual banquet March 14. Covers were laid for 150. The menu card is a good indication of the closeness with which the name Remington is identified with all matters pertaining to the city of Iliion. On the front cover directly under the title is a half-tone showing a Remington bicycle and a Remington shotgun, with the word Remington in red across the picture. The Remington Arms Co. not only has gratifying business relations in its home city but is at this time very secure in its relations throughout the country. So successful has been the skirmish for new agents and the canvass among old ones that all of the company's traveling force has been called in that orders already placed for Remington bicycles may receive prompt attention.

#### ECLIPSE CYCLES SELLING READILY.

The Eclipse Bicycle Co. of Elmira, N. Y., reports that its traveling men are constantly making new agencies and attributes this largely to the fact that its machines are fitted with the Morrow coaster and brake. The company does not find it at all difficult to place agencies for Eclipse bicycles in territory where it has never sent traveling representatives before, and feels that the coming selling season will be a very good one for the bicycle trade in general. In addition to having started a satisfactory bicycle trade for the season, the firm is enjoying a large business with the Morrow coaster and brake attachment, which it is supplying to twenty American manufacturers and to a number of English and German makers.

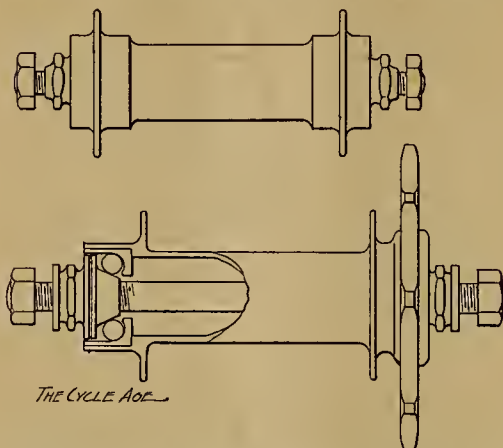
#### CLAIMS THAT HAVE FOUNDATION.

Though combined claims for durability, beauty and general excellence are as old as commerce in any kind of manufactured product, the Hollenbeck Saddle Co. of Syracuse, N. Y., is not making an empty boast when it says that its 12-ounce rawhide saddle possesses these qualities. The favor with which the saddle has been received by manufacturers, dealers and riders is evidence of the fact that though young in its commercial career, the rawhide baseless seat will play an important part in the equipment of bicycles the present season and in the future.

#### RACING HUBS OF PLAIN CONSTRUCTION.

There are very few firms which are satisfied to rest the merits of their product entirely on design and workmanship while refraining from incorporating any feature for which special virtues are claimed. Such, however, is the position of Walker & Ehrman Mfg. Co., Washington and Union streets, Chicago, in regard to their new rac-

ing hubs shown in the accompanying illustrations. The pair of them weighs less than one pound and every feature which is superfluous for racing purposes, such as felt washers or ball retainers, is left out. The sole object which has been aimed at has been to produce a hub which will run with the smallest friction when well cleaned and oiled for a racing event, and in which the extreme simplicity of design forestalls any possibility of getting out of order. Micro-metrical accuracy in the bearing parts is



secured through careful lathe work, scientific tempering, subsequent grinding and polishing, and through the employment of fine-grained tool steel. Rigidity is obtained by the proper distribution of metal and by using Stubb's steel in the axles. The cones are made with a dust flange which enters with a steam engine fit into the cups and the flange is grooved on the circumference to hold a film of viscous oil, making the hub sufficiently dust proof to serve all practical purposes even for road races and other prolonged events. In fact, it is as dust proof as most hubs with felt washers without sacrificing any free spinning qualities to this feature. J. E. Smith represents the manufacturers on the road.

#### WEBSTER-WHITCOMB BENCH LATHES.

The American Watch Tool Co. of Waltham, Mass., which manufactures the Standard adjustable pedal, has also in the market a line of fine watch tool and small precision machinery. One of the most popular machines in this line is the Webster-Whitcomb watch-makers' lathe. This tool has an 11-inch bed, 3.94-inch swing, and is intended to accomplish the most accurate light turning of the character of the work done by watch repairers and other fine workers in metal. The design of the lathe and the finish of the parts mark it as one of the highest types of small machine tools made.

#### BANNER AUTOMATIC FOOT PUMP.

The accompanying illustration shows the general appearance of the Banner Automatic foot pump manufactured by D. B. Smith & Co. of Utica, N. Y. The main claim for the pump is its convenience, it being at-



tached to the tire valve by merely setting the end of the air discharge spout down upon the valve. The spout is provided with a conical rubber bushing and will fit all styles of valves. It is not necessary to stoop down to connect the pump to the valve, as there are no swivels or flexible

hose used with the pump. The pump barrel is formed with an interior conical base which expands the leather cup on the plunger at each full stroke and thus keeps the leather from shrinking and sliding uselessly in the barrel. This feature also allows the pump to be stored away for almost any length of time with the assurance that it will be ready for use and will pump air on the first stroke after being put into operation again. The metal spout is one solid fixture with the foot stirrup and no danger of breakage under ordinary circumstances exists. The barrel is made of 1/4-inch brass tubing, nickel plated. The handle is enamelled and the base has an aluminum finish.

#### ACTIVITY IN SUNDRIES TRADE.

J. H. Collins, secretary of the Buescher Mfg. Co. of Elkhart, Ind., and also principal traveling representative for the cycle sundries manufactured by the firm, has just completed a trip through the east, visiting the jobbing trade in the larger towns. He reports that with but few exceptions the sundry trade is nicely started for the season in the various cities and that nearly everyone feels a great amount of confidence in the business to be done this year. Mr. Collins was in Chicago the first part of this week, from where he has gone to Cincinnati. He will visit Indianapolis the first of next week.

#### ACTIVITY IN TAP MAKING DEPARTMENT.

Chas. H. Besley & Co., 10 North Canal street, Chicago, report that they are very busy in the tap and die department of their factory at Beloit, Wis. They are making many shipments of their new Badger non-adjustable die stock which cuts the same size thread each time and forms a full thread at one cut. These are made in complete sets of bicycle thread sizes and also in machine screw and regular bolt sizes. Recent shipments of taps and dies in large lots have been made to Rockford, Milwaukee, Rock Island, Pullman, South Chicago, Joliet, Omaha, London, Lima, Rio de Janeiro and other manufacturing points.

#### STANDARD ARTICLE FOR MANY YEARS.

If there is any article in the bicycle sundry trade which may truly be said to be "old and reliable," that article is the "Perfect" pocket oiler manufactured by Cushman & Denison, 159 Ninth avenue, New York city. The oiler has sold for many years in cycle stores all over the country and dealers unhesitatingly recommend it as an oiler which can be depended upon not to leak and to regulate the supply of oil to a drop. The company has recently issued a small folder containing a number of voluntary testimonials from people who stake their word upon the merits of the "Perfect" oiler.

#### EDMONDS & METZEL IN NEW QUARTERS.

Edmonds & Metzels, makers of the Perpetual pedal, are now settled in their new manufacturing quarters at 253 South Canal street, Chicago, and owing to the greatly increased working facilities are in a position to fill all orders for their pedals on short notice and at prices which are sure to interest all who are looking for high grade pedals at figures which are not extravagant. The firm reports that the simplicity, lightness and strength of the Perpetual pedal has gained it many friends during the short time it has been in the market.

#### WAVERLEYS IN THE FRIENDLY ISLANDS.

The Indiana Bicycle Co. of Indianapolis, Ind., has received word from Nukualofa, Tongalaber, Friendly Islands, that a Waverley rider, F. R. Parker by name, won the Tonga championship races there on January 4. The races were contested on a rough grass track and were not fast, but the winner says that he had no trouble in reaching the tape first. The machine ridden has been in use two years, and according to the owner's statement has withstood the tropical climate finely, the wood rims showing no tendency to warp. The coral sand on the roads cuts the tires badly, however.

#### MISTAKE IN FIRM IDENTITY.

In a recently published report in another paper it was stated as an item of news that A. Barber of the Toledo Cycle Supply Co. of Toledo had entered a petition in bankruptcy. Mr. Barber is no longer connected with the company named and has not been for the past two years. His relations with the company ceased when the old company failed in 1897 and the present firm took up the business.

#### OLD TRADE MEMBER AT THE HELM.

The Wellington Cycle Co., Atlas block, Chicago, is practically a new concern in the trade, but is managed by an old member, Charles L. Thayer, who was for a long time connected with the Hamilton Cycle Co. of Hamilton, O., and later with the Hamilton-Kenwood Co. of Grand Rapids. The pres-

# Everything for Bicycle Builders and Dealers

—Means just what it says.

You don't have to shop around. We have it.  
=====Come to=====

## HEADQUARTERS

for *Staple Fittings* and *Equipment*, and  
while there we will show you all the *New  
Things* on the market.

### EXCELSIOR SUPPLY CO.

ESTABLISHED 1876.

88 and 90 Lake St., CHICAGO.

IF YOU WOULD DO  
**Business Successfully**

and wish to grasp the opportunity for making  
money in your town, write us at once for  
interesting booklet and prices of the Famous  
12-ounce

# Hollenbeck Rawhide Saddle

THE LIGHTEST SADDLE MADE.

Our Rawhide Saddle is the most popular saddle  
of 1899. Compare it with any of the wood or  
steel base saddles, also note the flexibility of  
our Rawhide Top. No hard base saddle can  
give the same amount of comfort to the rider.  
This seat will strike you right away as being  
of simple and strong construction, correct  
shape, and combining Lightness, Beauty and  
Durability.

MAKERS

## Hollenbeck Saddle Company

SYRACUSE, N. Y.

30 High-class wheel makers use them.



THE....

# Highest Grade Wheel

MADE.

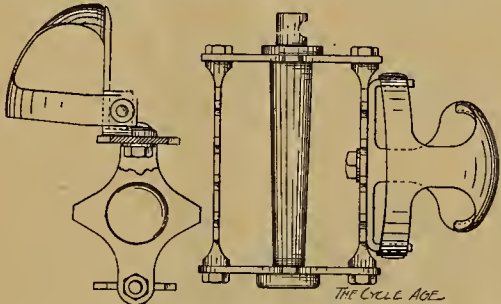
Good riding days are at hand.  
Send to-day for 1899 Catalogue.

THE DAVIS SEWING MACHINE CO.  
Dayton, Ohio.

ent company is now conducting a mail order business exclusively, selling direct to dealers but not to riders. The manager says he can give the dealer better goods for less money than can be obtained by the agent from the larger makers who employ a large staff of traveling salesmen and do extensive advertising. He makes his own goods. Mr. Thayer states that he expects to place at least 3,500 machines the coming season. Trade is beginning very well.

**WHALEY PEDAL STIRRUP PATENTED.**

Charles F. Whaley, of the well known supply firm of St. Paul, Minn., has obtained patent for a "bicycle pedal stirrup," as shown in the accompanying illustration. The claim of the patent is "the combination with a bicycle pedal of a toe support adapt-



ed to be attached thereto consisting of a plate having a cross-piece at its rear end, the ends of said cross-piece being bent outwardly and at right angles thereto, and a substantially T-shaped non-metallic flexible portion secured to said toe plate and bent ends, and extending thereover, substantially as described." The application for the patent was filed in November, 1895.

**LARGE FOREIGN BUSINESS IN IDEALS.**

The Shelby Cycle Mfg. Co. of Shelby, O., was never busier than at present. The activity is not alone due to the prosperous trade in this country enjoyed by the company, but is partly because of the heavy shipments being made to countries in all parts of the world. An idea of the amount of foreign trade handled by this concern can be grasped when it is stated that the shipments are not measured by crates, but by carloads. During one week recently four carloads were sent to Paris, one to Abo, Finland, one to Stockholm, three to Copenhagen, one to London, two to Winnipeg, two to Toronto, two to Buenos Ayres and one to Hamburg. Each carload comprises from 250 to 300 Ideal bicycles.

**PREPARING FOR HEAVY LATER DELIVERIES.**

The Calumet Cycle Co., Michigan and La Salle streets, Chicago, is storing up a stock of machines that will be sufficiently large to fill promptly at the times designated all orders calling for future deliveries. The company has already shipped 1,800 sample order machines this season and expects to send out 3,000 bicycles within the next month. It is expected that the export business will be considerable, as the company has shipped a number of samples abroad during the last two months. Forty per cent. of the output of the factory is in thirty-inch wheel machines, for which the company finds there is a large demand. No tandems are made by the Calumet people.

**TWO IMPORTANT POINTS.**

There are always two things about a low priced tire liable to make trouble; one is the fact that the inner lining is often imperfectly vulcanized, so that when punctured the repair plugs will not stick, and the other is that the outside rubber shoe is often badly frictioned, so that it is liable to peel from the fabric. The New Brunswick Rubber Co. of New Brunswick, N. J., pays particular attention to these two points, and even its lowest priced tires are free from these troubles. The Regal, which has been on the market for two years and sells at a very reasonable price, is said to have been absolutely free from either of these defects. The rubber never peels from the fabric, and if punctured, the repair plugs always stick perfectly.

**REPAIRMAN WANTED IN BRITISH GUIANA.**

A cycle dealer in Demerara, British Guiana, writes as follows: "We are looking for a cycle repairman who can do lathe work, such as turning up cones and small screw parts, screw cutting, and who has a general knowledge of fitting and brazing, at a contract of about three years at \$50 a month. The climate compares favorably with that of the United States and such a man can live comfortably on \$30 a month." Address care of Cycle Age.

**FIRE CAUSED LITTLE DELAY.**

On the morning of March 10 the boiler house and coal sheds of the H. A. Matthews Mfg. Co. of Seymour, Conn., were consumed by fire. The company has now started its boiler and made the necessary repairs to the furnaces and the fire will cause no further interruption to the business. The company is prepared to fill all orders promptly as heretofore.

**ENTIRE STOCK OF IDES PURCHASED.**

The Speed Mfg. Co., 71 West Jackson street, Chicago, has purchased the entire stock of completed Ide bicycles remaining unsold after the failure of the Ide company. The lot includes men's and women's roadsters, tandems and racing machines, all of which will be closed out by the Speed Mfg. Co. at extremely low prices as soon as possible.

**BECOMES PLEW SADDLE CO.**

The Plew & Motter Mfg. Co. of Chicago has certified to a change of name to the Plew Saddle Co., to change of object of incorporation to manufacture bicycles, to an increase in directory from four to five members, and to an increase in capital stock from \$5,000 to \$25,000.

**CARLOAD SHIPMENT OF HUDSONS.**

The Bean-Chamberlain Mfg. Co. of Hudson, Mich., recently shipped a full freight carload of Hudson, Lenawee and Noxall bicycles to the Bean Sons' Co. of San Jose, Cal., which is coast agent for the Bean-Chamberlain Co.

**HANNA CATALOGUE COMPLIMENTED.**

The Hanna Cycle Material Co. of Buffalo, N. Y., has received numerous letters from its patrons complimenting the completeness and neat typographical appearance of the company's recently issued catalogue of cycle fittings, sundries and supplies.

**OTT & HEMLEY DISSOLVE.**

Toledo, March 20.—The firm of Ott & Hemley, manufacturers of the Lucas bicycle, has dissolved partnership, D. A. Hemley retaining the business.

**MISCELLANEOUS.**

Advertisements under this head 5 cents per word first insertion; 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders or stamps received.

**WANTED.**

**SIDE LINE**—Salesmen in the bicycle and hardware trades wanted to sell standard bicycle sundry on commission. Quick seller and liberal commission. Samples carried in vest pocket. B. H. DIVINE, Utica, New York.

**WANTED**—Good agents in all parts of the United States and Canada to sell our contracts. We are the oldest bicycle protective company in the world. Our contracts sell easily. Write at once for particulars and territory Liberal commission. UNION WHEELMEN'S PROTECTIVE COMPANY, 618-630 The Temple, Chicago, Ill., American Trust & Savings Bank, Trustee.

**FOR SALE.**

**FOR SALE**—An Arnstein enameling oven, cheap. ROBT. L. THOMPSON, Muscatine, Ia.

**CLOSING OUT SALE**—Until closed out, we shall offer the following: 600 pairs finished, flat cranks, regular thread, rights and lefts, at 20c per pair, 6 in.; 2200 pairs brazed forksides 1 1/2 in., 10c; 350 pairs brazed forksides 7/8 in., 10c; 4360 seat post forgings, 2c each; 630 crown forgings, 2c each; 2700 pairs upper back stay forgings, 1c each; 2200 lower adjustment forgings, 1 1/2c each. CORTLAND CARRIAGE GOODS CO., Cortland, N. Y.

**FOR SALE**—500 Remington Hangers at a bargain; propositions considered for one or all. H. GEER, 906 Pine St., St. Louis, Mo.

**FOR SALE**—100 Lu-Mi-Num gear-cased bicycles; spot cash propositions considered for one or all; department stores, here's your chance. HARRY R. GEER, 906 Pine St., St. Louis, Mo.

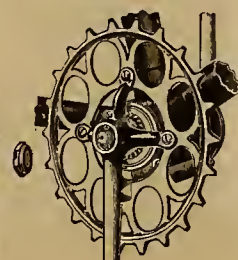
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WITH NAME PLATES AND FULLY GUARANTEED.

Equipments at cost if ordered with bicycles. Write for descriptive price lists.

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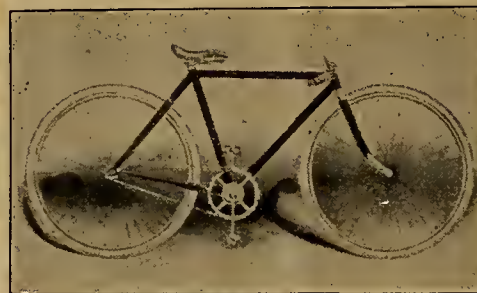
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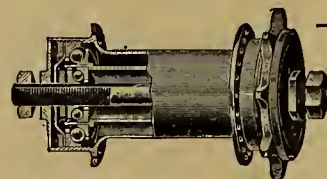
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**J. P. Thomas Revolving Hubs**

—AND Hangers

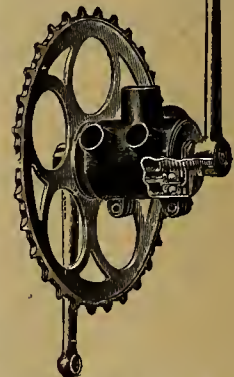


HIGHEST GRADE EVER PRODUCED... DOUBLE BALL BEARINGS.

Patented in U. S. Dec. 28, 1897.

Inner revolving sleeve, gains 40 per cent in speed with the same power, or rides 40 per cent easier. Notice the dustproof cap, patent oil feeder and other details of construction. It has been admitted by the most critical that this is the best and most scientific bearing ever produced. The great demand for a better article has made it necessary for all first-class manufacturers to adopt our bearings, as the public is willing to pay the additional cost. The J. P. Thomas Hubs and Hangers have been on the market only since December 22nd, 1898, and we are now receiving orders from all parts of the country. To any manufacturer who has not yet adopted our Hubs and Hangers we shall be glad to send sample set C. O. D. on approval.

J. P. THOMAS & CO., Pat. in U. S. Dec. 28, 1897.  
Office and Salesrooms, 439-441-443 Thirty-First St., CHICAGO, ILLS., U. S. A.

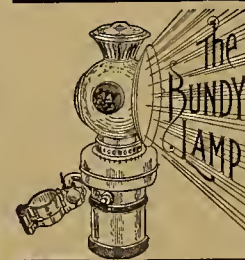


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**WATERS WHITE SCORCHER**

Fitted with Our One Piece Hanger made under Fauber licenses. Retail Price, \$22.00  
Send for net price and catalogue.

F. S. WATERS CO., 155 W. Washington St., Chicago.



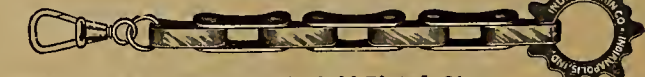
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Did you ever wonder why the "BUNDY" acetylene gas lamp is so often specified? You'd better investigate.

THE FRANK E. BUNDY LAMP CO., Elmira, N. Y.



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Send 26c. for Aluminum Fob. Gold Plated, \$1.  
INDIANA CHAIN COMPANY, - - Indianapolis, Ind.

# THE CYCLE AGE

VOL. XXII—No. 22.

CHICAGO, MARCH 30, 1899.

NEW SERIES No. 71.

## GOOD OUTLOOK IN THE WEST

**Prices Find a Resting Place and Sales Will Be Lively—Weather the Only Deterent.**

Salt Lake City, March 27.—The intermountain country of the west, as in most other sections of the country, gives promise of experiencing a healthy, lively cycle trade this season, and the dealers are full of confidence that it will be a prosperous year. For years past—in fact almost since the beginning of the cycle trade—the public have bought grudgingly and were not sparing in their opinions that they were being “held up.” Not knowing the peculiar conditions of the cycle trade and the enormous incidental and large overhead expenses connected with the production and marketing of bicycles, riders could not understand the difference between the list price of the bicycle and the market price of other manufactured articles produced by skilled labor and modern machinery at a much lower cost. No amount of explanation on the part of the dealer could satisfy the buyer that he was not paying someone an enormous margin of profit, and even many dealers shared the opinion of the public.

### Inconsistency of the Public.

The reduction of the list of pneumatic-tired safety bicycles from \$150 to \$125 and later to \$100 did not satisfy them, and they still felt that the retail price was out of all proportion to the cost of production. In a measure this was true, for the enormous expenses incurred by many manufacturers for racing teams and injudicious advertising, and the large stock losses incurred through the complicated unlimited option system were all illegitimate expenditures which were made good at the public expense.

The makers were nearly all in the same game, however, and none felt strong enough to dispense with these methods of marketing their goods and reducing their lists, for the buying public, with strange inconsistency, immediately looked with suspicion on a bicycle which listed at less than the “standard” price.

Even the reduction of the acknowledged high grade bicycles in 1898 to \$75 did not wholly satisfy the average buyer and the clamor for “cheaper wheels” was louder than before, with the result that many of the big guns found a large number of their old patrons going to manufacturers of lower priced machines.

### Nobody Expects Further Reduction.

At the present time, however, the \$50 models of the large makers of standard high grade wheels are in great demand and for the first time the public seems satisfied. Rarely, if ever, is the complaint made that the \$50 price is not a fair one. The public have become educated to a great extent in the cost of production of

a first-class bicycle and feel that a \$50 list price gives manufacturer and dealer only a fair margin of profit. Sales are therefore wonderfully stimulated. Riders who bought \$25 and \$35 bicycles a year or two ago are now freely buying the best product of the reputable concerns. Dealers have found to their sorrow that there is little profit in selling at less than \$50 list and some of the larger agents who in 1898 sold from 200 to 400 medium priced machines have discovered when they balanced up their books at the end of the year that they had made practically no profit for their season's work. Dealers and riders alike are satisfied with the present price and no one is looking for further reductions.

### Best Quality Finds Ready Market.

During the years that bicycles have been coming down in price they have been improving steadily in quality and construction, and this is another cause for stimulation of sales. One manufacturer who has made a specialty of new features and improvements is finding a ready market for his best product among discriminating riders at a list price of \$75 for a light chain driven machine.

Reports of sales in this section indicate that interest in the chainless models has not been so much aroused as in the east. The public seems to still entertain doubt as to the easy running qualities of the chainless bicycles and to object to the increase of weight over the standard chain machines. Riders appear to be waiting for a reduction of the weight and perhaps of the price also. Dealers are therefore ordering samples only at the present time.

### Suffering from Bad Weather.

The entire west has been experiencing an unusual amount of bad spring weather, and Colorado, Utah, Idaho and Montana are in many places still deep under the snow. The restless interest evinced by riders in the coming season's riding and their frequent visits to the stores, however, indicate that with the first days of good riding weather there will be an unprecedented scramble for good bicycles.

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## SPALDING HAS MANY OPTIONS

**Sellers May Be Asked to Take Stock in Part Payment—Accountants Ready for Work.**

There are no new facts of striking importance to record in connection with the project to consolidate the bicycle factories. Mr. Spalding still continues to get options, extending till June 1, on the purchase of concerns, and as fast as they are received a clerical force, operating under the direction of the syndicate of financiers, gives each establishment a number and is from that moment blind to its business individuality at least as far as title is concerned.

It is understood that a large firm of accountants is holding itself in readiness to make a minute examination of the books and factories. Two hundred or more skilled appraisers will simultaneously go to work in various parts of the country, charting factory floors, making drawings of every tool and machine, ascertaining their cost from invoice, appraising stock, and in that way arriving at a valuation of the gross worth of each plant. Special observation will be paid to factory capacity and economic methods of production and in each instance these matters will be made the subject of elaborate report.

### Sellers Urged to Take Stock.

It is hinted that, although the avowed intention of the capitalists is to purchase for cash, some sellers may be urged to take part of the sale price in stock in the new company, and this course of action is defended upon the ground that the public would invest more freely in the listed shares of a big company if it were known that the former owners of the consolidated plants had faith enough in the bicycle business to continue to risk some of their own money. But it is not disclosed what form of stock, whether common or preferred, is likely to be so offered to the sellers.

Further contributed opinions on the subject of the consolidation are herewith presented:

### Conditions Demand Radical Measures.

Anything in the way of a combination, or consolidation, of bicycle makers would be of advantage to the trade. Present conditions surely call for some radical measures to secure an improvement. We have not as yet been approached by any parties with a mapped-out programme that would likely produce the desired result. Evidently if the larger manufacturers would take hold of some such project in earnest, it would be easy of accomplishment. The benefits to the trade at large would certainly be very great, not only to the makers, but to dealers.

AMERICAN B. H. O. & SEWING MACHINE Co.  
Philadelphia.

### Distribution of Goods.

A combination of manufacturers would reduce the cost of manufacture and selling expenses to such an extent that it would afford a handsome profit to all. They could have one large retail store in each city and

control the small agencies from each city, and in this way get a much better price; or they could sell direct to the consumers on the installment plan through agencies established from their own stores, something like the sewing machine trade, and in this way control the trade. The business done in this way would soon reduce the number of agents, which would reduce competition, both as among manufacturers and retailers. The retail trade would welcome anything that would prevent unjust competition, or that would give them fair profits in return for their labor.

The most serious drawback to anything of this kind is the presence of the parts manufacturers, but we think the present prices are already commencing to cut down a portion of their trade, as a number of the small makers are already dropping out of the business. In a combination of this kind each one would likely make only one wheel, and in this way could make it so much cheaper, and the small manufacturers would soon be out of it.

Buffalo. KENSINGTON BICYCLE MFG. CO.

#### The Industry is Chaotic.

If the combination is effected it will act as the safety valve to the bicycle industry. With capitalists getting it into their heads that there is a fortune in the manufacture of bicycles, and because of the disappointment of many of these men, the bicycle industry has been thrown into a state of chaos, the result of which we are reaping today, the buyer making the price of the wheel, practically. Organization work will have telling effect, giving to the public a better wheel, steadier employment to the working man, and placing the agent on a level with any legitimate mercantile house. It should have a good effect upon every department along the line.

Poustown, Pa. LIGHT CYCLE CO.

#### In Favor of the Combination.

We would be heartily in favor of a combination, as we are quite certain that a strong one would be of great benefit in maintaining reasonable prices for standard wheels, discouraging the manufacture of trashy department store bicycles, establishing a sounder credit basis, and hence a more satisfactory way of distributing products. Further, a strong combination would infuse new life into the cycle trade and place it upon a sound footing equal with other lines.

Elgin, Ill. ELGIN CYCLE CO.

#### Opinion of Grip Makers.

The proposed combination of bicycle interests seems to us a very good scheme, provided that it is expected that the public will take hold of the project and bear the expense of closing out some of the weaker but trade-disturbing manufacturers. In view of the fact that the prices on all parts are as near the ground today as they can be put under the circumstances, and every large manufacturer in good standing gets the benefit of these low prices, it would hardly seem that the proposed combination would be of much advantage in purchasing parts and supplies. So long as the parts manufacturers are left out of consideration, and there are small machine shops, just so long will it be impossible to corral the small trade.

Malden, Mass. BASCARMAN MFG. CO.

#### Will Not Join the Combination.

We are and always have been opposed to any and all kinds of trusts, and, if we had a factory larger than a flock of barns, we could not think of entering into this deal. We feel that we shall always be able to get our share of the business and, in fact, unless some of the bicycle concerns come down on their prices next year, we are going to trot them a merry clip.

Filint, Mich. AMERICAN MACHINE CO.

#### Have Not Received an Entry Blank.

We have not been as yet approached in any way. We note, however, that two other concerns in this city have received "entry blanks," although their output per annum is smaller than that of our factory. Our output for several seasons has been running from six to eight thousand machines, for which everything has been manufactured under our roof, including all of the hubs and all of the pedals up to this season. Having heard so little about the combination, we cannot say whether the trust would help or antagonize our interests. If it would attempt to secure control of tubing and forging plants, it might place us in a bad way.

Cleveland, O. OTTO KONIGSLOW.

#### Worrying the Dealer.

We have been asked for an option on our plant, but have not yet made a figure. We think the scheme a good one in many ways. For instance, down in New York state there is a hamlet that has one dealer. He sells about twenty wheels a year. This year no less than forty-eight traveling men have called on that dealer in an endeavor to sell him goods. At the very lowest estimate

these trips cost the firms \$5 each. Now there's \$240 spent in selling twenty bicycles, and everybody knows enough of the bicycle business to appreciate the fact that the profits cannot stand such expenses.

Toledo. EZRA E. KIRK.

#### Will Not be Driven Out of Business.

We hardly see how it is feasible, there being such an infinite number of manufacturers to control, many of whom purchase most of the parts entering into the construction of a bicycle, simply put them together and market them, and yet they are termed bicycle manufacturers. If it were only a question of bringing in the large manufacturers, who produce machines from the material up, we think it might be feasible and perhaps in the interest of good business policy.

While we are not manufacturers of bicycles, we undoubtedly make more parts entering into the construction of a bicycle than any other house. What the effect would be on our business we cannot state. We should undoubtedly continue to turn out the parts if we could find a ready market. If this could not be done, we should most likely assemble the parts, adding to the same such as we do not now make, marketing the goods wherever we found it feasible. We certainly would not think of being driven out of the business.

If an association could be formed which would eliminate the heavy outside expenses, which do not assist in any way in the construction of the machines, we think it would be welcome to the public and might be to the interest of manufacturers.

Hartford. HARTFORD MACHINE SCREW CO.

#### Public Will Be Protected.

The combination will be the salvation of the bicycle business. The sooner it comes the better it will be. It will benefit all reliable firms and the public will be protected against scrap-heap machines, which on account of their cheapness find their way into use, and by their failure to give satisfaction work more injury to the trade than any

Toledo. CHAS. E. MELLINK.

#### OPTIONS ON MILWAUKEE PLANTS

##### Andrae and Meiselbach Return from the East—Later Enthusiastic Regarding Combination.

Milwaukee, March 27.—H. P. Andrae of the Julius Andrae & Son Company returned from the east Monday, where he had been to make arrangements for the transfer of the big Andrae plant to the syndicate when the proper time comes. In the meantime, however, and so long as the burden of secrecy is imposed Col. Andrae will not talk. "We know all about it, and we approve and are going into it, but I can't tell you anything more," said he. "Everything I have learned has been related to me in the strictest confidence and so far as I am concerned that confidence will be respected. I have just returned from the east and everything is satisfactory. So far as the details are concerned, they are left to the future to work out and when the proper time comes I suppose they will be made public."

A. D. Meiselbach of the A. D. Meiselbach company, is now in New York closing negotiations for the big North Milwaukee plant. He is enthusiastic over the plan which he designates as a "good thing" for everyone concerned. "It is certainly time that something of the kind was being brought about," said Mr. Meiselbach before he left Milwaukee. "It is necessary for the good of the trade. While I am not the promoter, nor even one of the promoters, I am satisfied that it is just what we have been waiting for. The effect will be to drive out the assemblers and do away with poor workmanship, which means of course that men will be employed in the factories in place of boys. Now there are a lot of factories that employ boys who don't know the difference between a piece of wrought iron and steel. It will be the middle of May or June before we know just how matters stand and just what the plans are, so of course the effect will not be felt until next season's work begins. We have not gone further than to agree to meet with the promoters. When I know

just what is expected I will be able to state exactly what we are going to do and how it will be done. Just look what the business is coming to. Here is a letter from a man who wants a lot of bicycles made up so that he can sell them for \$10. It can't be done, but he doesn't care how they are made nor from what they are made and he doesn't care what will be the result when the buyers try to ride them over rough roads. What we want is to make good bicycles and make a legitimate profit. As it is now there are a lot of fellows who start up early in the season and then drop out or go into bankruptcy, and after securing a big line of credit, throw a lot of cheap machines on the market, then settle with their creditors and begin business over again. When the new deal gets in working order everyone will be able to buy a good bicycle at a reasonable price.

Tandems have dropped out of the market apparently, so far as Milwaukee dealers are concerned, the only new machines that are offered being those in the salesrooms of the local manufacturers who have them there for show more than anything else. A number of second-hand machines are offered but no sales are reported. Dealers will therefore keep their tandems on hand to rent occasionally. The difficulty is ascribed by one of the dealers to the inability of ordinary riders to ride easily on tandems. Without a thorough knowledge of your partner's style of riding tandem riding becomes hard work and is soon given up after the novelty wears off.

#### British Exports and Imports.

The British cycle export trade continues to show the disastrous effect of competition in the colonial and European markets. Governmental returns for the month of February show that the exports only attained a value of \$282,290 as compared with \$474,225 for February of last year.

So far as the year has gone the foreign trade has been of a very disappointing character, the shipments during the first two months having amounted to only \$631,090, a decrease of \$333,600, as compared with the first two months of 1898.

The British cycle exports, however, are decreasing. Whereas, in February, 1898, the value of the gross imports amounted to a total of \$272,170, last month they only aggregated \$65,130. Out of this machines and parts valued at \$17,950 were re-exported, leaving the net imports for the month only \$47,180, which compares with \$216,145 in February of last year. For the two months of the new year the gross and net imports amount to respectively \$177,335 and \$76,120, as compared with \$506,655 and \$393,640 in the first two months of 1898. Thus there has been, so far this year, a decrease of no less than \$317,520 in the value of the imports of foreign cycles and material into this country.

#### Lindsay Brings Suit for Damages

Thomas J. Lindsay of Lafayette, Ind., has filed suit for damages against Justus Goebel, Robert Reynolds and Ben Kirker, of Cincinnati, in the United States Circuit Court. In his petition Lindsay alleges that he was the owner of certain bicycle models, motor carriage wheel models, with blue prints, etc., which were in a building used as a factory in Lafayette. The building was the property of the defendants, and Lindsay was employed as a superintendent. He alleges that last September Reynolds and Kirker, at the instigation of Goebel, went to Lafayette while he was absent and carried away the models and blue prints, and that he has been damaged to the extent of \$5,000.

## UNION RIDING SCHOOL SCHEME NEW ECONOMIC ARRANGEMENT

### Cleveland Dealers Establish An Academy to Be Used in Common—Agencies Hard to Place.

Cleveland, March 27.—The establishment of a union riding school for all the dealers in this city is a move which is being watched with considerable interest, as it is believed to be the first arrangement of the kind in the history of the business. The scheme of conducting riding schools in connection with the various stores has been found unprofitable, as has also the plan of employing special instructors to give lessons on the street. Still the interest in cycling shows no signs of abatement and there is more than the usual number of learners this spring. None of the local concerns, however, has cared to repeat the experiment of conducting an individual riding school. The question of a union school was broached at a recent meeting of the local board of trade and it was voted to give the plan a fair trial. A well known wheelman has been induced to secure a lease on a large hall, with the assurance that none of the other dealers will start a school of his own so long as the plan proves satisfactory. The machines for the school are secured at the various stores, each concern being given representation, the bicycles being paid for by riding tickets. The dealers agree to send all learners to the school and when a rider purchases a bicycle the dealer is allowed to furnish him with coupons good for lessons. When a rider pays for his lessons the amount paid in at the school is remitted from the price of his new mount.

#### Experiment Proving Satisfactory.

The school is advertised as a union school conducted by the local board of trade, all the concerns in the board being mentioned. The manager of the school agrees that no preference shall be given any special make, although the rider may select any machine he desires to try. In case an instructor should attempt to advocate any special machine, it is the agreement that he shall be instantly discharged and the manager failing to do so, any concern may withdraw its patronage or the entire board may cancel its contract. The plan seems feasible and the attendance thus far is proving very satisfactory to all concerned.

#### Competition Will Be Keen.

Competition in Cleveland this season promises to be the fiercest ever experienced. Out-of-town manufacturers have found it very difficult this year as in former years to secure good representation in Cleveland, and although several prominent concerns have lately placed their machines, the agencies are in several cases located in sections of the city away from the business district. A number of the small concerns in the outlying districts of the city have changed their policy with regard to handling machines made by local concerns or sold through local branch stores, alleging that the downtown stores show a disposition to make concessions in the way of exchanges and prices which the outlying dealer can not meet and as a result the rider makes his purchase from the headquarters downtown after the missionary work has been done by the small dealer. A number of them have therefore dropped local lines and will put out-of-town machines on their own account.

The hardest competition will be made this season by downtown branch stores which have increased in number lately by the addition of three concerns which

have never been represented here before. Three other new stores conducted by well known wheelmen, but said to be backed by the manufacturers whose lines they represent, have been opened on cycle row.

#### Enameling Becoming a Specialty.

The impression gained ground last fall that the number of assemblers in this section would show a decline this spring but from present indications quite the contrary will be true. However, the material houses doing business here say that the small people will do less of their own work than in former years. They have found that it does not pay to build their own frames or to do their own enameling and as a result some of the larger shops are confining themselves strictly to building frames, and the enameling business is becoming more of a specialty. This change of policy seems to be for the common good and there will probably be fewer stories of poorly constructed frames built by irresponsible repairmen.

## CANADIAN MAKERS CONSOLIDATE

### To Resist Competition from United States—Will Incorporate for \$3,000,000.

Montreal, March 27.—Last week a rumor was current both in this city and Toronto that the scheme to consolidate the Canadian bicycle manufacturing concerns as proposed by R. M. Jaffery was nearly completed. The consolidation is to be incorporated as the Canadian Bicycle Company, Ltd., with a capital stock of more than \$3,000,000 in \$100 shares, half of the stock to be preferred and half common. The companies in the deal as at first proposed were: Evans & Dodge, of Windsor, Massey-Harris Company of Toronto, Gould Manufacturing Company of Brantford, H. A. Lozier & Co. of Toronto, Welland-Vale Manufacturing Company of St. Catharines, and the Gendron company of Toronto. The plants and business of the companies will be purchased with stock in the new company, while the working capital would be supplied by the sale of the balance of the stock. The object of the combination is said to be to put the Canadian makers in better position to compete with the cheap bicycles from the United States.

Some of the manufacturers claim that there is nothing in the rumor now current while others are silent. There has been similar talk of a combination in the past, but owing to the difficulty experienced in attempting to allot the different grades of machines to the different factories the move fell through.

### Winding Up the Board of Trade.

Secretary George Hammann of the National Cycle Board of Trade—which organization is gradually expiring—expects that by May 1 his labors will be at an end. He is getting his claims in the collection department in shape to return to the owners. The committee in charge of the Board's affairs are about to remit the first dividend to the stockholders. It will be 30 per cent. It is now found that the committee cannot remit the full amount paid for stock by members admitted on August 18 last until the court passes upon the matter. Similarly with the expense accounts of the directors. If the court decides adversely on these two matters the general body of stockholders will receive about 50 per cent of the value of their holdings.

At the first Stanley cycle show held in London in 1878 there were altogether but 75 bicycles and tricycles on exhibition. At the 1898 show 2,200 machines were shown.

## SECOND-HAND TRADE A CINCH

### SOUTH DEPENDS ON THE NEGRO

#### Charleston Dealers Make a Good Profit on All Traded-In Machines—Repairer's Use of Them.

Charleston, S. C., March 27.—The net result of the second-hand exchange problem in this city in the past year was very satisfactory, the sale of old machines being about two-thirds of the number of new ones. The combined sales of all the dealers, independent of curbstone agents, amounted to about \$1,250. A close watch is kept on the illegitimate salesman, so that he has a hard time to make anything.

In regard to second-hand sales and profits on the year's business the merchants have come out on top, even considering that list prices were much lower than formerly. The demand is mostly for medium quality and price.

#### Negroes' Ambitions Easily Satisfied.

In the south there is a great advantage in the second-hand bicycle trade, due to the presence of the negro who thinks it his duty as well as his privilege to ape his white brother. Hence to ride a bicycle is his ambition, but his resources being limited, he must buy old machines. This affords the dealer his opportunity to reduce his stock. If he takes in an old bicycle at \$10 and gets the rest in cash for a new machine, he resells the second-hand machine to his negro customer for the original \$10 cash and requires him to pay, say, \$5 more in a given time, thereby making a profit on the traded-in machine and another on the whole transaction.

#### How a Repairman Draws Custom.

One dealer here who does a large repair business uses his second-hand machines as a means of drawing custom. When a rider brings in a machine to be repaired and would be inconvenienced by having it laid up for several days, the repairer lends him one of the old ones, which he takes care to have in fair running order. Or, if only a part is broken, such as a front fork, he substitutes one from his traded-in stock while the part is being mended. He says that he rarely ever fails to make a customer when once the latter finds out how little he is incommoded.

#### Good Demand for Chainless Models.

At present the outlook for retail trade in and around Charleston is as bright, if not brighter, than in previous seasons. The manufacture and sale of tandems seems to have passed almost entirely into the hands of repairmen. The demand here has never been great, owing to the poor condition of the roads. The proprietor of one of the largest retail houses has received orders for about twenty bevel gear chainless machines. These sell for \$75 cash.

### Humber & Co. Apply for Receiver.

Worcester, Mass., March 29.—Humber & Co., America, limited, has filed a bill in equity in the Superior court here against Arthur Martin and Frederick Goddard, trustees under deed of trust and mortgage upon property, and Albert E. Hawkley and the Revere Rubber company, named as respondents, asking the courts for the appointment of a receiver.

The company, which was organized under the laws of Great Britain, claims that it has been unable to pay interest on the bonds and that the property is tied up owing to suits which are now pending.



**CRESCENT  
BICYCLES**

ADULTS' CHAIN MODELS, \$35  
BEVEL-GEAR  
CHAINLESS MODELS, \$60

Catalogue No. 2—Free.

## ..Crescent Prices..

Have always been attractive. They have appealed to the fair-minded by their moderation and firmness. Low enough to be practical, and high enough to cover a strictly high-grade product, the prices of

## Crescent Bicycles

are guaranteed and are rigidly maintained throughout the seasons. The immense facility of our factory, the phenomenal sales and the economy in making, explain the price and the perfect product. ∴ ∴ ∴

Chicago—Western Wheel Works—New York

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# MILWAUKEE TIRES

## PUNCTURE PROOF

Pneumatic



Single Tube



Resilient



Easy Riding

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PRESENTING TESTIMONIALS.

INDUSTRIAL SCHOOL FOR GIRLS.

MILWAUKEE WIS., December 1, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen:—I take pleasure in highly recommending your Milwaukee Patent Puncture-Proof Tire. I purchased a set of your tires early in the season, about the middle of March, 1898, and rode them constantly for three or four months, when I gave my wheel to my son, who has ridden it ever since, and given it hard and severe usage. It has never given one bit of trouble, never punctured, and I believe it to be by far the best tire on the market. I remain, very truly,

(Signed) J. R. LOVE.

OTTO GELHAAR,  
Bicycles and Sundries.

MILWAUKEE, WIS., January 9, 1899.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen:—It is with no small degree of pleasure that I add this to the many testimonials regarding the Puncture Proof Tires of your manufacture. I have used them during the past season, traveling over two thousand miles, and have never suffered the slightest inconvenience. Therefore, in view of the fact that my trips took me through as rough a country for cycling as can be found, I strongly recommend your tires to those who want to be "in it" at the finish. Yours respectfully,

(Signed) OTTO GELHAAR.

Representatives Wanted. Write for Prices and other Information.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.



# THE CYCLE AGE

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

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## WHY MAKERS WISH TO COMBINE

If two live competitors in any line see clearly that by forming a partnership they may reduce their operating expenses while also increasing their gross receipts, they will combine whether their political or moral creed be of the highest or the lowest order. But if they are wise and wish to forestall new competition of the same kind which they had given one another before the combination, they will refrain from any attempt to market goods at more than reasonable profits, especially if their goods are articles of luxury and if they may be produced economically without a heavy investment of capital.

What two will do many will do if the opportunity is offered, and the difficulties in the way of unifying personal variations of opinion may be overcome; and it is therefore not at all wonderful that the majority of bicycle manufacturers are at present seriously considering the preliminary propositions for a consolidation of the competition-riddled bicycle industry, which have been laid before them.

Whatever may be their personal convictions in regard to trusts and combines in general and the means for regulating them, they are too conversant with the nature of their own business and its relations to the manufacture of component parts and assembling in small shops to believe for a moment that any amount of consolidation could result in higher prices for bicycle values than those now prevailing. The project which has been broached to them promises no new methods for gouging the public, but it seems to promise them a considerable saving in cost of production, an improvement in the average quality of bicycles and a certain safety against the mishaps of the bitter struggle for supremacy to which the present conditions are leading up.

Whether these promises are well founded or are only iridescent bubbles filled with the hot breath of Wall street promoters, is the question which bicycle makers are now taking ample time to ponder.

A letter received from one manufacturer will indicate the trend of the thoughts of many. He writes:

To the Editor.—I have read your comprehensive report of the bicycle combine and am glad to say that you have handled this affair in a masterly manner. You have hit the nail on the head pretty squarely.

I have but one criticism to make: I do not believe in raising the prices of bicycles. There is no necessity for it. As a matter of fact, the combination will bring about a higher average price, and that is what is necessary.

As a matter of curiosity, a few days ago I figured up to see how many wheels we could put up of the different models that we are manufacturing, and with the different options on each model, without having two alike. It ran way up into the thousands. For instance, we are manufacturing twelve distinct models. Each of these models is supplied in three sizes of frames. Each size of frame is finished in five distinct colors. Each color is supplied decorated, plain, or striped; three different styles of decorating. Each size of frame requires a different size of fork, so that we are obliged to have a fork for every frame. A very little figuring will show what an immense number of frames we must carry in stock in order to have twenty-five of each kind ready for immediate assembling upon receipt of an order. Carry this combination through the entire options, including the gears, the different sizes of chains, the rims, the lengths of cranks, and then the tires, varying in size according to the whims of the public, and you have a line of options that is almost endless. Could these options be reduced to a reasonable point, we could save from \$1 to \$3 a bicycle during the season.

In spite of anything that we can do we are obliged to carry over into the next year a stock of from 2,500 to 3,000 machines, in order to be able to supply the very limited demand which we have after the season is closed. The interest on the large investment necessary to

carry this stock is quite an item in itself. The depreciation in value by reason of carrying over is another large item, and can never be overcome until we have fixed patterns and can run the same style more than one season.

All of this trouble can be remedied and overcome by a combination. It means many dollars' profit to the maker. The dealer will also be in a position where he can place on his floor a stock of wheels on which he can reasonably expect there will be no great amount of loss in case he carries goods over into another season. It will enable him to order stock during the dull season, at a time when we can get the goods out to him assembled in a much better manner than when done in a rush. There really is hardly any limit to the saving for the manufacturer, from a manufacturing standpoint, in this direction only.

There are also a thousand and one other evils, which are of no direct benefit to the rider of a bicycle, that can be done away with by the combination. The matter of credits can be better handled. Spring datings can also be adjusted. For instance, we are now carrying, and have carried for sixty days, customers to the tune of over \$100,000. The interest on \$100,000 for sixty days at 6 per cent is quite an item in itself, yet we have been obliged to pay it, simply because we were obliged to meet other competition, and date our invoices April 1 in order to get the goods out of the factory during a dull season, and not have all of our business to do in the months of April, May and June.

I cannot believe that the promoters of this combine are blind to all of these advantages. Could this concern avoid these evils, we could produce a better bicycle, one which would be better for the rider, and consequently better for us, and sell it at our present prices, and make double the profit we are now making on it. My opinion is that a combination which will do away with the present evils of the bicycle trade will result in a generally lower price.

## MAKERS, SALESMEN AND AGENTS

Much of the friction generated by the various elements of the bicycle trade is due to the fact that a large proportion of the manufacturers and retailers misunderstand the relations which exist between them. As a rule the manufacturer thinks that he is controlled by the dealer, and so strong is this conviction that it influences him in his whole business policy. He pleads the arbitrary requirements of the dealers as an excuse for all his departures from a wise and conservative course; and while he might not confess in so many words that he considers himself of secondary importance in his trade to the man who sells at retail, he frequently makes this confession in effect when he says anything about his policy and advances his reasons for it. Evidently there is a misunderstanding somewhere. The manufacturer often imagines that he is bulldozed into making what he does not in all respects like, nor in all ways approve; and, on the other hand, the dealer often imagines that he must take what is given him by the manufacturer as he would a dose of medicine. Why is it that the makers entertain notions so far from the truth about the demands of the dealers?

The answer to this question is found in the fact that, to a very great extent, the communication between manufacturers and dealers is conducted at second hand, through the medium of the traveling salesman. For the traveler the Cycle Age has every respect and has more than once defended him against unjust aspersions on the ground that he is a necessary agent, without whose help the distribution of cycling products could not be effected so rapidly, economically or satisfactorily as now. But the traveler is in a position which forces him to look after his own interests as well as he can. It is he who interprets the demands of the dealer, and from him the manufacturer gains, largely, his impressions of what the dealer wants. The traveling man also interprets public opinions to the dealer who, often in spite of his better judgment, orders what his customers do not exactly demand, or out of proportion to the possibilities of his trade. While the traveler may be perfectly honest, he may at times deceive both manufacturer and retailer, and establish between them a false relation, which accounts for much of the misunderstanding which may be seen in the trade today.

The dealer's true position in trade is that of a middleman. He does not control the trade; he does not dictate styles or fashions, and he usually accepts them mainly because he feels that he must. The real arbiter of the whole matter is the traveler, and this fact explains many of the anomalies of the bicycle business. So far as the dealer is concerned, he will buy whatever he can sell to advantage, and he can sell whatever there is a demand for. If the manufacturer creates a demand, the dealer will buy and ask no questions.

## BRAZING BY IMMERSION

### Patent Granted on Columbus Bicycle Company's Method of Dipping—Table of Brazing Expenses

Members of the bicycle manufacturing trade have lately received letters from the Columbus Bicycle Company of Columbus, O., notifying them that if they are using the process of liquid brazing and immerse the joints to be brazed in the spelter bath by first passing them through a superposed body of flux and subsequently subject the joints to the action of the flux by holding them in the flux for a determinate time or withdrawing them slowly—then they are infringers on the rights secured by letters patent No. 611,922 issued to Thomas Midgley and Lewis Fink, assignors of one-half to the Columbus Bicycle Company.

#### Essential Features of Patent.

In order to enable the recipients of the letters to judge of their legal position the essential portions of the patent document referred to and the illustration accompanying it are herewith reproduced, as follows:

References being had to the drawing and the letters thereon, A indicates the masonry of an ordinary brass-founder's furnace; B, a crucible in the well of the furnace; C, the gas and blast supply pipes.

"The flux is preferably placed upon the surface of the molten bath for economy of operation; but it is obvious that for some purposes it may be heated and used in a separate vessel.

"For the purpose of illustration, F indicates the hub of a bicycle-wheel immersed in the bath D.

#### Cleaning Effect of Flux.

"The articles or joints to be brazed are prepared in the usual way—namely, by carefully removing all grease or other foreign matter, then assembling the parts and securing them in position by suitable means, such as pins or clamps. The article or joint is then preferably passed down through the flux E, which is maintained at a depth of three or four inches and properly fluxed. Then without exposure to the atmosphere it is immersed in the molten metal and allowed to remain until the metal parts to be brazed or soldered have all reached the same temperature, when the article is slowly withdrawn from the bath and without exposure to the atmosphere allowed to remain in the superposed body of a flux a determinate time either by permitting it to rest in the flux or moving it through the flux more slowly when it is withdrawn from the molten metal, the effect of which is that the chemical action of the flux at its high temperature drains or wipes off the surplus metal adhering to the article without loss of metal and produces a clean, bright finish with all the crevices and pores of the article filled, and the surfaces have nothing more than a thin film or wash on them, the borate having acted as a stripper to the excess of metal on the surface and the surfaces being in a superior condition for a subsequent coating of metal by electroplating or nickelplating or galvanizing.

"Having thus fully described our invention, what we claim is—

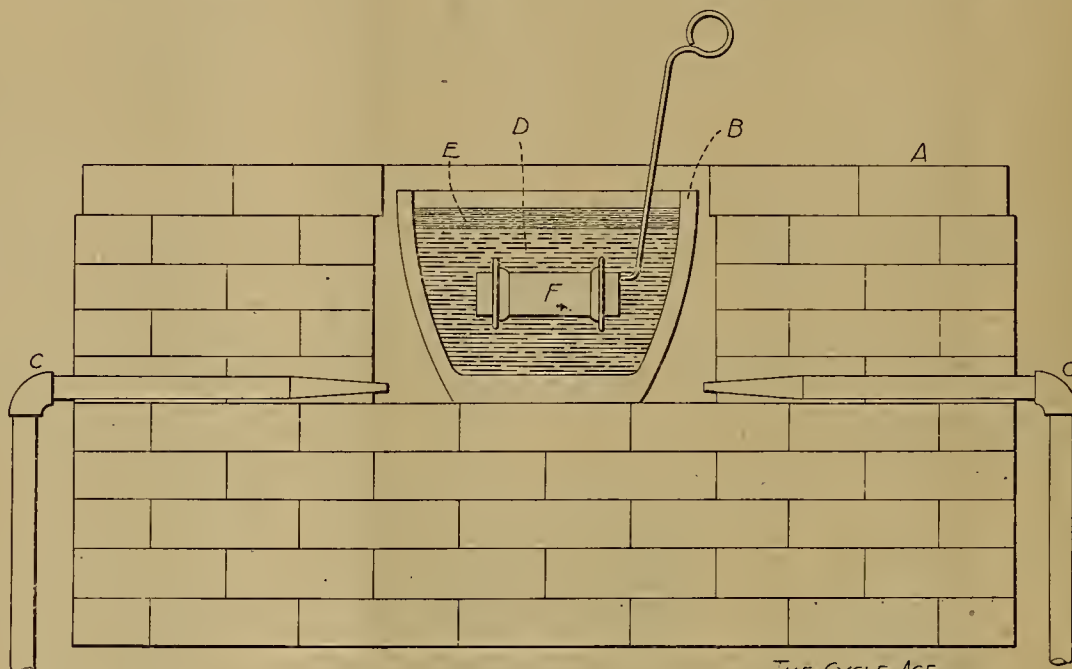
"The process of brazing or soldering metals, which consists in immersing the joint in a bath of molten metal through a superposed body of flux, then stripping or wiping off the excess of metal by subjecting the joint to the action of the said body of flux for a determinate time while being withdrawn from the bath of molten metal."

#### Cost of Brazing in Columbus Factory.

The Columbus people are old hands at immersion brazing and have brought the process by systematic practice to a low point of economy. At least they have given such attention to it, used it so constantly and on such a broad scale, that they have been enabled to figure out with comparative exactness the cost of performing the operations necessary after the frames are taken from the frame building department and before they are turned over to the enamellers for the ground coat of enamel. The table of such

costs as compiled by the company is substantially as follows:

	Per 100.
Dipping rear ends . . . . .	\$ .21
Grinding rear ends . . . . .	1.50
Dipping rear stay tips . . . . .	.19
Grinding rear stay tips . . . . .	1.25
Dipping steering heads . . . . .	.41
Grinding steering heads . . . . .	2.50
Dipping remainder men's front frames . . . . .	1.00
Grinding remainder men's front frames . . . . .	3.00
<b>Total dipping and grinding on men's frames . . . . .</b>	<b>\$10.06</b>
Flame brazing cross braces and rear forks to bracket . . . . .	\$ 3.00
Filing braces and hanger . . . . .	28.00
<b>Total flame brazing and filing on men's frames . . . . .</b>	<b>\$31.00</b>
<b>Total cost of brazing and finishing men's frames . . . . .</b>	<b>\$41.06</b>
Additional cost of dipping women's front frames . . . . .	\$ .33
Additional cost of grinding women's front frames . . . . .	1.25
Additional cost of filing women's frames . . . . .	3.00
<b>Total additional on women's frames . . . . .</b>	<b>\$ 4.58</b>
<b>Total cost of brazing and finishing women's frames . . . . .</b>	<b>\$45.64</b>



Dipping seat posts . . . . .	\$ .33
Grinding seat posts . . . . .	1.50
Polishing seat posts . . . . .	.50
<b>Total cost of brazing and finishing seat posts . . . . .</b>	<b>\$ 2.33</b>
Dipping handle bar stems . . . . .	\$ .26
Grinding handle bar stems . . . . .	1.25
Polishing handle bar stems . . . . .	.75
<b>Total cost of brazing and finishing handle bar stems . . . . .</b>	<b>\$ 2.26</b>
Dipping fork crowns . . . . .	\$ .50
Grinding and strapping fork crowns . . . . .	2.00
Polishing crowns and tips . . . . .	2.00
<b>Total brazing and finishing forks . . . . .</b>	<b>\$ 4.50</b>

#### Spelter Removed By Grinding.

It will be noticed from the foregoing that while sand blasting and pickling are not included in the company's practice, the amount of filing necessary in finishing the frames is lessened by the use of the grinding wheel. Though several factories use the grinder to remove large lumps in certain easily reached places on the frame, its extensive use is but seldom adopted. There is, however, one other notable instance of the use of the wheel.

The White Sewing Machine Co., of Cleveland, has in its frame department a number of grinding wheels, each intended for some especial purpose, by means of which the main portions of nearly all of the joints in the frames can be ground clean. The use of the grinder is but another point for consideration in the important question of frame cleaning which is at this time receiving much attention at the hands of factory superintendents and frame room foremen.

#### Flame Brazing an Expensive Fad.

In the Columbus factory the front frame parts are assembled, brazed together and finished before the rears are attached. Though no exact reason can be gathered from the table, it is evident that the men in charge in this shop consider it good practice to braze the rear forks to the hanger on a flame brazing table. The figures also show that while the entire cost of brazing the front frame together by the dipping process is less than one and one-half cents, the cost of brazing the rear forks to the hanger and the cross braces in the rear frame by the flame method is three cents, or more than twice as much. It is thus apparent that if there is no objection to the practice of those factories which braze the entire frame in the immersion crucible a large proportion of frame brazing cost is wasted by using the flame in brazing the rear forks to the bracket. With justice to the Columbus people, however, it may be said that their reason for attaching the rears after the fronts have been

dipped is doubtless to make more extensive use of the grinder in clearing the hanger from brass after dipping. The attachment of the rear forks would limit to a certain extent the areas which could be reached by the wheel.

The question, taken as a whole, thus resolves itself into one of those logical circles in which the many points to be considered are so related to each other that the course of reasoning employed keeps coming round to the starting point and leaves the reasoner in doubt as to the ultimate policy which had best be followed. It is still an open question as to whether means should be developed by which spelter can be economically removed, or whether such means should be disregarded and attention given to the production and application of anti-fluxes which make spelter removal and frame finishing practically unnecessary.

#### Comparative Filing Costs.

Without doubting the statements of cost in the foregoing table it appears that, other considerations being dropped, the

price mentioned for filing the crank bracket and cross braces after flame brazing is somewhat high, it being given as twenty-eight cents per frame. There are many factories where all the joints of the frames produced are brazed by immersion and where the total cost of filing the frame is but thirty-five cents; in fact it is doubtful if there are many factories where more than this latter amount is paid for filing complete frames. The Columbus company, while it has not compiled any figures on the subject, is authority for the statement that immersion brazing systematically operated results in a saving of all materials used in frame brazing and finishing, such as spelter, fuel, files, etc., and roughly estimates this saving to be at least one-third.

**DRUM UP COUNTRY TRADE**

**Cut-Price Buffalo Concerns Make the Most of Bad Weather—"Big Store" Tactics Win.**

Buffalo, March 27.—The stormy weather of the past week had the effect of taking much of the cycle enthusiasm out of the riding public and as a consequence business has fallen off temporarily to a considerable extent, but notwithstanding these conditions the general business shows a marked increase over that of the same period last year and the prospects are good for an early return of activity as soon as the weather clears.

The inclement weather put a sudden stop to the advertisements of those cut-price concerns that had been indulging so freely in the use of printer's ink, and they bent their efforts in another direction, sending their employes into the neighboring country towns to drum up trade. This was anything but a successful experiment, for with a foot or more of snow on the ground and the wind blowing a gale from every quarter, it was found a difficult matter to interest the country folk in anything pertaining to the bicycle.

A story is going the rounds of the Buffalo cycle stores that has to deal with the introduction of a representative of one of the prominent out-of-town manufacturers into department store tactics. As the story goes, the store in question contracted for a certain number of cycles last season and as the season progressed and the stock did not diminish as rapidly as was anticipated, the proprietors decided to reduce the prices of the different models. A sale was announced in display type in the daily papers, and the manufacturer, becoming cognizant of the contemplated slaughter of his reputation and product, dispatched an emissary post haste to Buffalo with instructions to head off the sale. Upon arrival the representative informed the head of the concern in no uncertain terms that his tactics would not be tolerated. "It's an outrage," he is reported to have said, pointing his finger at a machine that was decorated with a placard in letters that could be read across the street, "to sell a wheel like that for that money." The merchant replied, with a look akin to contempt: "We bought and paid for these bicycles and it is our purpose to dispose of them at our best advantage. We advertise to sell them at those prices and we purpose doing so. If our methods do not meet with your views we stand ready to sell them to you at the same price that we offer them to the public." And the sale went on.

**Elgin Bicycle Co.'s Affairs Adjusted**

The legal differences between M. C. Epenstein of the Illinois Watch Case Company of Elgin, Ill., and Mr. Duncan, formerly a stockholder and director of the con-

cern, have been settled out of court, the action begun by the company against Mr. Duncan for an alleged sum owed to the company having been withdrawn.

The company is directing its efforts at present toward retiring from the bicycle business as speedily as possible.

**PAY JUNK DEALERS' TAX**

**Dealers Who Trade in Second-Hand Cycles Held to Be Subject to License.**

Washington, March 27.—The Court of Appeals for the District of Columbia handed down a decision last Friday in the test case brought by John D. Lasley against the district to determine the validity of the act of Congress, approved March 3, 1891, imposing a tax of \$40 per annum upon every dealer in second-hand personal property. The court held it to be compulsory for all such dealers to secure a license in order to conduct such business, although they may have already procured a license to carry on the sale of new goods of the same kind.

The court, in delivering the opinion, stated that the law on the matter is conclusive and plain, and requires a dealer to procure a license before engaging in the purchase and sale of second-hand goods. The only substantial point to be settled, it was stated, is whether or not the act of Congress giving the District commissioners authority to make such municipal regulations is valid. In reference to this the court says there seems to be no reason for contention, and the decision in the Stoutenburg-Hennick case, in which the point raised was whether or not a commercial traveler could be compelled to pay a license, was cited. The case was taken on appeal to the Supreme Court of the United States, and the regulation was held to be valid. The fact that Mr. Lasley was conducting a principal business of dealing in new bicycles, the court maintained, does not relieve him of the duty and obligation of obtaining a license to deal in second-hand machines, or any other class of second-hand goods. The regulation, the court said, is explicit.

In accordance with this decision, all dealers in bicycles in this city who handle second-hand machines will be required to pay a tax of \$40 per year as all dealers in second-hand goods are required to do. They will comply with the law and will not take the case to the Supreme Court. It is probable, however, that the matter will be brought to the attention of Congress at the next session and an effort will be made to have the law so amended as to relieve bicycle agents and other legitimate dealers from the tax.

**Michigan Bicycle Bill Defeated.**

The Davis bill to make bicycle stealing a felony and punishable as such has received temporary defeat at the hands of the rural representatives in the Michigan legislature. The farmers denounced the bill as class legislation, forgetting the special rulings for the protection of orchards, etc. Adherents of the bill managed to get the vote reconsidered, however, and the bill tabled so that it is liable to come up again at some more auspicious time.

**Machine for Making Spiral Gears.**

The increasing favor with which spiral gears are being considered in the machinery world is evidenced by a patent secured by W. G. Burnham and assigned to the Brown & Sharpe Manufacturing Company. It is for a machine designed for cutting small spiral gears accurately and automatically. Even for bicycle gearing the spiral gear meshing with an-

other spiral gear has been proposed and the old prejudice against this form of gear arising from its similarity to a worm-gear and the assumption that an excessive end-thrust is inseparable from its use, is giving way to a better understanding of its usefulness for transmitting power at angles near to 90 degrees. With the end-thrust largely absorbed in ball-bearings and the gear teeth scientifically cut two spiral gear cylinders with the teeth at 45 degrees with their respective axes may apparently drive in mesh with one another without any but rolling contact. The patent is No. 621,519, dated March 21, 1899.

**LOW TRADING-IN PRICES**

**Nashville Dealers Make Cash Sales by Discouraging Exchange Custom—Repair Charges.**

Nashville, March 27.—The second-hand exchange problem was worked out very satisfactorily to the dealers here last year. The allowance on second-hand machines traded in was from \$10 to \$20, never exceeding the latter figure on the best-make of machines. This resulted in comparatively few trades being made, as a great many riders preferred to sell their old machines themselves and then make cash purchases from the dealer. As a consequence the demand for second-hand machines exceeded the supply and the dealer was enabled to clear from \$2 to \$5 on all bicycles exchanged and invariably had a clean stock.

The riders have now become educated to the fact that their old machines are worth little and show a disposition to trade in at the dealer's figure. The generally lower list prices will help matters this season, for although the rider gets little for his old machine he has a smaller difference to pay than formerly.

Altogether the experience of the dealers last year and the outlook for '99 with regard to accepting second-hand machines in exchange, are considered by the dealers as very satisfactory.

By common consent the following charges for repairs and rentals are recognized as standard here:

Repairing broken top or lower tube, frame re-enameled . . . . .	\$5.00
Broken top and lower tube, frame re-enameled . . . . .	6.50
Broken seat post tube, frame re-enameled . . . . .	5.00
Broken rear fork, one side, frame re-enameled . . . . .	5.00
Broken rear fork, both sides, frame re-enameled . . . . .	7.00
Inserting one new fork side, re-enameled . . . . .	2.50
Two new fork sides, re-enameled . . . . .	3.50
New fork stem, re-enameled . . . . .	2.50
New fork crown, re-enameled . . . . .	3.50
Enameling, plain, any color . . . . .	3.00
With decorations, any color . . . . .	3.50
New rim . . . . .	2.00
Wheels re-spoked . . . . .	2.00
One spoke put in . . . . .	.25
Each additional spoke . . . . .	.10
Truing wheels . . . . .	.25
Repairing puncture in double tube tire . . . . .	.50
In single tube, one plug, guaranteed . . . . .	.50
In single tube, one plug, not guaranteed . . . . .	.25
Putting metal base stem in single tube tire . . . . .	.75
Valve stem vulcanized in single tube tire . . . . .	1.00
Valve stem in double tube tire and cementing . . . . .	.65
Cementing tires, each . . . . .	.25
New cranks, regular stock . . . . .	.75
Brazing front sprocket . . . . .	1.00
Fitting new rear sprocket . . . . .	2.00
Crank axles made and fitted . . . . .	2.50
Front axles made and fitted . . . . .	.50
Rear axles made and fitted . . . . .	.75
Pedal pins made and fitted . . . . .	1.00
Cleaning bearings . . . . .	1.00
Adjusting all over . . . . .	.25
Oiling all over . . . . .	.10
Link put in chain . . . . .	.25
Lacing chain guards . . . . .	.25
Rear wheel guards . . . . .	.25
Renting—One hour or less . . . . .	.25
Each additional hour . . . . .	.15
Six hours . . . . .	.75
Twelve hours . . . . .	1.25
Twenty-four hours . . . . .	1.50
At night, per hour . . . . .	.50

## SUBJECTS OF GENERAL INTEREST

### INDUSTRIAL SECURITIES OVERVALUED

In two months this year there have been placed on the market \$1,048,800,000 of industrial or new trust securities. This does not include \$403,000,000 in various projects, planned, started, often organized, but not completed.

These issues, made in only two months, put on the market and sold to the public, are larger in the aggregate than all the industrial securities floated in all of 1898, which were in all \$916,176,000. These issues in two months are greater than all the listings, shares and bonds together, made in any year on the New York stock exchange, except one.

In two months, of one particularly risky class of security, valued and organized on a new basis, whose future cannot be predicted, the American investor has been asked to take more in sixty days than he has before taken in a year of all securities, including the soundest. The peril of this sort of thing is plain. The end is inevitable. These vast, swollen overcapitalizations may be kept at their present prices for a season, but a day of reckoning is sure to come. Their management is not open to investigation. Those who control them are making money now by marketing them at a high price, and when that is done there will be just as much money for inside managers in breaking the price.

Nothing can be clearer than that these securities do not offer the proper field for the small investor or for small savings. The craze for them will pass, as have all other like lunacies.

### INTERESTING MECHANICAL FRAUDS

The mystery of Keely's motor has quickly followed its inventor to the grave. The opinion generally held by scientific and practical men, that it was grounded in fraud or fallacy, has at last been proved beyond a reasonable doubt. Since the discovery of metal tubing artfully concealed in the walls of Keely's laboratory and of a large iron or steel sphere adapted to serve as an air or gas reservoir, under the floor, together with other corroborating evidence, it is morally certain that the machine supposed to turn in sympathy with the vibrations of a tuning fork, was, in reality, operated by ordinary air under pressure, and that the wires said to convey the subtle currents of etheric energy were, in fact, minute tubes through which the air flowed.

Keely's imposture has had many prototypes. Some interesting examples of mechanical frauds have been collected by President Morton, of Steven's Institute of Technology. One of them, which acquired publicity at the beginning of this century, in Philadelphia, was the Readhefer perpetual motion machine. In 1812, the Pennsylvania legislature, being applied to by Readhefer for funds to develop his invention, appointed a committee to investigate it. On that committee was Nathan Sellers, who was accompanied to the inventor's shop by his son, Coleman Sellers, later the father of the present distinguished engineer of that name. When they arrived at the shop they found the door locked, and had to make their investigation through a barred window. Young Sellers, though a mere boy, was observant enough to notice that the teeth of certain pinions ostensibly driven by the machine were frictionworn on the wrong sides, which indicated that instead of

having power transmitted to them these wheels must have transmitted the power to the motor from a hidden source, which subsequently was shown to be a fact.

Twenty or more years ago an inventor in Newark, N. J., exhibited an apparatus in which mechanical operations requiring several horse-power were performed apparently with the current generated by a small galvanic battery, which, according to the laws of nature, was inadequate to accomplish such results. Several prominent men were induced to advance capital for the enterprise. It worked well for a while and then stopped. The peculiarity about its stopping was that this occurred just at the time the steam engine, which furnished power for sundry purposes in the building, was wont to shut down for the day. Subsequently, when the inventor had fled from his stockholders, his machine was found to have a hollow frame permitting the introduction of a belt to convey from a lower floor the power that ran it.

### REMARKABLE RAILROAD INVENTION

Ever since the railroad became a necessity in the life of civilized nations the invention of a feasible plan by which a railroad could be constructed and operated, using a single rail, has been the hope of many engineers of the highest attainments. Several single-rail roads have been devised and some of them have been tested with indifferent success; but cheapness in construction, rapidity in the moving of trains and reduction in cost of operation have made the single rail especially desirable in solving many of the perplexing problems in transportation. Since the greatly increased use of electricity as a motive power the exertions of engineers to hit upon a safe, cheap and practical road using one rail have been redoubled and it seems they have finally been successful.

The credit of this discovery, or invention, belongs to an Englishman named Behr, who has put his plan into successful operation in Belgium, over a short line of road near Tervuerne, over which he has moved his trains at the rate of two miles a minute, the cars being of ordinary size, capable of seating 100 passengers. The invention has attracted the attention of practical railroad men to such an extent that a line is to be constructed from Manchester to Liverpool, a distance of sixty or seventy miles, the construction of which is to begin within the next two months. Fabulous stories are told as to what may be expected when the new line is built, and it is affirmed that 1,000 miles in twelve hours will not be more than the ordinary speed of the trains.

From the rather condensed descriptions of the new road that have been published it appears that the trains run upon a single rail, supported upon a trestle some feet from this ground, which avoids the necessity of an ordinary roadbed of earth. The cars are sixteen feet in length, suspended from the rail and kept in place by guide wheels that bear upon the top and sides of the rail. Each car has four electric motors, weighing three tons each, supplied by a contact rail, laid parallel with the track, having 150 horse-power each and capable of 600 revolutions, each of which would give the car a speed of 100 miles an hour, and this speed is capable of being indefinitely increased. From the contact rail electricity is conveyed to the

motors in the car by copper wires. The cost of this mono-railroad is estimated at from \$50,000 to \$100,000 a mile, which is considerably more than that of the ordinary surface double-rail road, but the inventor claims that the greatly reduced expense of operating the former will far more than compensate for the increased cost of construction.

The invention has passed beyond the experimental stage, and while all that is claimed for the new system may not be immediately realized there is little doubt that it marks a very long advance in the solution of the problem of rapid transit for long distances.

### PLATINUM PRODUCTION IN AMERICA

It is predicted that this country will soon be the greatest producer of platinum in the world. As yet four-fifths of the supply of this product is obtained from mines on the slopes of the Urals, near the boundary line between Russia and Siberia. The principal reason why the bulk of the platinum used in this country has been hitherto derived from the Urals is that labor is much cheaper there. Gravels which have been washed down from the mountains for centuries contain the deposits. Miners dig into the ground to a depth of fifteen feet or so, and then tunnel in all directions. The stuff they throw out accumulates in summer, and in winter it is washed. Gold is what they are searching for in reality, and the platinum is merely a by-product. Twenty-nine hundred cartloads of gravel yield only about fifteen pounds of platinum.

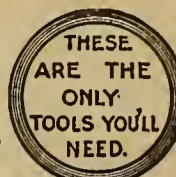
The difficulty and labor which is entailed in separating it from the accompanying substance is so great that the product itself is necessarily very expensive. Its present market price today is \$9 per ounce. Rich placer mines of platinum are frequent on the Pacific coast of the United States, especially in Oregon and California. Both of these states would long since have become great producers of platinum but for the cost of separating it from a mixture with which it is always associated.

In this mixture is found osmium, which is one of the most interesting substances in nature. If a little of it is exposed to the air it is instantly transformed into osmic acid, which is a most deadly poison. This peculiar quality may be utilized in a most advantageous manner, for if the filament of an electric lamp be saturated with it, it will carry a current about four times as strong as can be passed through it without the same treatment. With the same strength of current it will give much more light. The reason that the current is increased by this treatment is that osmium will not melt in a vacuum, and so an indefinitely strong current can be passed through it.

In 1879 five pages of Harper's Magazine were devoted to the exploitation of a magnetic motor devised by one Gary, of Boston. It was supposed to operate through the periodical introduction of a shield in front of a permanent magnet, and to produce effects which would have been inconsistent with the principle of the conservation of energy. As a matter of fact, the magnetic shield, made of iron, was moved by hand, and its manipulation against the attraction of the magnet must necessarily have put into the machine all the energy that was given out through this device.



TRADE MARK



60



JOBBER ARE FURNISHING

# DUNLOP DETACHABLE TIRES

ON THEIR WHEELS AT NO EXTRA COST.

1899 WILL BE A DUNLOP YEAR

GET OUR CATALOGUE.

## THE AMERICAN DUNLOP TIRE COMPANY

BELLEVILLE, N. J.

CHICAGO, ILL.



TRADE MARK



# THE STERLING

## "BUILT LIKE A WATCH"



### THE STERLING BATHING GIRL IN A NEW ROLE.

STERLING BICYCLES have acquired the enviable reputation of being the most substantial, the lightest running, and the most favorably spoken of machines on the market, because of the quality of material and class of workmanship used in their construction, and the careful attention given to details and finish.

STERLING ADVERTISING has been extensive but judicious, and the attractive matter supplied to agents has been largely instrumental in bringing the wheel into prominence.

### THE BEACH SCENE IN THE ACCOMPANYING CUT

is from the famous Sterling poster, the best known and most talked of poster ever before the public.

It now appears upon an edition of handsome PLAYING CARDS of the best quality, which will be furnished broadcast at less than a third of their value. A background in Sterling olive surrounds the halftone in the center, the "ad." being confined to the back of the cards, and the faces free from fancy designs.

Sample package by mail for 20 cents in stamps, one dozen by express for \$1.75.

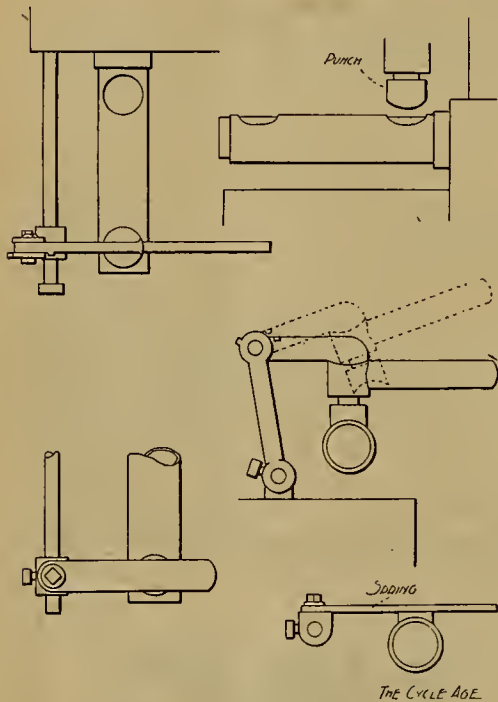
A WORD TO BICYCLE DEALERS. The present year will be the best in bicycle history, with a vastly increased demand for the acknowledged high grade makes. If you are not already satisfactorily provided for, we would like to say a few words to you upon the subject of agency, and your correspondence is invited.

# STERLING CYCLE WORKS KENOSHA, WIS.

## CURRENT SHOP PRACTICE

### Aligning Holes in One-Piece Head Tubes—Half-Hearted Experimenting with Dip Brazing

Many manufacturers using flush joints make their steering heads from a single piece of tubing in each end of which is punched a hole through which is subsequently passed a flashed reinforcement which laps around the inner wall of the tube. The frame tube is then slipped on over this reinforcement, or branch, the end being scarfed to fit against the head tube. The punching of the holes in the head tube is very simple as it is done in a regular vertical press, the tube being slipped on over a horizontal mandrel and up against a shoulder during the operation. The first hole is punched without



regard to alignment, of course, but the punching of the second hole, at the other end of the tubing, must be done in perfect alignment with the first one and, as the eye of the workman cannot be depended upon in such a case, mechanical means must be employed. The accompanying illustration shows two methods that have been used in factories.

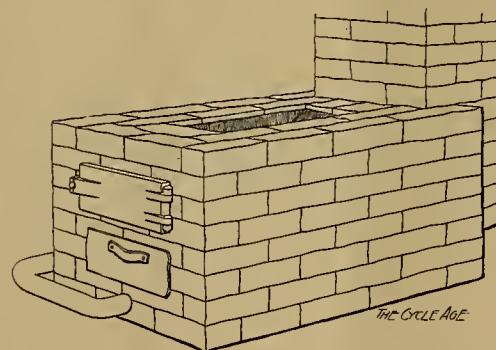
According to the first plan a horizontal rod is rigged up on supports from the frame of the press, the rod being parallel to the mandrel holding the tube and a short distance below it and to its left. A collar is fitted to slide back and forth upon this rod and may be fastened with a set screw at any desired point. An upward rigid projection or arm from the collar connects by a vertical hinge joint at its upper extremity with a swinging arm having a hand piece at its free end and near its middle a vertical hub bored to receive the arbor of a gauge matching the holes which are punched in the tube. The swinging arm can be adjusted, by moving the lower supporting collar on its inclosed rod, so that when it is dropped to its lowest normal position the attached gauge piece will enter the punched hole in the head tube. When not in use the gauging arm may be swung back till the small stop lug near its hub rests against an engaging lug on the vertical support. After the first hole in the hub has been punched the tube is pulled off the mandrel and turned around. The gauge is then lowered and the tube turned on the mandrel till the hole al-

ready punched is in such a position that the gauge piece will drop into it. The other hole is then punched.

A simpler form of gauge is illustrated in the two lower views. The horizontal rod is placed about even with the top of the tube mandrel and holds a sliding block with a flat horizontal top face. To this face is fastened by a screw a long flat spring which extends somewhat to the right of the mandrel. On the lower side of the spring and over the mandrel the gauge block is fastened. The spring in the flat bar tends to press it downward. As it may be swung horizontally from its left end the bar may be sprung upward enough by lifting on its free end with the hand to allow it to be turned from an out-of-the-way position at the left to its gauging position over the mandrel. Then when the hand is taken from the right end the spring will force it downward and when the head tube is turned till the hole is in the correct position the gauge block will drop into it. The hole in the other end of the tube is then punched.

#### HOW DIP BRAZING IS REJECTED.

A bicycle manufacturer who felt bound to experiment a little with dip brazing, but did not have the heart to go at the work systematically, was approached by a workman, who claimed to know the art, and commissioned this person to erect a furnace and teach the factory men what he knew. The builder of the furnace had the very general knowledge about immersion brazing furnaces that there should be a crucible supported over a fire box, the whole to be contained in a fire brick structure. The accompanying illustration shows the exterior view of the furnace as erected. The crucible was supported by the brick work, which entirely covered the top, leaving only the crucible open. The crucible was tightly cemented in place, no provision being made for expansion or warping after heating. The fire box was directly under the crucible and was reached by a door



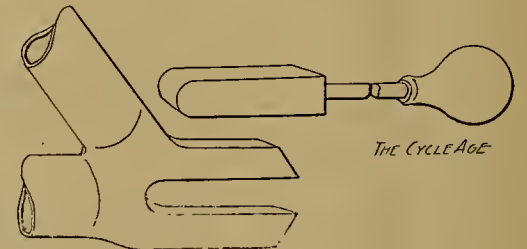
in the front end of the furnace. Below the grates a space was left for the accumulation of ashes to be cleaned out through an opening directly below the fire box door. This opening was closed by a thin iron plate. The draft came into the furnace through a single pipe leading into the front of the fire box. The fire when built produced a sufficient amount of heat but this heat instead of being forced up around the crucible and over the top of the molten metal, could, on account of the restraint of the fire brick top and walls, reach as high only as

about three inches from the bottom of the crucible. It was then forced out by the rear of the furnace and through a chimney arranged for the purpose. The chimney, it is said, was the hottest part of the entire furnace, while the top position of the spelter was chilled too much to flow. By heating up more the zinc was burned out and the spelter again refused to flow. After this experiment the bicycle manufacturer temporarily rejected brazing by immersion.

#### THEIR TROUBLE FOR THEIR PAINS.

Few factories exist that have not one or more special shop schemes for obtaining accuracy in the making and assembling of parts, but though the motive is a worthy one the results are frequently incongruous with the aim.

In a large factory the finishing work done on slots in the rear end lugs of the frames presents an example of such wasted pains. Following the common method the rear stays and forks are brazed to the rear lug before they are joined to the front frame. That is, a rear stay cut to the proper length is pinned to the lug, to which also the mating rear fork is secured. The three parts are then brazed and the joint filed up. In order to get an accurately filed, properly



shaped slot for the reception of the rear wheel axle the joint is sent to a second filer whose sole duty it is to file out the slot to the gauge of a metal templet like that shown in the accompanying illustration. When subsequently the rears are put into the frames, the entire frames have been brazed and filed and sent to the liner, it is unfortunately found in ninety-nine cases out of every hundred that a rear wheel if put into the frame will not lie centrally between the rear stays and between the forks at the same time, and the liner is now required to file off some metal from the upper side of one of the rear slots according to the direction in which the wheel inclines. In so doing he enlarges the slot and places at naught the carefully gauged work of the filer with the templet.

#### Every Rider an Agent.

They have a new scheme in England for selling bicycles, whereby each customer becomes an agent. Certain makers advertise to supply customers with bicycles for \$1.25. On the payment of this sum the customer is given a coupon, and this coupon is returned to the makers with \$7.50. For the \$7.50 a certificate is issued containing six coupons, each valued at \$1.25. These six coupons the purchaser is expected to sell to six friends for \$1.25 each, which repays him for the \$7.50 which he has paid. Then the customer's friends are expected to do what the original investor has done. Supposing, however, that only four friends in place of six send in their applications for machines and agencies; the first purchaser is blandly told that there is nothing to prevent him from paying \$18 more, on receipt of which the machine will be sent to him.

#### Obnoxious Wisconsin Bill Shelved.

The farmer assemblymen in the Wisconsin legislature who carried the obnoxious Guth bill through the assembly and were all but ready to turn it over

**Arnold, Schwinn & Co.**  
INCORPORATED  
**THE "WORLD" CYCLES**  
240-254 WEST LAKE ST. CHICAGO, U.S.A.

CABLE ADDRESS "WORLD CYCLE" CHICAGO.

ABC CODE USED. WESTERN UNION WIRE DIRECT TO FACTORY

THE WORLD IS MINE

# EXCELSIOR SUPPLY CO.

EVERYTHING } FOR BICYCLE BUILDERS AND DEALERS

**DROP FORGED SPROCKETS FOR LIGHT-WEIGHT AND JUVENILE MODELS.....**



## FIVE-ARM PATTERN

For 3-16 and 1/4-in. chains; 16 to 25 tooth; rough or machined.



## SPIDER PATTERN

For 3-16 and 1/4-in. chains; 17 to 24 tooth; rough, machined or nickel-plated.



Six and one-half inch cranks for spider sprockets. Rough or machined and tapped 1/2-inch, 20 threads, R.

Write for the most comprehensive catalog ever published. If you don't find what you want in it, and will send us exact drawings and specifications, we will make it to order for you, in our own shop, on the premises. This shop is run exclusively for the benefit of

## OUR CUSTOMERS

# EXCELSIOR SUPPLY CO.

ESTABLISHED 1876

88 AND 90 LAKE STREET

CHICAGO, U. S. A.

# We Want to Buy

FOR CASH F. O. B. NEW YORK

## SEVERAL THOUSAND BICYCLES

Suitable for the requirements of our customers.

### SPECIFICATIONS:

Outside joints, three, two or one-piece hangers. Steel or wood mudguards to front and rear wheels. Brakes. Black enamel and nickel finish, double plate crowns. Wood or steel rims for single tube and Dunlop tires.

## Name Your Best Prices

with and without tires, pedals, saddles, toolbags and tools. Packed in single closed cases. K. D. and in crates not K. D. Prices to be F. O. B. New York.

Address, sending catalogue with your quotation and stating how soon and in what quantities deliveries can be made,

"M" Care of Cycle Age,

15 NASSAU STREET, NEW YORK.

to the Senate, have been compelled to recall the bill and shelve it for indefinite postponement. The concerted opposition of the cyclists of the state was so strong that the assemblymen did not dare send the bill to the Senate, upon whose members the wheelmen had been showering petitions and personal letters from the time that the adherents of Guth first began to gather dangerous strength. Chief Consul Van Valkenburgh was instrumental in stirring the cyclists up to action. The measure was a direct blow at cycling outside of cities and towns and provided that every wheelman should turn aside upon meeting any other form of vehicle and give that vehicle the entire roadway.

### NEW YORK SPRING CYCLE SHOW

Dealers' Exhibition Opened Thursday—Fifty-One Retailers Represented—Sundries Prominent.

New York, March 27.—The Dealers' spring cycle show opened at Grand Central Palace last Thursday night. It will continue throughout this week. It is a dealers' show pure and simple, the management having had it in mind all along to make it such and having so advertised the affair. The booths contain the exhibits of fifty-one representative dealers, each of whom in most cases shows several different makes of bicycles. Sundries and specialties of all descriptions form an important part of the show and in many booths are side lines that cycle dealers have found to be suitable for their business.

Some of the local dealers refused to attend the show, giving as an excuse that the spring activity demanded their attention at their stores, but the number of dealers exhibiting and the interest shown by the visitors are satisfactory both to the management and to those dealers represented.

A fair proportion of the admission is paid and the visitors as a whole show more buying spirit than has been common at shows. One exhibitor reports that he has already made twenty sales and nearly all of the dealers say that there has been direct selling value obtained from the show. One of the side features of the exhibition is a small track in the building on which intending purchasers may try any machines which have taken their fancy. The management has arranged such special features as fancy riding and races on home trainers to maintain the interest of the spectators and several interesting exhibits of cycle curios and the like attract that portion of the visiting crowds which is not commercially inclined.

The L. A. W. and the C. R. C. both have booths and many of the local cycling clubs have thus far been present either in bodies or as groups of individual members. On the opening night ex-President Potter of the L. A. W. delivered a short address. Other speeches were made the same evening by local cycling lights and State Road Commissioner Budd of New Jersey gave a brief talk in the interest of good roads.

### PARTS FACTORIES BURNED

Dangler Plant Destroyed and Cleveland Machine Screw Co. Injured—Work Resumed.

Cleveland, March 27.—One of the fiercest fires ever experienced in Cleveland's manufacturing district destroyed the plant of the Dangler Stove & Manufacturing Company, on Perkins avenue, and damaged the stamping plant of the Cleveland Machine Screw Company, early last Friday morning. The fire spread rapidly from the testing room of the Dangler fac-

tory to all parts of the main building and the west wing and then jumped to the adjoining buildings occupied by the stamping department of the Cleveland Machine Screw Company. The Dangler company includes the well known Kells Manufacturing Company and the Kelly Handle Bar Company and nearly everything belonging to both concerns was destroyed or damaged. As soon as it was seen that the Dangler plant could not be saved, all efforts were directed to the stamping plant and the east wings of this factory were saved.

President Moore of the Cleveland Machine Screw Company, when seen by a Cycle Age representative, stated that his company's loss was about \$100,000, insured for more than double that amount. Said he: "The insurance adjusters will commence work in the morning and as soon as their investigations are completed we will be able to tell how we stand. The fire does not affect our automatic machinery and ball departments, as they are in an entirely different plant at some distance from the stamping department. Had the fire occurred some weeks ago a number of manufacturers who use our goods would have been seriously embarrassed, but we have made shipments earlier this season than ever before, so that only a few concerns will be delayed. We have already arranged to have the damaged building rebuilt and the work will be pushed to completion with as little delay as possible." An outside plant was at once secured and work was resumed this morning, Monday.

Mr. Dangler of the Kells and Kelly companies, stated that the saddle and stove departments had been completely cleaned out and the handle bar department badly damaged, but he thought it probable that they would be able to save the handle bar tools and dies. Their loss will probably reach \$350,000. The Kelly Handle Bar Company made arrangements the same day whereby it will be able to take care of all orders after this week, and began work in another factory today.

### IMPORTANT BANKRUPTCY DECISION

Entry of Judgment and Advertising Property For Sale Can Force Debtor Into Bankruptcy.

Buffalo, March 27.—A decision of importance to debtors and creditors throughout the United States was handed down by Referee Hotchkiss in Bankruptcy Court last week. It grew out of the proceedings in the matter of an alleged bankrupt. The gist of the opinion is that, whereas under the old bankruptcy law, if a judgment was entered against a failing debtor in favor of one creditor, the other creditors could not stop the creditor who had the judgment from proceeding and possibly getting the whole estate, short of proving intent or collusion, under the new law, the mere entry of a judgment and the advertising of the property for sale by the sheriff, without any intent or collusion, is sufficient to force the debtor, against whom the judgment is secured, into bankruptcy.

After stating the issue and the dates when the alleged bankrupt was insolvent, the ruling states, that on January 18, 1899, a judgment was entered and docketed in an action in the Supreme Court, in which Levi W. Rubenstein was plaintiff and Aaron Meyers was defendant; that on said judgment an execution was issued to the sheriff, who, on the same day, levied upon the stock of goods belonging to the judgment debtor and duly advertised the stock of goods for sale on January 26, 1899, and posted notice of such sale on January 18, 1899; that the judgment debtor, or any other person, did not, at least five days before the

date when the sale was advertised to take place, vacate or discharge said judgment or attempt to do so. On motion of the creditors, after the levy and before the sale, the sheriff was restrained by the District Court from selling under his execution, but was later permitted to sell as the representative of all parties on notice to the creditors of the alleged bankrupt, and the money realized from the sale, some \$1,200, was deposited to await the final decision of this controversy.

After an exhaustive review of the law and many interesting comments on the history of bankruptcy legislation, both here and abroad, the ruling concludes:

"It would be ridiculous to hold that creditors wishing to avail themselves of this act of bankruptcy must wait until a sale has taken place before filing their petition and in many cases would amount to a denial of justice. The bankruptcy act is a remedial statute and should be construed liberally to effect the purposes of its enactment. The phrasing of the act is not so accurate as that of the Canadian or the English acts, but that the words 'before a sale' must mean in a case like this the same as 'before the time fixed for a sale,' seems to follow from the general scope of the act and the uselessness of the third act of bankruptcy unless an interpretation be given."

### Week's Exports from New York.

The exports of bicycles and bicycle materials from the port of New York for the week ending March 21 are recorded as follows:

	Bicycles.	Mtls.
France . . . . .	\$13,016	\$11,543
Argentine Republic . . . . .	14,176	675
Australia . . . . .	7,019	2,729
Denmark . . . . .	6,925	1,945
Sweden . . . . .	7,125	410
England . . . . .	3,197	3,177
British Africa . . . . .	5,003	382
Belgium . . . . .	1,761	2,510
Switzerland . . . . .	2,516	.....
Germany . . . . .	1,910	287
Holland . . . . .	1,429	582
Scotland . . . . .	550	908
Greece . . . . .	750	...
Ireland . . . . .	642	...
Central America . . . . .	354	40
Italy . . . . .	150	231
U. S. of Colombia . . . . .	332	...
Dutch East Indies . . . . .	240	...
Prussia . . . . .	...	240
Uruguay . . . . .	216	...
British West Indies . . . . .	173	40
Mexico . . . . .	107	70
Dutch Guiana . . . . .	80	92
Brazil . . . . .	84	...
Cuba . . . . .	...	61
Puerto Rico . . . . .	25	19
Totals . . . . .	\$68,500	\$25,946

### English Exports for One Week.

Cycle exports from England for the week ending March 3 are recorded as follows:

Adelaide . . . . .	\$ 175
Auckland . . . . .	120
Blenheim . . . . .	240
Bombay . . . . .	420
Boulogne . . . . .	1,970
Calcutta . . . . .	1,415
Cape Town . . . . .	2,785
Christchurch . . . . .	1,200
Colombo . . . . .	650
Durban . . . . .	5,850
Gibraltar . . . . .	80
Hong Kong . . . . .	215
Invercargill . . . . .	7,650
Kurrachee . . . . .	460
Mauritius . . . . .	85
Lyttleton . . . . .	120
Madras . . . . .	865
Melbourne . . . . .	4,780
Newcastle . . . . .	60
New Plymouth . . . . .	50
New York . . . . .	320
Ostend . . . . .	200
Penang . . . . .	170
Perth . . . . .	510
Port Elizabeth . . . . .	3,085
Rockhampton . . . . .	1,000
Shanghai . . . . .	304
Sydney . . . . .	100
Wellington . . . . .	185
Total . . . . .	\$35,160

The universal lights law is in force in Ceylon.



Garford

Hunt

The Wheeler  
EXTRA

Brown

Gilliam

P & F

By This Stamp

You May  
Know  
Them

**W**HEN you see an attractive saddle you generally look for the name of the maker, and nearly every time you find that it bears one or another of the familiar stamps here shown.

A saddle to be satisfactory must have beauty, style, durability and correct shape. These attributes are absent unless the goods are manufactured by experienced workmen under the supervision of men who make a study and have a thorough knowledge of the business, and who have the capital and the facilities to put together the finest materials in the best manner known to the art.

The American Saddle Company makes saddles that *satisfy*.

The evidence of it lies in the fact that such an overwhelming majority of the riders buy them, ride them and believe in them.

It is safe to trust the judgment that is so nearly universal and be governed by it in laying in your stock.

Buy the products of the American Saddle Company and you will need few others.



**American  
Saddle Company**

American Trust Building

Cleveland, Ohio

## COMMERCE IN FOREIGN MARKETS

**PHILIPPINES AS A MARKET**

The Philippine islands are looked upon as a good field for the bicycle manufacturers to unload their old stock in. The bicycle of '96 production is as popular as that of '99. At present Hong Kong is the distributing center for the Philippine trade. The market wants a low-priced machine, one that will sell at about \$20 gold in America, wholesale. The high-grade American machines are now selling there for \$185, Mexican money, but where one of these is demanded there is a call for 100 of the cheaper grade.

Brakes, lamps and bells must be attached to the bicycle in the Philippines. The streets are crowded with jin rickshas and sedan chairs and darkness comes on suddenly.

In Hong Kong from 5 to 7 o'clock each night the streets are covered with bicycles. The Chinese are the most faithful riders, and are wholly indifferent to the make or the reputation of the wheel.

**DUTCH WHOLESALERS COMPLAIN**

It is generally supposed in Holland that American bicycles, when broken, cannot be repaired and that their owners must have parts made, as they cannot be replaced. It is advisable to eradicate this impression. Catalogues should be printed in French. Wholesale dealers in Holland complain bitterly against the habit of some American manufacturing concerns in sending catalogues which give the wholesale prices to small dealers supplied by these large wholesale houses. The manufacturer's catalogue is looked upon abroad as a document of a strictly confidential character, and it is considered a breach of good faith for a maker or a wholesale dealer to let a retail dealer become acquainted with its contents.

In this connection it is interesting to note that a protest has been made by the export association in Rotterdam against the custom of American exporting houses publishing papers in the interest of their trade and sending their publications to retail bicycle dealers who "do not buy more than a dozen machines a year, and who, by receiving these papers, get acquainted with all the large manufacturers and export houses in America." The burden of this complaint is that the market is spoiled for the large buyers.

**DOES IT PAY TO DAMAGE SAMPLES?**

One of the first questions asked by a commercial traveler going into South American countries is: "Can I damage my samples in such a way as to make them unsalable in the opinion of a custom house officer without having their sightliness lost?" If samples can be damaged and still be useful, then another question presents itself: "Is the sum to be saved in duties and bonding expenses more than equivalent to the loss incurred in damaging the samples?" In answer to both questions it may be said that if the samples would sell at \$500 and the total expense of paying duties in Brazil and Uruguay and bonding in Argentina would not exceed \$500, then it is useless to carry a damaged line unless such a collection could be made from damaged stock on hand. On the other hand, should the total amount of duties equal or almost equal the valuation of the samples, then carry a damaged line because of

the saving of time, money, trouble in appraising, custom house delays, etc.

Samples should be packed in crates or boxes not weighing over 150 pounds, nor containing 15 cubic feet of space. At all ports in South America, with the exception of Buenos Ayres, Argentina, passengers and their baggage are sent ashore in small boats, and weighty or cumbersome trunks are very liable to get bad usage and cause delays. Baggage of this nature is usually carried about town on men's shoulders, and portable packages invariably facilitate the delivery of samples. Then, again, but few hotels or buildings in South America have elevators. On the contrary, all baggage must be carried upstairs through narrow hallways and doors, which also causes the necessity of a limit to the width of trunks.

Do not have your own or firm's name attached to your baggage; it often leads to trouble. Use locks and not nails to seal packages. In custom house examinations the superficial work must be done as quickly as possible; there are no packing tools about when wanted, and nails offer no security from theft while trunks are being stored in the custom house. Have on each trunk a detachable plate of some sort suitable for directions in case you wish to forward your goods ahead consigned to an agent.

### TRADE IS JUST OPENING IN SIAM

The demand for bicycles has just begun in Bangkok owing to the king's trip to Europe, where he became familiarized with the use of the bicycle and as a result ordered several for himself and his establishment. Bangkok is about the only city in Siam, with the exception of one or two small places, where a bicycle can be ridden at all. There is no basis for determining how many might be sold should the people decide to use them. There are many obstacles to be met in the cycle business there—referring to the American production exclusively. A large majority of the manufacturers demand cash, not considering that it requires from three to four months to land the shipment there; firms in Europe allow ample time for delivery before expecting settlements. This discrepancy accounts for American business (not only in the cycle line) being so small. Another detriment is the excess freights from America compared with rates from European ports.

The white population in Bangkok is composed principally of Britishers, Germans, French and Danes, the majority of whom would have to be educated to appreciate the superiority of American machines. The greater number of cycles in use have come from England, while the sundries are purchased in Singapore. Bicycles retail at from \$55 to \$100 in United States gold. The demand is mostly for cheaper grades; there is, however, a limited demand for high grade machines. Cycles are sold by Indian shopkeepers, hardware dealers, grocers and dry goods merchants. Siamese, Chinese and English are the principal languages spoken. The business is done on thirty to ninety days' time after the arrival of the goods; the merchants can hardly be induced to pay cash.

All the merchants in Bangkok are Chinese, with the exception of three or four Europeans. Except in a few cases, it would be impossible to do business with

them direct unless someone was on the spot to guarantee payments of accounts. A merchant who may be good today is no good tomorrow. This statement fits the majority of merchants anxious to do business with American firms. The course pursued by all European and American firms up to the present has been to appoint representatives there on buying terms who sell to the local dealers. A certain machine made in Chicago is prime favorite in Bangkok. An American missionary has opened a store for the sale of another well known American machine and is the only exclusive bicycle dealer in Siam. The importers in Bangkok are Germans and discourage trade of any kind except with their own country. In particular do they discourage the use of American goods.

### GOOD FIELD IN THE TRANSVAAL

There is a great field in South Africa for the American manufacturer and exporter, there being many rich concerns there which send practically all their business to Great Britain and the Continent, a large share of which might be diverted to American channels if our exporters and manufacturers had only the same confidence in the African dealer that they have in those at home. The dealer in South Africa has an equal amount of honesty and undoubtedly more means at his command, the question of remoteness being the only thing against him.

The question has been asked, "Why does the foreign dealer give the preference to European manufacturers?" This may be answered very simply with another question, "Why does the American manufacturer or jobber exact from the foreign customer a settlement of account for goods purchased, long before the goods are received and frequently before the goods have ever been shipped, when the European manufacturer is willing to extend a credit for at least thirty days?"

Again, the English and German manufacturers canvass for trade through the medium of clever commercial travelers, who visit the dealer personally, and none of whom carries more than five or six different lines. Above all, they are thoroughly acquainted with every line they carry. Contrast this with our American manufacturer. He makes a contract with an export commission house and sends the house a line of expensive samples, besides inserting a costly advertisement in the columns of its monthly or weekly export journal. What is the result? The commission house has on hand from seventy-five to 150 different lines of goods, not 5 per cent. of which it knows anything about.

### GREEKS DON'T LIKE OUR BICYCLES

In Athens, Greece, the sale of bicycles has fallen off greatly of late. The condition of the main roads is good. There are no domestic manufacturers of bicycles. Machines are imported from Germany and Austria. Some American machines were imported, but were of inferior make and dealers dropped them. The receiving port is Piraeus, five miles from Athens. There are no port charges. There are bonded warehouses.

If you wish to exchange hay, corn-stalks, corn, oats or wood for a boy's new pneumatic bicycle, call at this office and investigate.—Kingsville (O.) Forum.

# Prompt Shipments

Mr. Dealer—One of the reasons why the manufacturer can't fill your orders promptly is that he can't get the handle bars—if you didn't specify the Claus.

Every time you make a customer wait you give him a chance to change his mind—to buy another wheel.

If your customer didn't specify the Claus he didn't know anything about it.



Show him how it works—tell him it's guaranteed forever.

Tell him he needn't wait so long for his wheel if he takes the Claus.

Tell him if he isn't satisfied with the Claus after he gives it a trial he can exchange it.

We will back you up in all these promises.

We are up with orders and the manufacturer will equip the Claus if you say so.

**The Claus Handle Bar Mfg. Co.**  
MILWAUKEE, WIS.

# Plain Talks on ANDRAE Cycles

XV.

Model 40 is as good a bicycle as we can build. It's as good a bicycle as an agent can sell or rider can buy.

It has a moral influence just like a good friend. It advertises you just as a good friend does.

\* Anybody who knows anything about bicycles will recognize its value.

A few in your town to-day means 50 in a week or so.

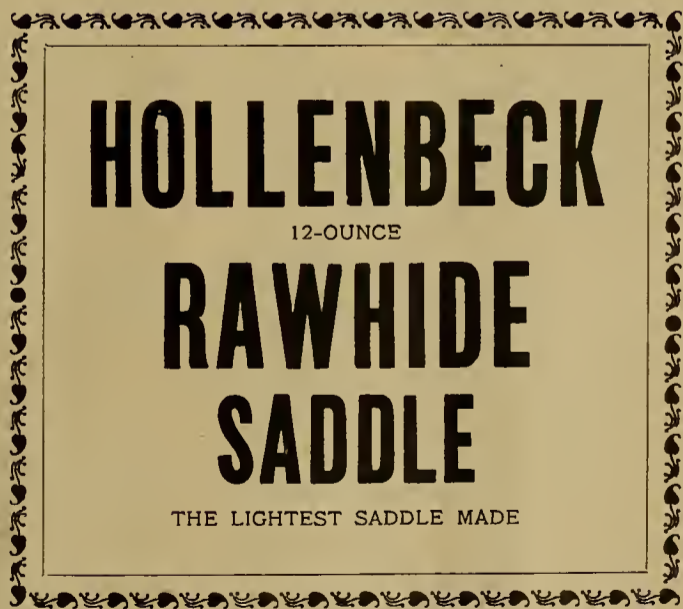
"The Andrae Agent," a monthly paper, free.

THEY  
NEVER  
DISAPPOINT....

**Julius Andrae & Sons Co.**  
MILWAUKEE, WIS., U. S. A.

## EVERY DEALER

SHOULD  
HAVE IN STOCK  
THE



30 HIGH-CLASS WHEEL MAKERS USE THEM  
Write for particulars and name of your nearest Jobber.

—MAKERS—

**HOLLENBECK SADDLE COMPANY**  
SYRACUSE, N. Y.

## DIRECTION OF DRIVE THRUST ALWAYS UPWARDLY INCLINED

The Wind as a Factor—Error in Previous Article Corrected—No Argument for Low Frames.

To the Editor:—"Many men, many minds," and "minds differ as men differ." Much of our best judgment is founded upon a composite of the differing opinions of others. In your issues of March 9 and 16 you published two views taken upon the question of design in bicycle wheels with special reference to the ability of the wheel to surmount obstacles lying in its path. Two views were expressed and sustained by arguments, but there is more to be said upon the subject than yet brought out, and here we have still another argument from a different standpoint.

The principal friction which the wheel has to contend with is the roughness of the surface of the path along which it rolls, although this may not be the principal resistance overcome by the rider. Traveling at ordinary speed over smooth roads, the air resistance is as great and sometimes greater than the energy necessary to maintain progressive movement and overcome the machine friction and the rolling friction due to surface roughness combined. It may be considered as concentrated at the center of the vertical projection of the moving surface or probably not far from the pommel of the saddle, which is also the location of the center of gravity of the rider and wheel combined. This air resistance must be taken into consideration, and this will bring the line of thrust up so far that it will probably strike the ground some distance in front of the fore wheel.

To the mind of the writer, if the wheel is to be made to surmount obstacles more easily and with less violent vibrations, it will be accomplished by increasing the diameter of both wheels and adjusting the position of the rider in such a way as to more nearly distribute his weight, always letting the fore wheel bear the lesser weight, and retaining a low frame. With a larger wheel, in comparison with one of less diameter, the tire will come into contact with an obstacle sooner, will surmount it more slowly, and, although the rider may receive the same elevation thereby, the motion will be more in the nature of easy oscillation than of sharp vibration. As to just where this increase must stop when limited by appearance, ease in mounting, weight, cost of building, and other considerations, it is difficult to say, and any alterations which may be made in this direction will probably develop in the same way the bicycle itself has done—not as an engineering structure, but as an empiric design, one that has been developed by the rider and the mechanic. If the engineer has been consulted we would not today have 20-pound bicycles, and probably not so many repair shops, either; but that has nothing to do with the present question. W. K. L.  
Brooklyn, March 24.

In connection with the question of bicycle design to which this correspondent refers, the writer of the article which appeared March 16 feels bound to state to the readers of Cycle Age that an error in reasoning—besides that of overlooking the wind resistance to which the correspondent calls attention—slipped into that article. The error did not in any way weaken the refutation of Mr. Renouf's theory in favor of small rear wheels, but does weaken the assumption that bicycles with low-built frames will pass over inequalities in the road with smaller resistance than bicycles with high-built frames. It was stated that the thrust caused by the momentum of a bicycle would travel from the center of gravity of rider and mount combined—if the two were considered rigidly connected—toward the front wheel axle, and would therefore make the scaling of an obstacle in the road more difficult the higher the rider was perched.

### Momentum Operates Parallel to Ground.

Upon second thought the writer sees clearly that this was wrong. The momentum operates in the direction of travel and, when the machine and rider are approximately rigid, the direction of the thrust is transmitted to the front wheel at the axle in a line parallel with

the road surface. The other force which determines the impact with an obstacle travels, as shown in the previous article, from point of ground contact of rear wheel to front wheel axle and the resultant of the two forces must always be a line slanting upwardly to the front. Wind resistance which is always smaller than the driving power further increases this angle.

The well-known fact that a car-track is scaled with less of a jolt when the speed is increasing than when the rider allows the machine to slack up and pass over it by the momentum, may find its explanation in the greater upward angle of the thrust when a great surplus of power is being applied from the rear wheel tire.

### Road Inequalities Determine Wheel Size.

The best size of front wheels for either smooth or rough roads must apparently be determined according to the average size of inequalities in the road surface. There is evidently no gain in having the average line of thrust representing the force with which the bicycle is driven at any given moment, rise to the front wheel axle at an angle greater than the small angle between the wheel base and a line drawn from the point of ground contact of the front wheel to a point near the top of the obstacle to be scaled. The same reasoning applies of course to any roughness of the road which does not take the shape of distinct obstacles in the path of travel. Ruts, holes, cobblestones, etc., are all to be considered as obstacles, and it seems as if it must be very difficult to decide in favor of any certain size of wheel as being better adapted than any other to scale them and at the same time produce good results on smooth roads.

### More Millions for Automobiles.

Articles of incorporation of the Columbia Automobile Company, with a capital of \$3,000,000, have been filed. The company is authorized to manufacture and operate vehicles propelled by electricity, compressed air and other power. The incorporators are Elliott Mason, Andrew H. Scoble, John M. Scoble, Louis R. Moore, Anthony N. Jesbera, Sherman N. Granger, Francis R. Foraker, Roland B. Harvey, of New York; W. B. Greely, of New Rochelle, N. Y., and E. S. C. Young, of Jersey City. Mr. Mason is the manager of the Pope company's New York branch.

Articles of incorporation have also been filed for the New England Electric Vehicle and Transportation Company, with a capital of \$25,000,000. The company is authorized to manufacture appliances for operating vehicles and to manufacture and operate vehicles themselves. The incorporators are: James E. Hayes, Camden, and Arthur Phillips and Augustus Treadwell, Jr., of New York.

### Labor-Saving Plan a Success.

The success of the Cycle Age's catalogue department has been instantaneous. The manufacturers replied with alacrity to the invitation to forward the necessary literature and, since the announcement of the plan in last week's issue, there has been a steady demand from agents. Those readers who are not already familiar with the details will find particulars on the Cycle Age's page. It is designed to save the agent the trouble of writing a number of letters for catalogues when one will do.

The police department of Mayence, Germany, has adopted a regulation compelling all motocyclists to pass an examination upon their efficiency as automobile operators before being allowed to drive machines through the streets of the city.

## STANDARD CHAINS FOR MOTORS

### FRENCH TOURING CLUB RULES

To Facilitate Repairs and Exchange of Driving Chains Certain Standard Dimensions Are Recommended.

A commission of engineers appointed by the Automobile Touring Club of France has recommended certain standard dimensions for sprocket chains to be used on motor vehicles, with a view to securing interchangeability. The measurements are given according to the metrical system and it has evidently been one of the aims of the commission to devise a system which would help to exclude English and American chains in which the English inch is the basis of measurements and by the same stroke place an obstacle in the way of importing English or American motor vehicles unless their makers conform to the established standards.

In selecting the standard sizes it has been the object of the commission to place as few restrictions upon the freedom of the designer of motor vehicles as possible and to make every allowance for the varying requirements that depend upon the power and weight of various types of vehicles.

To enable owners of vehicles to immediately and without uncertainty replace a broken chain with a new one has been the main consideration.

The features which have been regulated are therefore only: Pitch, interior width between sideplates and the length of blocks or rollers. In chains with single roller blocks the last dimension is equal to the diameter of the roller. In those with double rollers it is considered to be the diameter of the two rollers plus the play between them. The play has been fixed at two millimeters.

It has not been considered necessary to provide for more than one width of chain for each variation in pitch.

### Dimensions of Single Roller Chains.

The table agreed upon for single roller chains is as follows:

Pitch.	Width.	Roller.
25 mm.....	13 mm.....	11 mm
30 mm.....	15 mm.....	13 mm
35 mm.....	20 mm.....	16 mm
40 mm.....	20 mm.....	18 mm
50 mm.....	25 mm.....	22 mm
60 mm.....	30 mm.....	27 mm
75 mm.....	35 mm.....	33 mm

For block chains or double roller chains the dimensions are as follows:

### Block and Double Roller Chains.

Pitch.	Width.	Blocks.
35 mm.....	20 mm.....	24 mm
40 mm.....	20 mm.....	28 mm
45 mm.....	20 mm.....	32 mm
50 mm.....	20 mm.....	36 mm
60 mm.....	25 mm.....	42 mm
70 mm.....	30 mm.....	48 mm
85 mm.....	35 mm.....	60 mm
100 mm.....	40 mm.....	70 mm

For the dimensions exceeding 70 millimeters pitch the commission found no precedent to work upon in the French motor vehicle industry.

### First Italian Motor Vehicle Shown.

The motor vehicle exhibition and road contest at Verona, Italy, held March 1, was well attended. There were thirteen competitors in the prize competition for vehicles of one seat, won by the Conte wagon of French build. Non competitors entered for the prize for the best vehicle with more than one seat, and this prize was won by Giusi, an Italian builder. The 100-mile road race was the first motor vehicle race run in Italy. There were nineteen starters, while eighteen contestants entered the race for motor bicycles and tricycles. The first race was won by Aquilli in 5:03:23 and the other by Ruggati in 4:05:02.



**T**HE rider of a National is always proud of his machine.

It's handsome and well made.

Like a good horse well groomed it adds to its owner's pleasure in simply being "all right."

The real satisfaction in the purchase of a National comes when the buyer finds that his first expenditure is his last. No repair charges or delays later to reduce his cash or spoil his pleasure.

One season on a National and he says—

*A National Rider Never Changes His Mount.*

Better join the procession.

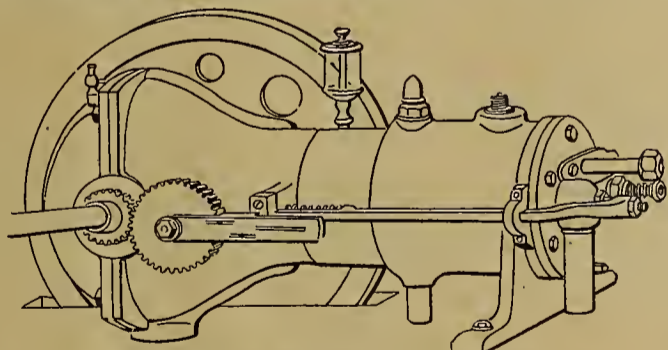
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**National Cycle Manufacturing Co.**  
BAY CITY, MICH.

# GASOLINE MOTORS

**THE ONLY RELIABLE MOTORS FOR HORSELESS VEHICLES.**

OURS can be run at cost of less than 1-2 cent per hour (2 horse power—larger ones same ratio). **SPECIAL MOTORS and TRANSMISSION GEARS** for Carriagemen and others to construct **THEIR OWN VEHICLES.**



**W**E believe this to be the very best Gasoline Motor ever placed on the market for simplicity, durability, more power and less weight than anything ever produced. Especially adapted for Motor Wagons.

Boats, Small Electrical Plants, Elevators, Machine Shops, Optical Works, Printing Presses, Feed Cutters, Carpenter Shops, Lathes, Emery Wheels, Corn Shellers, Laundry Machines, Pumping Water, Ice Cream Freezers, Irrigation Machinery, Ventilating Fans, Hay Presses, Cream Separator, Sewing Machines, Mining Machinery, Sawing Wood, etc., etc. These Motors are manufactured horizontal or upright.

They are absolutely safe, and cannot explode or cause damage, and are always ready for instant service. They require no mechanical experience or licensed engineer.

Our 2-horse-power Motor weighs but 89 pounds, and occupies a space 24x11 inches; runs at high speed and high compression.

Working parts are all tightly enclosed; one sight feed oil cup lubricates all bearings. Our ignition devise is perfect, and all wearing parts are especially strong and substantial.

—WRITE FOR PRICES—

**THE ST. LOUIS GASOLINE MOTOR CO.**

822 CLARK AVE., ST. LOUIS, MO., U. S. A.

# QUICK TRANSIT



The remarkably perfect bearings that are a feature of WAVERLEY BICYCLES at \$40 make the WAVERLEY the easiest of man-driven machines, just as they are the handsomest.

**WAVERLEY \$40 BICYCLES . . .**

Remarkable value! The most remarkable value yet given bicycles and only possible in factories as perfectly equipped as ours. But just as remarkable value is found in our

## ELECTRIC MOTOR CARRIAGES

now ready for the market. These carriages are the result of long and careful testing, are free from untried devices and are handsome in design and rich in appearance. They are causing a sensation and will create for Waverley agents a quick-transit means to profitable success.

**INDIANA BICYCLE CO.**

INDIANAPOLIS, IND.

# THE PASTIME AND SPORT

## DISSENTION IN C. W. A. FOLD

Many Matters to Be Decided at Friday's Annual Meeting—Official Organ the Bugbear.

Montreal, March 27.—The annual meeting of the Canadian Wheelmen's Association, which occurs on Good Friday in Toronto, will probably be a notable one. The affairs of the association have drifted along indifferently for some time and a crisis is at hand. The rock upon which the organization has split is the official organ, The Canadian Wheelman, which for many years has been the subject of much acrimonious discussion. Hal B. Donly, the secretary-treasurer of the C. W. A., tried for several years to publish the Wheelman on a basis that gave him a tremendous amount of work for an inadequate remuneration. Last year the publication of the journal passed into the hands of a joint stock company of cyclists, who have found that there is no money in its publication. On Good Friday the C. W. A. will have to face the fact that the Wheelman company will abandon its present arrangement with the association, and it is certain that no one will step in with any offer which will mean the supplying of a paper such as the Wheelman for less than fifty or sixty cents per member. Yet it is considered by every one familiar with C. W. A. history and affairs that the association membership cannot be kept together without a paper.

### Compulsory Membership Disliked.

Again, a number of large city clubs that have club houses, and to which C. W. A. affiliation is only an incident, feel strongly against the compulsory clause that every member of a club in affiliation must be enrolled as a member of the C. W. A. On this ground the association will this year lose some of its oldest and largest clubs unless a change is brought about, and a few clubs in this city talk strongly of dropping out of the association in any event.

Most serious of all is the fact that the present income of the association falls short of its needs. Outside the few unattached riders, the members pay in over the cost of their Wheelman, 26 cents each, and with this sum it is certain the association work cannot be carried on with sufficient effectiveness to command the support of cyclists in any considerable numbers.

### Plan for Two Departments.

In the meantime Secretary-Treasurer Donly has formulated the following plan and will move for its adoption at the annual meeting: "That the Canadian Wheelmen's Association shall be divided into two departments, to be called respectively the "Sporting Department" and the "Touring Department." Membership in the sporting department shall be confined to amateur bicycle and athletic clubs, which shall pay an affiliation fee of 10 cents per member for clubs under 100, 7½ cents per member for clubs of 100 and under 200, and 5 cents per member for clubs of 200 and over. The department shall control the government of the cycle racing and cycle racers to be licensed, all race meetings to pay sanction fees.

The touring department would issue individual membership certificates which would carry subscriptions to the official

gazette, customs privileges, legal protection, C. W. A. hotel rates, the new road guide, a share in the association's good roads work.

The fee for this would be \$1 per annum, with, perhaps, a small reduction to clubs sending in a number of names. The touring department would be open to unattached wheelmen and members of affiliated clubs. In the annual meetings affiliated clubs would vote their entire membership on questions pertaining to the sporting department and in the touring department one vote for each full privileged member.

### No Contest Over Presidency.

There will be no contest for the presidency, Louis Rubenstein, of Montreal, the present vice-president, having been the only candidate nominated. There will be a hot contest between A. B. Rattray, of Montreal, and J. W. Prescott, of Vancouver, B. C., for the vice-presidency, with the odds largely in favor of Prescott.

There seems to be a foregone conclusion that the city of Guelph will be awarded the Provincial meet to be held on July 1 next—Dominion day. Guelph has one of the finest tracks in the Dominion and a grand stand capable of seating more than 6,000 persons.

### New German Racing Union.

A meeting of track owners was held recently in Berlin at which it was decided to dissolve the German united racing societies and the German track owners' association and to form in its stead the "Union of German Tracks," of which Franz Langenscheidt was elected president. The following race courses were represented: Halensee track of Berlin and the tracks at Bremen, Breslau, Geissen, Hamburg, Einbeck, Leipsic, Mayence, Oldenburg, Neubrandenburg and Weisenfeld. The managers of the tracks of Cologne, Hanover, Darmstadt and Mannheim had written in advance that they would abide by all resolutions adopted. The riders' syndicate was represented by one member.

Resolutions were adopted fixing the membership fees of small tracks at \$2.50 annually, middle sized track at \$5 and large tracks at \$7.50; providing for the publication of a weekly official bulletin; making it obligatory for professional and amateur riders to pay annual licenses before being allowed to ride on affiliated tracks; and agreeing not to pay riders any more appearance money, allowing them only their actual traveling expenses and the prizes won.

### To Promote Outlaw Races in Chicago.

It is the avowed intention of John West to vigorously oppose the L. A. W. racing interests in Chicago. The trainer will be manager of a cycle track to be centrally located in one of the densest residence districts of the city. This will be an N. C. A. track and three Grand circuit dates in addition to a monster meet July 4 will be applied for. Mr. West will establish a training colony for amateurs and will charge the riders nothing for superintending their training. They will have to pay for the rubbers. The training quarters at the track will be the most complete in this country.

The municipal council of Marselles has voted \$500 for the creation of an annual "great prize of Marselles" race meet.

## WILL CANADA RECOGNIZE N. C. A.

Insistence That Johnson-McLeod Match be Run on Montreal Track Points That Way.

Tom Eck blew into Chicago last week and stimulated local interest in racing matters. Incidentally he showed a letter which has much weight on the attitude of the Canadian Wheelmen's Association toward the National Cycling Association. This was a communication from Manager Danderand of the Montreal track regarding the match race between Johnson and McLeod, the Canadian champion, in which the track manager insisted that the race be run on the Montreal track. As Johnson is known by Mr. Danderand to be an "outlaw," the letter can have but one meaning, and that was made plain when Tom Eck said: "The International championships will shortly be declared open to the N. C. A. riders of the United States, you mark my word. When they asked for the Johnson-McLeod match at the International meet they knew that it would mean the throwing down of the bars and the formation of an alliance with the N. C. A. by the C. W. A.

### Want American Stars at International Meet.

"Those people up there are giving their races for the big men and do not count upon a very strong representation of the foreign cracks. They want to see the American sprinters ride and may even decide to give the races for the Americans anyway and allow the foreigners to race if they wish to break away from the I. C. A. Why, when McLeod leaves the C. W. A. control to enter that of the N. C. A. at a time when his own country is to promote such important contests, he must have reasons for believing that the N. C. A. will be recognized, for McLeod, next to our own leading riders, is the most wanted rider at Montreal. When they demand this match race at any price they realize what it means and it is my private opinion that within the next thirty days we shall learn that both the Montreal and Charles River Park tracks have declared for the National Cycling Association."

### Martin Writes of African Tracks.

"Plugger Bill" Martin, writing from Durban, Natal, states that after his defeat of Van Heerden, the South African champion, at Cape Town, he rode at Graff Reinets, where he was beaten owing to the puncturing of his tire in the race. Continuing, he writes:

"I won at Grahamstown, also at King Williamstown, but was beaten at East London, where I got two bad falls. We were given a reception and dinner here by the Amateur club and got the same at Greenstown, where I was the winner. I have had a splendid time and have been well received everywhere. There are very few professionals in this country. There is a pretty ground at Cape Town and a nice three-lap cement track. The stand is a good one and the only one in South Africa. The others are mostly bleachers. The Cape Town track is about the only good one, according to the American standard. The rest are not unlike that famous death trap at Mahanoy City, where we all met our just deserts for riding on such a track. Yet I am riding on as bad here and doing well enough. But then, look where I am. These tracks are

...RECOGNITION OF...

# Orient Quality

Is why ORIENT agents are numerous and constantly increasing.

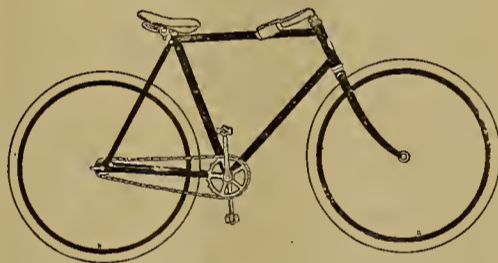
PROGRESSIVE  
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# The Speed Mfg. Co.

BUILDERS FOR THE TRADE  
HIGHEST GRADE JUVENILES

THEY ARE  
THOROUGHBREDS



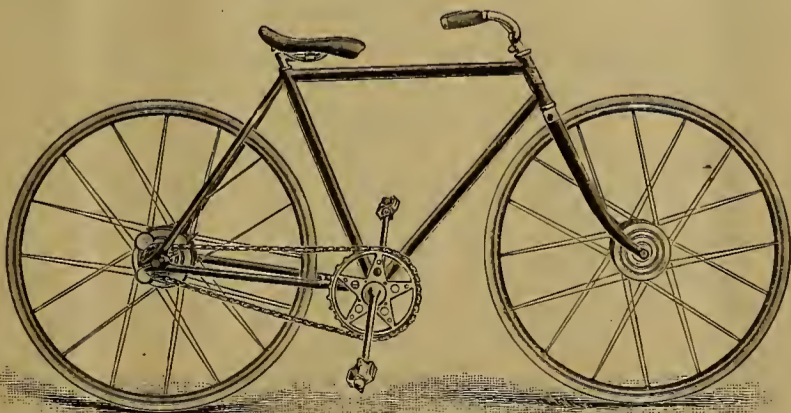
HAVE  
YOU SEEN THEM?

IF NOT, CALL AT OUR SALESROOMS, OR WRITE

**73-75 W. Jackson St., Chicago**

GROUND FLOOR

N. B.—We have bought all the IDE WHEELS made by the F. F. Ide Manufacturing Co., on hand when they wound up their business. No need to describe them. The name tells the story and the price sells the wheels. Ide Agents take notice.



\$50.00—MODEL G—\$50.00.

## Why Not Get The Best?

PNEUMATIC HUB WHEELS  
ARE PUNCTURE-PROOF. . .

MANUFACTURED BY

THE COLLINS PNEUMATIC HUB & WHEEL WORKS,

Sayre, Pa.

a quarter mile, with no banking at all. It is awful hot and has been so all winter—it is winter, you know, with you, but the opposite season here. There are lots of 'rickshaws here. I am riding an American machine for the local agent. I expect to go to India from here."

Martin says nothing of having paid his fine to return to L. A. W. protection, although the letter was written after it was reported he had done so.

#### Plans for Chicago Six-Day Race.

The proposed Chicago six-day race is now scheduled for the second week in May. John West, who is promoting the affair, will clear the track for half an hour at the end of every six hours, forcing the men to rest for two hours out of every twenty-four. There will be two half-hour resting spells, and one of a full hour during the evening, when sprint races will be put on to fill in. The Tattersalls building will be the scene of the race. A ten-lap track will be constructed and everything possible done to help the riders break the San Francisco record. The entry list will include most of the riders from San Francisco, excepting Gimm and Fredericks, and others from New York and Chicago. The Illinois law against continuous racing will be evaded through a flaw in construction of the wording. Lawyers have passed upon the law and say that it will never hold water. The mayor and city police, however, assert that the law will be enforced as it stands, but this does not seem to frighten in the slightest the promoters, who are liberally backed and whose offer of a purse is generous in the extreme.

#### Six-Day Race at Houston.

The professional riders who have been following Jack Prince's Texas circuit are now riding in a two-hour-a-day six-day race at Houston. Prince is managing the race, which is creating no little local enthusiasm. The leaders are Bob Miller, Walthour, Repine and the Kreamers. Several local riders are also competing. The race was started March 21 and ends next Sunday afternoon.

The Lords Cycle Club of Houston kept the Sabbath, March 19, by holding a race meet at the Coliseum track. The races were competed by local amateur riders. The programme included nine events ranging from one-quarter mile to five miles.

#### Seattle Cyclists Help Themselves.

There are more than twenty miles of exclusive bicycle paths in Seattle at the present time, which will be largely increased in 1899. The cost of these paths was about \$6,100, which was raised by voluntary donations and a license fee of one dollar per year on each bicycle, 80 percent of which went to the path fund. Bicycles have increased from 300 in 1896 to nearly 4,000 at the present time. Cycling is an all-the-year-round recreation in Seattle.

#### Prince's Riders at Galveston.

Bicycle races under the management of Jack Prince were held at Galveston, Tex., March 19. The events included a number of races for local riders and two open professional races. The ten-mile professional was a paced event and was won by Bob Walthour in 23:38, with Miller second and Repine third. Bob Miller won the half-mile in 1:08 1-5, Walthour taking second and George Kreamer third place.

The irrepressible John Chinaman is making himself obnoxious as a cyclist in Shanghai. He evidently fancies himself a trick-rider, and is anxious to show off his dexterity regardless of the safety of the general public.

## RACING SITUATION SUMMED UP STRENGTH OF OPPOSING SIDES

Unless Union Riders Weaken the Fight  
Must Be Decided by the Race  
Track Owners.

Discussion is inopportune now as to whether it would not have been better policy for the L. A. W., in view of the troubles the racing game has brought the organization as a whole the past year, to have quietly dropped it at Providence with some such minute on Secretary Bassett's books as this: "Racing had no part in the objects of the L. A. W. as mapped out by its founders, who had only the furtherance of good roads and wheelmen's rights as the goal to be striven for by this union of bicycle riders. The control of racing, a function utterly foreign to the original intent, was assumed out of pure philanthropy to a fatherless sport. The child has proved ungrateful and unruly and has brought only trouble to our once happy family, diverting our attention from the real objects of the League and prejudicing it in the minds of many members and people who would otherwise be staunch and useful friends to it and its legitimate ends. Race control having become a nuisance and ceased to be even an advertising benefit to the League, it is hereby dropped."

#### What Might Have Been.

Probably the League's thankless and unlucky connection with it would soon have been forgotten. Perhaps its racing-made enemies would soon again have become valuable friends. Cycling columns devoted to condemnation of L. A. W. racing domination might soon have been replaced by helpful sermons for good roads and other practical and useful objects of League endeavor and there might have been no need of a national press committee to force such literature into newspaper columns which would be already filled with it through the voluntary contributions of their own writers.

The die, however, was cast at Providence when a majority of the delegates decided that the L. A. W. should endeavor to continue its control, and the fight is on. The outcome of the battle, for which the L. A. W. and the N. C. A. have locked horns, is the absorbing feature of discussion now in the cycle racing world, not only in this country but the world over. The international championships are to be run at Montreal the coming season and there has been, is, and will be to a greater extent than ever before an interchange of visits among the champions of all countries, so cosmopolitan has cycle racing become. Of course there can be no real claim of advantage on either side until there has come the "show down" of meets actually promoted and the relative participation of the racing men therein. Until then there can be but a comparison of organizations and a setting forth of little more than mere claims and promises.

#### The Two Sides of the Matter.

A comparison of these rival claimants for racing control is even now interesting and the claims and promises of each are worthy of critical consideration by the followers of the game, be they promoters, racing men or spectators. The L. A. W. seeks to govern on the ground that it always has governed and so has a title through long possession. Its theory is that the best interests of the sport demand that it should be controlled by those not financially interested in it and it needs the backing of a disinterested organization of great numerical strength and undoubted reputation with the gen-

eral public. The N. C. A. sets up as its *raison d'être* first and foremost a charge of gross mismanagement of racing by the L. A. W., either through the ignorance or wrong motives of officials accused of having been appointed largely as rivals for political services or as a punishment to political opponents. In opposition to this alleged mismanagement by appointees alleged to be purely political it sets up what it regards as the business-like proposition that racing should be governed by those directly interested in it, either as track owners, individual promoters, race promoting clubs or racing men.

#### Relative Strength of Opponents.

Now, what of the prospects? The L. A. W. has behind it the prestige of a great body, the experience and machinery of long and exclusive control, and the loyalty of thousands of racing amateurs and members—a no mean advantage. It is a very natural outcome of the wish that is father of the thought that the L. A. W. should claim that all tracks and bodies that have not sought membership or declared allegiance to the N. C. A. are to be counted upon as still loyal to the L. A. W. It may be that they are, but it must be remembered that owners of tracks and promoters of races may be very prudently waiting to see which way the cat is going to jump before naming the side of the fence on which they will be found the coming season. It is said that Chairman Gerlach claims a larger number of applications for National circuit and other sanctions than ever before. On the other hand, the opposition sets up definite claims by which a conclusion by exclusion can be arrived at.

#### N. C. A. Strongest in New York City.

The nucleus of the N. C. A. and its greatest strength lie in the membership of the American Racing Cyclists' Union, embracing all the leading professionals in the country save one, Major Taylor. It is in the metropolitan district that the N. C. A. shows its greatest strength so far as the undisputed allegiance of tracks, amateur clubs and riders goes. All the four tracks—Manhattan Beach, Berkeley Oval, Ambrose Park and Vailsburg—are numbered among the organizers and members of the N. C. A. and all are backed up by ample capital and stand ready to furnish purses and prizes sufficient in number and value to maintain high class professional and amateur racing in the district throughout the season. Most of the amateur riders in and around New York have already ridden under N. C. A. colors and the majority of the amateur racing clubs were represented at a meeting to frame the amateur rule. The new track at Washington and the cycledrome at Baltimore are also members. So is the track at St. Louis. Affiliation with the California and Southern racing associations has been effected. Walt W. Wilson, the member of the board of control of District B (New York and New Jersey), is a stockholder in and has exclusive control of the only track at Buffalo. The Inter-State Fair track at Trenton, on which one of the greatest meets of the year is given, was the first to break away from the L. A. W. and wring from Chairman Mott mitigation of the fines of the outlaws and pay them itself with notice of suit for recovery. Richard Kelsey, the former New England handicapper, is in charge there now for the N. C. A. and gives assurance of the allegiance of the New Haven, Hartford, Bridgeport, Waterbury and other New England tracks. The Fountain Ferry track management at Louisville has notified the "outlaws" that they need not go to Cape Girardeau to train. This leaves Chicago, Philadelphia and Boston as the fighting ground. The L. A. W.



claims all three and the N. C. A. prefers to say nothing as to them in the absence of definite promises and uncompleted negotiations.

#### All Depends on Riders.

But after all the key of the situation lies in the hands of the best professional riders. If they continue in allegiance with the N. C. A., the new body will control the cream of the big racing events. If the new body fails to put up the promised purses or shows inability to hold promoters to their promises, former alleged wrongs at the hands of the L. A. W. will soon be forgotten.

The racing union in the United States leaves the Canadians in an embarrassing predicament in their promotion of the international championships at Montreal next August. As a member of the I. C. A. the C. W. A. owes its allegiance to the L. A. W., a fellow-member. An international meet, however, is a business proposition and so expensive a one that racing attractions and gate receipts must of necessity cut a much larger figure than mere sentimental loyalty. The C. W. A. officials are reported to believe that they can run a successful championship meet without the presence of the American cracks. The track owners, who have to bear the larger part of the financial burden, are said to fear otherwise. Their fear is far from groundless. A championship meet on this side of the water with the American cracks absent would furnish very little sentimental inducement for foreign top-notchers to come over. It is hard enough to get them here even by paying their expenses and offering them big purses. It is doubtful whether the public in the absence of the Yankees would give sufficient support to pay the monetary inducements that would have to be offered. Such a situation is much to be regretted and unless the L. A. W. proves an out-and-out winner long before then there seems to be only one way out of it without abandoning the meet altogether and that is for the I. C. A. to elect the N. C. A. to exclusive membership as representing this country or to a joint membership with the L. A. W. if the constitution permits. But the N. C. A. might demand the former and refuse the latter. The complete victory of the L. A. W. and the exclusive recognition of the N. C. A. seem, therefore, to be the horns of the Canadian dilemma.

#### Trade Men Encourage Path Project.

Washington, March 27.—The local end of the project to build a cycle path between Washington and Baltimore took definite shape Friday evening in the formation of the Washington Cycle Path Association, which will co-operate with similar associations in Baltimore and in the several cities along the proposed route in the building of a forty-mile path. Permanent officers were elected for the ensuing year. A delegation from the Baltimore association was present and took an active part in the proceedings. The local association starts out with a large membership and with generous encouragement of the project. The Business Men's Association and the Washington Board of Trade have promised to lend their aid. The proposed path will be of great benefit to the cycle trade. Every movement calculated to improve the condition of the roads tends to increase the use of the bicycle, and with this idea in view the trade will get in line and give substantial encouragement to the enterprise.

#### Death of Frank Pearson.

Frank Pearson, the speedy Chicago amateur rider, accidentally shot and killed himself while hunting near his suburban

home at River Forest, March 23. His six-year-old son was with him at the time and it was through the child that the accident first became known. Pearson was one of the organizers of the Bankers' Cycling Club and at one time was its president. He was well known in local cycling circles, held the Illinois mile record and was regarded as one of the fastest amateurs in the city.

#### Suspended Riders Win in France.

A big meeting was run at Nice, France, March 12, in which Jacquelin and Deschamps, who had been disqualified for one month the week before, competed against Verheyen, the German, and many others. Jacquelin won most of the events, capturing the 2,000-meter scratch race from Verheyen by twelve lengths, and winning the pursuit race with Deschamps after going eight laps.

#### NEWS IN BRIEF.

L. A. W. press agents have announced that the League officials have restored to good standing under L. A. W. colors outlaws McDuffee, Nat Butler and Waller.

A bill has been introduced into the New York legislature providing that a cyclist who rides no faster than six miles an hour shall not be required to carry a lighted lantern, or if he is riding faster, he may escape the penalty by ringing his bell at every 30 feet.

Tom Eck is again anxious to match J. S. Johnson against running horses and has accordingly issued a general challenge through the daily press. The challenge is for mile races in heats and provides that Johnson be given the first eight feet around the pole and be allowed such pacing as is deemed best.

W. J. Stafford, the Bostonian, who set out on January 1 to out-Edward Edwards by riding one century per day during the year, has abandoned his task. He has completed thirty odd centuries, when grip caught him. He fought it for several days, but was forced to surrender after his fortieth hundred.

Miller's latest decision on future plans is to go to France. He has cabled to Paris that he is ready for an engagement of several weeks on foreign tracks and that he will sail some time in April so that he can ride in the Roubaix event in May. He also expects to enter twenty-four-hour paced races while in France.

The Wisconsin bicycle baggage bill is not receiving a very hearty welcome from the state representatives now at Madison, it having been tabled several times. Chief Consul Van Valkenburgh has been doing all in his power to get the bill through the legislature, but does not express himself as very confident of success.

J. S. Johnson has finished skating now and will soon begin training for cycle racing, at what track has not been determined. It may be Cincinnati, as Johnson expects to race there against Harry Gibson at a middle distance, probably fifteen miles. Johnson has shown improvement of form this winter and his skating has prepared him for a hard season on the path.

Floyd McFarland has decided to accept the challenge of Harry Elkes and will ride the latter a match at any distance provided the purse is large enough to insure the winner \$1,000 after the pacemakers have been paid. McFarland has also received a challenge from McDuffee which he will treat in exactly the same manner as that of Elkes. In no case will he consent to a division of the purse.

The touring board of the League of South Australian Wheelmen has arranged a monster camp to be held in a seaside locality during Easter time. The encampment is for the benefit of that faction of the League whose interests are not concentrated on the track. All of the cycling clubs in the League have been requested to send delegations and the proposed plan of laying out the camp is to set aside a large tent for each club.

The report had been spread by an overzealous press agent of the L. A. W. that Fountain Ferry track would be closed to the outlaws, but when questioned on the subject, Tony Landenwich, manager, replied: "They can train on Fountain Ferry track as much as they like." Consequently Bald, Cooper, Kiser, McFarland, Stevens, Kimble, Gardiner, Fisher, Johnson, McLeod, Elkes,

Ziegler, Gibson, Downing, Cotter, Munroe and others of the band of "outlaws" will be found at their work early in April. It is probable that about the middle of May the entire party will move to Berkeley Oval, there to take up their work again until they leave New York city on the state circuit, which starts at Ambrose park May 20, has a meet at Newark May 21 and at Berkeley Oval May 30.

Large purses will be common at the great circuit meets the coming season, track owners having reached the decision that nothing else will draw the best riders and attract large gates. It is promised that no less than seven meets during the opening weeks of the season will have handicap races for \$1,000 purses. One of the first races announced with a grand prize for first is the \$500 handicap which opens the season at Manhattan Beach.

The wheelmen of Cincinnati have petitioned the Board of City Affairs to abolish the present system of sprinkling asphalt streets. The cyclists claim that in addition to being a nuisance to cyclists, the heavy sprinkling is very injurious to the asphalt. The board received the petition favorably and turned the matter over to the street cleaning committee, which will doubtless experiment on one street at least by cleaning the asphalt without sprinkling.

Bald, who arrived in Buffalo from the Pacific coast last Saturday, said to the Cycle Age correspondent: "I will stay in Buffalo for a week and will then go to Fountain Ferry track, where I will get into condition. You can state positively that I will race in Europe this year, and will start for the foreign lands about the middle of May. I will do some racing here prior to leaving, so as to fit myself to meet our cousins across the sea. I have assurances of good support in Europe, but will confine myself entirely to match races."

Edouard Taylore, the French middle distance cyclist, will return to the United States next spring. He has done no racing since his arrival in Europe, an attack of malaria having laid him up since he reached home. He is now recuperating in England, where, unlike other foreign racing men who have returned from a visit to this country, he is painting glowing pictures of the money to be made here and the good treatment he received while in the United States, laying special stress on the fact that he received every cent he earned or won while here.

McDuffee will follow the action of Charles River Park track, where he expects to be stationed this season. Should the track management remain loyal to the L. A. W., then McDuffee will be the first white man to pay his fine and return to the L. A. W. Tom Linton will race under the L. A. W. when he comes, and it is also rumored that Edouard Taylore will do the same, he having applied for reinstatement in France. McDuffee has asked that his fine be remitted, or at least be reduced, and believes that this will be done to get him to return to the fold. He is in Boston now.

Tom Eck has gone to Hot Springs, Mo., with John S. Johnson, Angus McLeod and Ben Munroe. The latter is from Memphis and is looked upon by Eck as a coming man. Munroe is a stocky little fellow, but nervous and full of life. In build he is not unlike Stillman G. Whittaker, according to Eck. Last fall Munroe made a name for himself when he defeated Bald in a heat of the five-mile national championship at St. Louis. He was not given the decision, but competent judges said that victory was rightfully his. Munroe shot along from the rear and fairly out-sprinted Bald. He will follow the New York state and Grand circuits of the N. C. A. During the past winter Eck had him in the north on skates, a new experience for a Memphis boy, and the white-haired veteran says that his charge has developed most remarkably and is in prime condition to do wonders this season in the fastest company.

That Toga and Woodside Park will remain loyal to the League is practically assured. As to Willow Grove, it is hardly probable that the A. R. C. U. can guarantee a sufficient number of meets there during the year to warrant the managers of that record-breaking track destroying all chances of securing their shares of the local club meets by allowing races to be run there under any but League sanction, for every Philadelphia race-promoting club will stand by the League. A trolley line has just been laid to the gates of Point Breeze track, and it is hardly likely that the owners of the track will give up the first reasonable chance of making money. The A. R. C. U. cannot offer local track-owners one-quarter the number of money-making opportunities the League can give, and sentiment cuts no ice with the capitalists, whose object is the pursuit and capture of the nimble quarter-dollars of the race-going public.

## AWHEEL ON THE LEVEE

### Interesting Sights Along the Artificial Banks of the Mississippi in Flood Time

Cyclists who visit New Orleans hear a great deal about the crevasses of the Mississippi. The writer once made a 50-mile excursion a wheel to see one of these devastating breaks in the river's artificial banks. At the outset of the journey the ground traveled over was soil that had been reclaimed from the Father of Waters about eighty years ago and was moist and sandy alluvium, which effectually clogged the front forks, but the sun soon dried the upper crust of the road into a fine dust and made cycling a little more enjoyable.

The levee tops proved better, for they are used as foot paths by the country folk and are well trodden and smooth except in places which have been newly raised.

Occasionally a ride upon the levee was ventured in secluded spots and enjoyed until a guard ordered a halt or a gang of workmen, propping and strengthening weak places, compelled a return to the sandy stretch.

#### Scene At a Crevasse.

One of the illustrations on this page shows an interruption of the kind just mentioned. The workmen are busily engaged in strengthening the levee by the best means known to engineering science in the south. These breaks in the levee are, as is well known, exceedingly dangerous when they get beyond control. The roar of this crevasse was audible to the writer, on the special occasion when he undertook a visit to the scene, for the

of some other tree which had been torn down, and send the water splashing and roaring in every direction. It was a fascinating display of the marvelous force of a pent-up body of water turned suddenly loose.

#### State Road Appropriation Increased.

The New Jersey house of representatives passed Senator Johnson's bill increasing the annual appropriation for

should not become operative until an appropriation of \$1,000,000 for highway improvement had been made by the state. The amendments will, if passed by the legislature, remove this restrictive clause, and the bill will at once become operative. The Hamilton bill provides for a radical change in the system of road building and inspection throughout the entire state.

#### THE ROADS OF HONOLULU

Built on the Principles of McAdam and Topped with Lava—Are Practically Perfect.

Years of travel have made the streets and roadways in and around Honolulu almost as smooth as floors, and the highways of our new island possession are a credit to the whole nation; in truth, they can hardly be excelled anywhere, according to M. Vance Prather of Toledo, who



BRACING A WEAK LEVEE.

recently returned from the Hawaiian islands.

The process of road making in Honolulu is interesting, though it is now seldom carried on except in the outlying districts where new territory is being opened to traffic.

First of all, blue stone, which comes from the quarries in abundance, is broken to the size of walnuts and liberally spread over the thoroughfare from curb to curb. Then, with a ponderous machine propelled by steam, this is rolled until so smooth that save for the sloping from center to sides, a spirit level could hardly detect an unevenness. When reduced to a compact state, this foundation is covered with enough gravel to conceal it, and this, too, is rolled by the same weighty engine.

Finally, a reddish-brown coat of lava dust is spread over the surface and when rolled it is almost as hard as asphalt, and is pronounced to be far superior to it for practical worth and wearing qualities. There is much heavy traffic in Honolulu, and although showers are frequent, they do not seem to have any damaging effect on the roadways, which defy both traffic and weather and are only baked the harder by the sun's scorching glare.

It is due to this most excellent system of highways that the rubber tired equipment has found such popular favor and gained such a firm foothold in the island capital.



LEVEE FRONT AT JACKSON BARRACKS

distance of almost a mile. The engineers had given up all hopes of closing it and had done all they could by building a breastwork around each broken end, so that the water flowed through with all its force in the center of the opening and the remaining levee was protected from being further eaten away.

#### Fascination of the Waters.

The scene was appalling. The water was flowing through rapidly and its surface was smooth except when the trunk of a big tree would drift near and be sucked into the opening as though it were a straw, lodge for a while against the root

stone roads to \$150,000, on March 9. The governor, it is said, will sign the measure.

#### Making Good Roads Bill Operative.

The bill introduced into the state legislature by the highway improvement committee of the Pennsylvania division, L. A. W., amending (so as to make operative) the Hamilton road bill, which was passed at the last session, was favorably reported on March 2 from the committees of both houses to which it had been referred. This bill was pushed through the last legislature, but on its final reading was amended with a proviso that it

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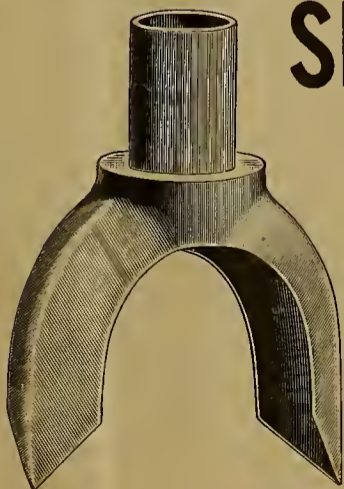
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## RETAIL MISCELLANY

## General Information Concerning Cycle Agents and Repairmen Throughout the Country

## Alabama.

Henry Brown and George Houston have bought a controlling interest in the bicycle establishment of the Marvel City Cycle Co. of Bessemer and will continue business at the same stand. The first bicycle ever built in Bessemer has been placed on exhibition at their store.

## Arizona.

Gandolfo & Sanguinetti of Yuma have dissolved partnership. Bicycles were handled as a side line.

## California.

The San Diego Cycle & Arms Co. has on exhibition a mounted giant white pelican, weighing 42 pounds and measuring nearly 11 feet from tip to tip, which was killed in southern California.

## Canada.

M. J. Baker has opened a bicycle livery in the Grand Central hotel block, St. Thomas, Ont. The place is nicely fitted up and Mr. Baker has 55 new Brantford machines in stock, 20 of which are for hire. He also has a full line of sundries, tires, etc.

F. H. McLean of Winnipeg will open a bicycle livery in the Stobart block early in April. Mr. McLean will have about twenty Brantford machines on hand.

William Whittaker is arranging to open up his bicycle livery in Sarnia again for the coming season.

## Connecticut.

George H. Stevens is about to open a first-class bicycle store and repair shop in New Canaan. He states that he desires prices and discounts on bicycles and specialties from manufacturers.

A. D. Elster of Meriden has opened a new bicycle store at 123 Hanover street, where he intends to carry on business in the latest and most improved manner of repairing machines known to that profession. Mr. Elster is agent of the White bicycle.

## Illinois.

George S. Webb, who has for many years conducted a bicycle store and repair shop on "the island" at Aurora, has rented the same to Arthur King of Chicago, who will carry on the business. The store will be opened about April 1.

The building occupied by L. F. Hyneman as a bicycle store at Lexington has burned. The building was uninsured.

Hynes' bicycle store at Rock Island has been brightened and touched up in a manner that makes it more inviting than ever. A large assortment of models is being shown. The usual line of sundries will be handled and repairing will be looked after in a thorough manner.

Roy H. Jarrett & Co. have reopened their bicycle house at 721 Maine street, Quincy, and have on exhibition the best line of machines in the city.

George C. Heyde has bought out his brother's interest in the firm of Heyde & Bro., Marlon, and will continue the business in his own name.

Gibler Bros. of Harvey have dissolved partnership. They handled bicycles in connection with furniture, etc.

## Indiana.

Atz & Stuckey is the name of a new business firm in Decatur. They will carry a stock of harness, buggies and bicycles. Both men are hustlers in their line of business.

## Iowa.

The Cedar Rapids Cyclery, which was announced in these columns as having filed incorporation papers with the secretary of state in Des Moines, is located at 122 South Third street, Cedar Rapids. They are wholesale and retail dealers in Tribune, Deere, Eagle and Crawford bicycles and sundries. They repair, rent and store machines.

The bicycle store of Jackson Bros., Cedar Rapids, was entered by robbers and about \$75 in money and bicycle sundries and tools taken.

Stevens & Myers have bought out the business of Ira L. Thomas & Co., bicycles, musical instruments and sewing machines, in Oskaloosa. Increased capital and energy will be put into the business, making the establishment one of the foremost in its line in southern Iowa.

Clifford Feese will start a bicycle repair shop in Villisca next month. He will be

prepared to do good work, as he has had a great deal of experience in this line.

Korns & Faulks succeed Moses Korns in the hardware and bicycle business in Hartwick.

## Kansas.

Frank York of Salina intends to start his son in the bicycle business.

Lynch & Hart will succeed W. P. Lynch, a dealer in agricultural implements and bicycles in Wetmore.

## Kentucky.

The hardware store of G. Dreher & Son at Louisville has been damaged by fire. The loss will amount to about \$800.

## Louisiana.

Dalstrom Bros., bicycle dealers of Amite City, have opened a branch house in Roseland, where all kinds of bicycle work will be done. Cycle sundries of all descriptions will be on hand for sale.

## Maine.

Hall & Knight of Lewiston will open a bicycle shop and store on Lisbon street April 1.

## Massachusetts.

F. A. Hentz, formerly manager of the Boyleston Cycle Co., has joined the Boston forces of H. A. Lozier & Co. at their store at 396 Boylston street. Mr. Hentz is an old timer in the cycle trade. He was with the Pope Mfg. Co. for nearly a dozen years and later represented the Dayton Wheel Co. at Bar Harbor, Me.

W. J. Knowlton has rented a store on Main street, Palmer, and will engage in the bicycle business.

F. E. Wing, a bicycle dealer in Salem, has had wide experience in the bicycle business. In 1892 he had charge of the Ranny Cycle Co. of Akron, O., since which time he has been identified with the following firms: Hickory Wheel Co., John P. Lovell Arms Co., American Waltham Mfg. Co., Dame Stoddard & Kendall. He is now in business for himself at 74 Washington street.

Richard O'Brien has bought E. F. Dakin's bicycle repairing outfit and will open a repair shop in the old bicycle club rooms on Elm street, Southbridge. Mr. O'Brien will be assisted by E. D. Brown and for the present will conduct the business during the evenings.

E. D. Tufts of Palmer is making improvements in the arrangement of his bicycle store. His repair shop will be in the basement, his business office in the rear room on the ground floor, and the salesroom in front. A bookkeeper will be employed.

## Michigan.

Ed. Atyeo of Belleville has opened a bicycle store.

Some of the bicycle dealers of Kalamazoo have made complaint to the aldermen that a member of the fire department is conducting a bicycle agency on a small scale. They object on the ground that he is getting a regular salary from the city, besides being at no expense for store room for his machines, and say that it is hard enough for them to pay taxes and rent without such competition.

Hunter, Glenn & Hunter, a dry goods firm in Detroit, have dissolved partnership. They handled Iver Johnson and Erie bicycles.

Cyrus Reimer of Owosso has sold out. He handled hardware and bicycles.

Twogood & Bristol of Durand have sold their bicycle and general repair shop business to H. M. Cowley.

## Minnesota.

A. B. Fullerton of Livermore, Ia., an expert tinner and bicycle repairer, has accepted a position with F. B. Volz, Janesville, for the coming summer.

Wieland & Wade, the West Duluth merchants, have opened a bicycle store at 14 Lyceum building, where they will sell Crescent bicycles.

P. Martinson of Detroit City has put in a general bicycle repair shop and is ready for all kinds of work in that line.

Frank Goettsche has admitted F. W. Frank as a partner in his hardware and bicycle business at Sleepy Eye.

W. A. Sorg and H. H. Rutter of Winona have formed a partnership as the Gate City Plating & Cycle Co.

## Missouri.

Ostemeyer & Hill succeed Slack & Ostermeyer in business at Calhoun. Bicycles were handled as a side line.

## Nebraska.

F. C. Lyon has gone out of business at Wausa. Furniture and bicycles were the goods handled.

## New Jersey.

Walter H. Merritt has opened a bicycle repair shop at Middletown in connection with his wheelwright business.

The Quick Cycle Co. of Paterson is moving its repair shop to the Voorhies building on Washington street in order to allow more room for the display of bicycles in their store on Broadway.

The Ridgewood Cycle Co. has rented a store in Ridgewood and expect to open about April 1.

## New Mexico.

J. R. Hudson, a jeweler at Santa Fe, is dead. He dealt in bicycles.

## New York.

The business of Spencer, Lord & Co. of Dunkirk has been extended and they now sell bicycles both at wholesale and retail. Their business location has also been changed. The repair shop has been fitted up with all the conveniences necessary for the display and repairing of bicycles.

Alex. Smyth, formerly with the Erwin Mfg. Co., has gone into the bicycle building and repairing business at 74 Broadway, Rensselaer. He handles cycle supplies of all kinds.

Samuel M. Lawrence has sold out his hardware business at Cato. He had bicycles in stock.

Frank M. Mahan has opened a bicycle repair shop on Steuben street, Bath.

Glenn Curtiss' bicycle palace in Hammondsport is now nearly completed.

Strong Bros., Owego, are putting a new front on their store, which will enable them to make a better display of their bicycles.

C. H. Turner of Binghamton, at one time editor and one of the proprietors of the Herald, has purchased the bicycle business of H. E. Tiffany, 148 State street. Mr. Turner is now renovating and decorating the store and expects to open for business with a complete line of cycles and sundries about April 1.

Stephen Houk and J. E. Terwilliger will open a bicycle store at 83 North Avenue, Owego.

## North Dakota.

George D. Brown of Fargo is having the big store room of his bicycle house remodeled and thereby secures a much better display.

S. D. Bostwick of Bathgate has just purchased the repair shop outfit of Fiedler & Perrault and will enamel and repair machines on short notice.

## Ohio.

Grabler & Aslakson of Mansfield, who have been doing bicycle repair work in connection with the manufacture of plumbers' supplies, are preparing to locate in Cleveland, where they have purchased a brass foundry.

Mr. Eggerdinger of New London is fitting up a shop where he will sell bicycles, sundries, etc.

A quantity of rubber caught fire from a gasoline stove and ignited the interior walls of the bicycle repair room of Burgert & Banister's hardware store, Gallon. The damage was trifling.

## Oregon.

Dilly, "the fixer," of Corvallis, has enlarged his quarters and added a great quantity of bicycle supplies to his stock.

## Pennsylvania.

Richards & Nesmith, agents for Columbia bicycles at Warren, have rented the ground floor of the Y. M. C. A. building and will convert the same into a bicycle store.

M. D. Reynolds will occupy the addition to Warren Perry's building in Edinboro as a bicycle store.

Edward E. Hertzels has opened a bicycle repair and machine shop in the Mill building, Liberty street, Warren. The shop is well equipped for doing first-class work. In addition to repairing and light machinery work, a full and complete line of bicycle sundries will be kept on hand.

Alva Stewart has opened his bicycle shop in Ridley Park.

C. A. Conaughey has rented a business room in Ligonier and will run a bicycle repair shop the coming summer. He expects to have some fine high-grade bicycles for sale.

The Tivy Bicycle Mfg. Co. of Williamsport has just finished enlarging one of the best nickeling plants in the state. The company is well and favorably known, its machine has a famous reputation, and, together with the immense trade in repair work, is giving

the firm a leading place in the cycling business.

The Drake Cycle & Electric Co. of Huntingdon has disposed of its repair department to R. O. Johnson, a good mechanic, who has been in the employ of the company for two years. He is equipped to do all kinds of light mechanical work.

**South Dakota.**

The Dell Rapids Implement Co. of Dell Rapids will handle a fine line of bicycles in connection with its farm implement business. The company has engaged A. C. Anderson of Omaha, an expert bicycle maker and repairer, to take charge of the bicycle department, and will fit up a shop for him equipped with tools and extras for all kinds of repairing. Everything in the bicycle line will be supplied.

**Tennessee.**

The Biddle Cycle Co., Mabry street, Knoxville, has begun the manufacture of bicycles to supply the spring and summer demand. The firm desires to dispose of all its product to the retail trade direct. The company has agencies throughout the state as well as in other cities in other states.

**Utah.**

Bolitho & Lewis, hardware dealers in Richfield, have dissolved.

**Washington.**

O. R. Haight of Ritzville has sold out his harness and bicycle business.

**West Virginia.**

Harry Rogers has opened a bicycle repair shop in the Opera block, Bridgeport. He expects to handle all kinds of supplies.

**Wisconsin.**

E. T. Wiggins, foreman of the Warner cycle repair shops, had a close call. An emery wheel which he was operating burst while running at a high rate of speed. One piece of the wheel struck the floor between his feet and another the ceiling above him. He escaped uninjured.

The bicycle repair shop of C. F. Dunbar & Co. of Wausau has been opened. All work is warranted. S. T. Durant, who has been secured to do the work, comes very highly recommended as a first-class mechanic.

W. E. Miller, a practical, all-around bicycle man, has opened a bicycle store and repair shop at 54 North Franklin street, Janes-

ville. Mr. Miller will handle several grades of bicycles and a complete line of sundries.

Mr. Sorenson has placed an electric light plant in his bicycle factory at Ripon.

The Hoeffler Mfg. Co. has opened a bicycle store in the Atwell building, corner of Main street and Strongs avenue, Stevens Point.

Frank Trist of Racine has made preparations to do first-class enamelling and nickel plating and will make a specialty of renting bicycles.

**ROTARY CRANKS OR LEVERS**

**Reciprocating Levers Disagree With Rapidity of Foot Motion—Pronounced Antagonism.**

W. H. Bennett, Auburn, N. Y., has constructed the bicycle shown in the accompanying illustration and desires to sell



the patent. He states that he has a cable as large as a lead pencil, tested to stand 1,200 lbs. pressure without stretching and unaffected by moisture. It is made of fibrous material. The inventor has one bicycle built upon this plan in working order.

In reply to the inventor's inquiry in

regard to the commercial chances for the machine, the following may be said:

There has never been any great mechanical difficulties in constructing cable-operated bicycles on the plan shown in the photograph, except to obtain a cable with the necessary properties. Such a cable may be worth more separately than in connection with the mechanism—easier to introduce and sell.

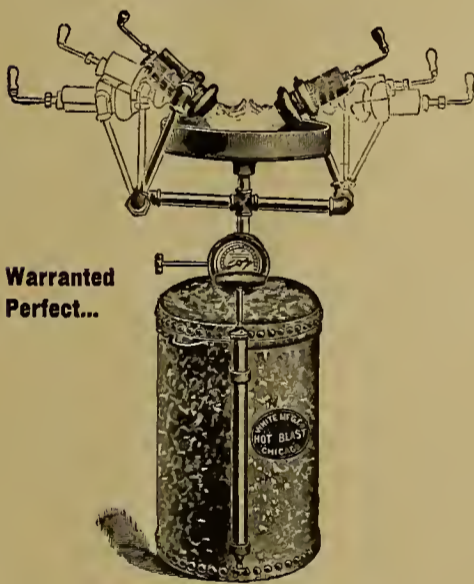
Looked upon as a purely mechanical contrivance, it is generally admitted that a bicycle with lever propulsion instead of rotary cranks shows a higher efficiency per pound of pressure applied to the pedals, but the trade and the public stubbornly insist that the rotary motion is in better accord with the nature of man as a source of power. There is something in the complete stop of foot travel after each stroke which disagrees with man's physical nature. It might be different if a cyclist were always taxed to the utmost of his capacity for power exertion when cycling. But he is not. His capacity for rapidity of motion is what is taxed most heavily. For merchandise carriers and similar purposes the cable and lever system may be preferable, but hardly for a bicycle.

The cable system must ordinarily be supplemented by a brake, as it operates only one way. And to apply a brake on all occasions when the cyclist on a chain-driven bicycle would slow up by back-pedaling or merely allowing his feet to be dragged around by the pedals, is at best awkward, especially in large cities or where street traffic is congested.

**Woodruff & Little Bankrupt.**

George E. Woodruff and George L. Little, doing business as the Woodruff & Little Cycle Company, of Towanda, Pa., have filed petition in bankruptcy in the United States District Court. The liabilities are \$17,307, with no assets. Woodruff gives his liabilities as \$20,523 and no assets, and the liabilities of Little are \$11,480, with \$100 assets.

The landlady of a London hotel recently refused admission to the house to a lady cyclist clad in a rational costume. The Cyclists' Touring Club has taken the matter up and intends to prosecute the landlady.



Warranted Perfect...

**Universal Brazer...**

"HOT BLAST" TRADE MARK.

KEROSENE OIL or GASOLINE.

Powerful Heat. Instant Brazing.

Write for new catalogue.

WHITE MFG. CO.,

158 Indiana Street, CHICAGO.

H. ROMEYN SMITH Eastern Mgr.

**TO FLORIDA**

THE

**BIG FOUR ROUTE**

CHOICE OF ROUTES, VIA

Cincinnati or Louisville,  
Chattanooga or Asheville.

J. C. TUCKER, G. N. A.,  
234 Clark Street,  
CHICAGO.

E. O. MC CORMICK,  
Passenger Traffic Mgr., CINCINNATI, O.

W. J. LYNCH,  
Asst. Gen. Passenger and Ticket Agt.

**AN EXTRACT**

"Of all the bicycles made and sent from the Chicago market the greatest bargains are those offered by the Chicago Tube Co. Their 28-inch, 30-inch and 3-crown wheels with Fauber one-piece hangers beat them all. They are up to date in design and equipment and are exceedingly highly finished, and their agents control the market with them in their respective territories."

IN ADDITION to bicycles referred to in above extract from a letter by a prominent dealer we make and sell frame sets and frames and also all material to build or to repair or to equip a bicycle, and have, for the past six years, a constantly increasing business, and are in a position to give the best for the least money. Particulars, catalogue, etc., to any address.

**CHICAGO TUBE CO.**

217 East Washington St.,

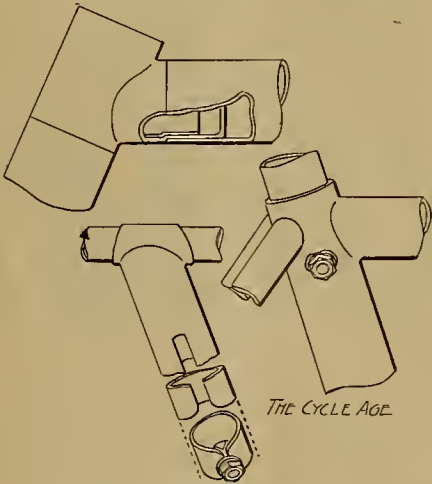
CHICAGO, ILLS.

# INFORMATION FOR BUYERS

## NEW WRINKLES IN THOMPSON'S FITTINGS.

Some trouble was experienced last year with bicycles built with sheet metal fittings, owing to the unscientific formation of the lugs on the connections, which in pressing were stretched and made too weak at the junction of the lug with the shell. To guard against all possibility of such a fault in the widely known Thompson's fittings, the Geo. L. Thompson Mfg. Co., 6128 La Salle street, Chicago, has given especial study to this point, with the result that by the method of pressing now in use at this big plant every lug is in effect reinforced at these points to allow more than the usual margin of safety. The bracket shell, for instance, is of 13-gauge metal and in pressing the lugs outward this same thickness is retained at the point of juncture and does not diminish until the shoulder on the lug is approached. From that point the thickness decreases until at the end of the lug the gauge is only 17 or 18. By this method of production all danger of weakness in the lugs is obviated and a thoroughly strong, safe bracket provided.

The head lugs have been similarly strengthened and the angle of the shoulder, against which the tube end abuts, is not so abrupt as in some fittings of last year, consequently there is much less danger of disaster in manufacture than was the case with the old pattern joints. Instead of the usual right angle, the shoulder has a wide oblique angle and the tube end is belled to fit snugly against same, and at the same time to form a flange, which more readily conveys the spelter to the joint in brazing and is afterwards filed off. An internal ferrule is provided which is placed so as to lend strength to the joint at its weakest point, the shoulder. In this instance the ferrule is a piece of tube, fitted and pressed when the shoulder is made. In this way it forms prac-



tically a part of the lug, even before brazing is accomplished, and necessitates little or no attention in building.

The head is swaged down to fit inside each of the head connections and extends to the extreme end of each, reinforcing the lug where it starts from the head by the addition of brass gathered in brazing. Where dip brazing is in vogue, and Thompson fittings are used, care should be taken to punch holes in the ends of each lug so as to allow the free circulation of the spelter.

The Thompson company has equipped its plant for the manufacture of fittings for both flush and outside joints and the factory is now running full time. While the demand is for the flush connections in the majority of cases and the company has taken the greatest care to make them perfectly safe and accurate, it believes that the outside joints are superior.

The company has also provided fittings for thirty-inch wheels of the three-arch-crown pattern, although it is held that it is a fad which will soon go the way of others. There is a demand for the fittings, however, and the Thompson company has taken the greatest care to make them sufficiently strong to withstand the additional strains placed upon them by the enlarged design. No chances have been taken at all.

An expander has been placed before the trade in which some new ideas are incorporated so far as cycle construction is concerned. The seat post or handle bar stem is slotted on one side and a split steel ring inserted; this ring is about three-quarters of an inch in width and carries a bolt, the head of which is V-shaped on the side fitting into the slot in the ring. It carries a nut and washer on its outer end, the latter fitting against the face of the frame as shown

in the illustration. When the nut is tightened the V-shaped wedge is drawn into the slot in the ring, which expands against the inside of the seat post, forcing the latter against the inside of the frame tube. It is simple in construction and also in operation.

A comprehensive catalogue has been issued in which all the parts made by the company have been illustrated and described, and which will be mailed to any builder upon application. The factory is capable of supplying any demand that may arise. Although not so long in the trade as some others, the company points with pride to the immense business it has worked up as an evidence that it stands in good faith with the trade and gives good value for the purchaser's money.

## BUILDING ADDITION TO ORIENT PLANT.

Each year the increased demand for Orient bicycles has made it necessary to add to the facilities of the Waltham Mfg. Co. of Waltham, Mass. This year is no exception, as the company has within the last ten days been compelled to add a large wing to its already extensive works. Men are working night and day to complete this structure, which is greatly needed, as the factory is running twenty-four hours a day in many departments to keep up with the high tide of orders.

It will be recalled that it was this concern that took the initiative in establishing beyond the question of a doubt the speed efficiency of the chainless bicycle, for it was upon an Orient Sager chainless that last October, under most adverse circumstances, Major Taylor, assisted by the Orient pacing outfit, established the phenomenal record of 1:31 4-5 for the mile. This was only a crowning climax to the large number of world's records established during the preceding season, amounting to a total of 278; obtaining for the first time in the history of the bicycle on an American track the world's record for the hour. As a natural result of efforts directed in these channels, the Orient company today is reaping its reward. It is doubtful if in the history of the trade there is any better example of what can be accomplished by enterprise than is exemplified by the great demand for Orient bicycles.

## SUNBEAM SPOKE A PATENTED ARTICLE.

The American Specialty Mfg. Co. of Hartford, Conn., which originated and introduced the now popular "sunbeam" twisted spoke, states that this form of spoke is fully secured by United States letters patent 598,620, dated February 8, 1898. It has come to the knowledge of the company that the increasing use of the "sunbeam" spoke has invited imitation and that orders are now being solicited from the trade for a similar spoke of unlicensed manufacture. It is the purpose of the company to prosecute all infringers of its patent rights and it thereby cautions dealers, jobbers and users against any and all imitations of the original "sunbeam" spoke with view to saving them from future legal consequences of participating in infringements.

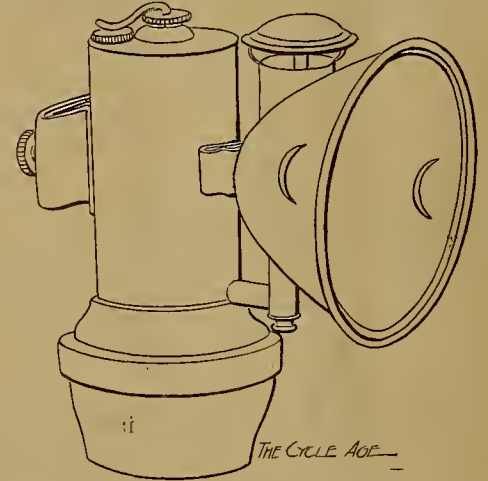
## NEW DEPARTURE IN NAMEPLATES.

One of the latest original patterns of nameplates turned out from the factory of S. D. Childs & Co. of Chicago is finished in royal blue and gold, the raised letters and scroll work being in burnished gold and the background being treated to a bluing process which is a new departure in the plating line. Another notable feature of this form of plate is the height to which the letters are raised above the sunken background. Even the smallest letters on the plate stand out in a bold relief which gives the plate a rich and substantial appearance that cannot fail to appeal to the eye favorably. The company has been in the nameplate business since the early days of the industry and has all along been a leader in the production of new patterns of plates and is recognized as originator of novel ideas in nameplate design and finishes.

## THE CRESCENT GAS LAMP.

The accompanying illustration shows the exterior appearance of the new Crescent acetylene gas lamp manufactured by Herman Boker & Co., 105 Duane street, New York city. The main features of the lamp are its simplicity, readily cleaned water valve and gas burner and even distribution of water to the carbide. At the lower extremity of the tube leading to the gas jet is a threaded opening closed with a knurled thumb screw. By removing this screw and turning off the water so that gas generation will cease, an ordinary tire pump may be screwed into the end of the tube and by

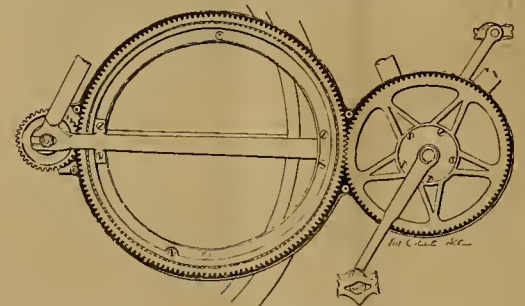
a few strokes of the pump the gas jet thoroughly cleaned out. The water feed tube being merely a straight tube inclosing an adjustable and removable needle, the cleaning of the feed becomes merely a matter of taking out the needle and thus allowing the unhindered downward flow of water to wash the impurities from the inside of the tube. The water tube is surrounded by a perforated tube in the carbide chamber which brings the water in contact with the carbide at several points at once and thus causes an even generation and flow of gas. The carbide cup is fitted with a false bottom so that consumed carbide can be re-



moved in a lump and without having to scrape out the inside of the cup. Any form of carbide may be used and the makers state that the lamp will burn six hours at one charging.

## IMPROVED GENTRY CHAINLESS GEAR.

Since the Reading Chainless Gear Co. of Reading, Pa., has obtained new and ample factory facilities to take the place of the original factory which burned down last year, much activity has been displayed in perfecting the Gentry chainless gear in order to get it upon the market in a satisfactory form both from a commercial and from a mechanical standpoint. As a result of the company's efforts the gear is now furnished to the trade as a complete set ready for building into a bicycle and is also offered the dealer as a regular driving equipment of all Vindex bicycles manufactured by the Reading Cycle Mfg. Co., also of Reading, Pa. The present mechanical design and construction of the Gentry gear shows much improvement over the original pattern and after rigid tests on more than seventy-five machines made and fitted with the present form of gear the makers feel confident in offering it as a reliable chainless gear possessing both easy running qualities and durability. The driving mechanism is in the form of a regular star sprocket and fits to the sprocket hub of the Crown hanger manufactured by the Reading Cycle Mfg. Co. The intermediate gear or idler runs on a ball race made in the form of a ring and attached to the bicycle frame by two blocks integral with the right rear fork, the rear support being on the inner side of the fork and the front support on the outer side. The gears and pinion are but five-sixteenths of an inch wide, so that the entire



mechanism when incased in the dust-proof sheet steel casing is narrow and does not add in the least to the tread of the cranks. The face of the casing is easily detached and replaced and the meshing adjustment of the gears is readily accomplished.

When the gears are sold in sets for building into bicycles, both front and rear hubs are included in the outfit as well as the gears proper, the hanger parts and bracket and the rear forks and fittings. The hubs supplied are of the Star disk adjusting pattern, made by the Reading Cycle Mfg. Co., and the gear parts will not be sold without

# CYCLE AGE

Vol. XXII. No. 22.

THE CYCLE AGE OFFICE.

March 30, 1899.

## Advertisers and Advertising.

There is a great deal of talk about advertising being something hard to understand.

Advertising is the least mysterious of all things.

There is no secret about advertising. It stands for itself.

There is more mystery about "no advertising." Once and a while a fellow can plug along, and make a small competence, and retire from business fairly well-to-do. The wonder is, "How did he do it?"

He is generally a man who keeps open from 5 o'clock in the morning until 11 at night, burns coal oil, does his own sweeping out, squeezes a penny as if it were his all, never enjoys himself socially, and is known in the community as an old moss-back, but—"he is honest, and does what he says."

But the man who advertises comes out in the broad daylight—with each issue of the paper. Everybody knows why he is making money—that he isn't afraid to tell what he has to sell, and what he sells it for—and they go to him with the confidence instilled by continued publicity; for no one could advertise to sell gold dollars for 50 cents and do it right along, because either the gold dollars would be counterfeit, or the man would bust up in business.

And did you ever notice that the advertiser has a bright, tidy store? That he is a public-spirited citizen? That he and his family enjoy themselves socially?

That's the reason that advertising is not mysterious.

It makes a man of a man. It makes him a power in a community.

Once in a while some men who advertise don't succeed. It is their fault, not advertising's fault.

One of these same men might get a bolt of seasonable cloth, and shove it back on a shelf until the edges got faded, and the goods musty and dusty, and it would be valueless.

Run your advertising as you do the rest of your business. It takes common sense to do either.

Do not buy up the sides of barns, and cover them with white and black paint; do not buy little tin signs to tack around; do not disfigure farmers' fences; do not go into fake schemes.

Use the newspapers.

Use the best—the one that goes to thousands of buyers each week, and is read by them.

That paper is the Cycle Age. It is at your service. Our advertising experience is at your service. Space we charge for; advice we give freely.

## Cycle Age Foreign Department.

The growing demand for American goods makes it desirable that someone be prepared to supply prompt replies to those questions which confront shippers.

The Cycle Age has organized a foreign department for the benefit of its advertising patrons.

It can furnish reliable information rela-

## The Cycle Age Catalogue Department.

Every agent may save the time and expense involved in writing a dozen letters for catalogues. The Cycle Age has on hand the catalogues of nearly all its advertisers. When you want one or more, write to the Cycle Age, giving a list of those you require and enclose postage. They will reach you by return mail. You will have saved yourself considerable time and trouble.

tive to the more remote as well as the more important countries.

Its investigation has extended to every country in the world.

It has on its lists over 17,000 agencies in foreign countries.

The advertiser who desires information concerning tariffs, port charges, ports, packing, freight rates, express rates, bonded warehouses, steamship lines, population language is invited to apply to The Cycle Age for particulars.

## Sticking to It.

Newspaper advertising is not an experiment in any sense of the word. It is a common sense, business transaction. Returns the first week or month are not always encouraging, but it is the sticking at it that brings success. No business was ever built up to be a success in one week or one month. Continuous advertising in the right mediums is the best and safest and surest road to business success.

Ask advertisers who use it whether the Cycle Age is one of the right mediums.

## What do you want?

Why don't you, like other wise men, tell the trade about it through The Cycle Age small ads. column. The charge is 5 cents a word for one insertion—3 cents a word for subsequent insertions. . . . Other people find it profitable.

## What have you to sell?

## Modern Cycle Repairs an Immediate Success.

Copies of the Cycle Age's repair book were mailed last week. Every mail since has brought some expression of appreciation from a satisfied purchaser. Here are a few samples:

We are more than satisfied with Modern Cycle Repairs and would recommend it to any one who is in the repair business. It is worth ten times the price.

F. DECREMER,  
Green Bay, Wis.

No mechanic ever gets too old or wise to learn. I have spent 14 years in the cycle business and am learning yet. Modern Cycle repairs is the best thing I have ever seen in this line.

HARVY R. GEER,  
ST. LOUIS ALUMINUM CASTING  
COMPANY.

Modern Cycle Repairs is the best work on the subject I have ever read. It is complete in every detail.

CHARLES HENDERSON,  
Vinton, Iowa.

Every repairman, every factory superintendent, every mechanic may find something of value in Modern Cycle Repairs.

Cycle Age subscribers pay \$1.00 for it; other people, \$2.00. The repair book and a 12 months' subscription to Cycle Age costs \$3.00.

them, as the gear company believes it is the best policy to see to it that as smoothly running hubs as any are used with the gear in order to prevent unfavorable opinions being formed on the running qualities of the gear because of poor wheel bearings. The materials used in the various parts have been selected after careful consideration with view to obtaining the best for the purposes in each case, and the workmanship has been closely watched so that the completed gears may be as mechanically perfect as possible. The gear of a bicycle fitted with this mechanism may be readily altered by changing the rear pinion, which can be done within reasonable limits without interfering with the rear portion of the gear cover. The gear is covered by broad patent claims granted to the inventor, O. H. Gentry. J. E. Blackman is general manager of the company.

#### MAKING JUVENILE CYCLES ONLY.

The Hero Cycle Co., Ontario and Wells streets, Chicago, is confining its efforts entirely to the production of juvenile bicycles this season. The manager of the company inclines to the belief that there is a good field for this variety of machines, and has concluded to leave the construction of adult bicycles to other manufacturers who are devoting their time to that class. So far this year 2,500 juvenile machines have been made by the Hero company and it is the ambition of the manager to make and sell 6,000.

The machines are not of the ordinary juvenile construction; they are made symmetrical and proportionate at all points. The usual child's machine has tube lengths shortened, but the diameters and connections are the same as those used in adults' machines. The product of the Hero factory has been made to take a high standard of excellence and is being taken up by the best trade throughout the country.

The latter day improvements are incorporated in the machines, such as internal expanders in handle bars and seat posts. The frames are supplied in different colors, with nickel plated crowns.

#### NEW BRUNSWICK CO.'S COMPLETE LINE.

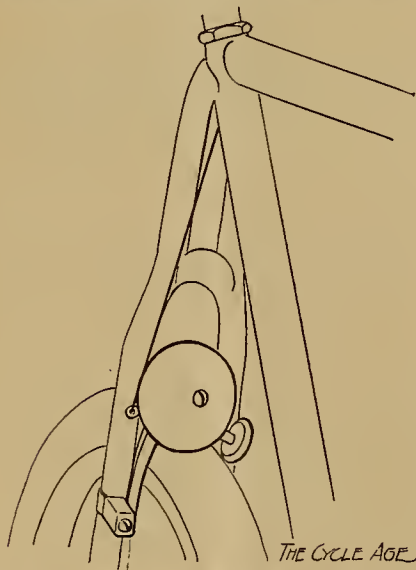
The New Brunswick Rubber Co. of New Brunswick, N. J., is making a very full line of tires this year. It makes one high grade line, as follows: Fenway, corrugated; Meteor, smooth, and Messenger, rough. These tires carry the fullest guarantee.

It makes another tire—the Raritan—in the three different treads, which carries a 60-days' guarantee. This is a new tire just introduced, and is proving immensely popular.

Then it continues to make, as it has during the last two or three years, the popular Regal, which carries no guarantee but which is a good, serviceable tire. This is also made in three different styles of tread—corrugated, smooth and rough.

#### TIRE BELL ATTACHED TO REAR STAY.

The Frank Mossberg Co. of Providence, R. I., is calling the attention of the trade to the fact that the Mossberg tire-actuated bell may be applied to the rear as well as to the front part of a bicycle frame. Though the common practice is doubtless to place the bell on the front forks so that it may be operated by a cord running directly to

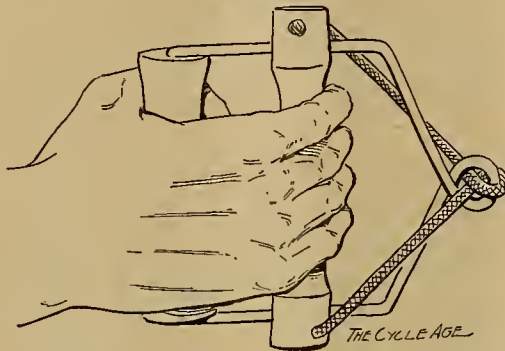


the handle bar, many riders now have their machines equipped with front wheel brakes, thus making it necessary to place the bell on the rear stays above the rear tire. No special fittings are required to attach the bell to the rear stays and the operation is exactly the same as when the bell is attached in front. A patent has just been granted covering the construction of the Mossberg bell and applying to both the single and double chime movements. One of the features of the bell which insures long

life to the working parts is the absence of springs, the return of the strikers being effected by the combined tendency of gravity and rebound.

#### LITTLE GIANT WRIST MACHINE.

Cycle dealers looking for profitable side lines which can be handled without a heavy outlay of capital will be interested in the Little Giant wrist machine, manufactured by the Little Giant Wrist Machine Co., 335 Decatur street, Brooklyn. The machine is designed to develop the muscles of the hand and of the forearm. The handles slide on the wire frame and are held apart by the tension of a double elastic cord. When the handles are gripped in the hand and alternately brought together and separated by closing and opening the hand, it will be



found no easy task for an untrained person to continue the work for more than twenty-five or thirty seconds. By timing one's self the person using the machine can notice daily improvement in the "grip" of his hand, for after constant practice he will be able to keep up the motion for a much longer time without tiring out. The wrist machine is said to be a good cure for such hand cramp as that with which typewriter and telegraph operators and accountants are often troubled.

#### HENLEY'S SKATE INTERESTS GROWING.

Since the revival of roller skating the Henley roller skate and bicycle factory at Richmond, Ind., has been taxed to the utmost to keep up with orders, and has been running day and night a large portion of the time. M. C. Henley, proprietor of the works, who is also interested in one of the largest and finest rinks in the country, located in Richmond, writes that the attendance at that rink throughout the entire season has been exceedingly large, the rink having two or three sessions almost every day excepting Sundays. Attractions of different kinds are offered at the rink, and at the mask carnival on roller skates, held at the rink a fortnight ago, there were more than 2,000 paid admissions. It attracted a large number of competitors and developed unbounded enthusiasm.

Mr. Henley also states that the outlook for the Henley bicycle works for the coming season is better than for years past. There are eleven models in the Henley line and indications are for a very active season's business in these popular goods.

#### STERLING PLAYING CARDS.

The well known bathing girl poster of the Sterling Cycle Works of Kenosha, Wis., now appears in a new role, the company having used the design as the decorative design on the reverse side of playing cards which it is sending broadcast over the country at a nominal price per pack. The cards are made by the U. S. Playing Card Co. and are of the maker's regular fifty-cent quality. They differ from many advertising playing cards because there is no fancy designing or advertising matter on the face, such matter being confined to the backs. This renders the cards suitable for card clubs and for the use of confirmed card players. The ace of spades and the joker have small advertisements on their faces, but this is common to all cards, the manufacturer usually placing his own advertisement on these cards. The poster design on the back is surrounded by an ornamental background in Sterling olive green.

#### TWO TUBE TESTS.

Some interesting comparative tests were recently made between two kinds of bicycle tubing, the tests not merely being comparative in the sense of comparing the different makes of tubing, but in that of comparing the results of tests made in different manner. The makers of the Clincher brazed tubing have been forwarding to those who are interested in the matter samples of their tubing brazed to seamless tubing. The two short pieces of tubing were in each instance brazed side by side so that the party to whom they were sent could place the two together in a vise, one jaw of the vise striking the Clincher tubing and the other jaw touching the seamless tube. In this way by tightening the vise gradually and

watching to see which tube flattened first, the comparative strength under compression of the two tubes could be determined. The result of this test when made from the samples sent out was that the seamless tubing flattened before the Clincher began to crush. From mere curiosity as to the reliability of the test, a piece of regular stock Clincher tubing was placed in a vise alongside of a piece of seamless tubing, the pieces being each one and one-eighth inch in diameter and 20 gauge in wall thickness. The Clincher tubing was crushed about half of its normal diameter before the seamless tubing began to give. The result was seemingly a demonstration of dishonesty on the part of the Clincher people with regard to the character of the stock used in the samples sent. Either the Clincher tubing used was of a better grade than that sent out in stock, or the seamless tubing was of an inferior make and not of the kind stated. However, the reputation of the Clincher makers being such that they could not well afford to stoop to such practices, another solution for the radical differences between the two tests was looked for and a third test made.

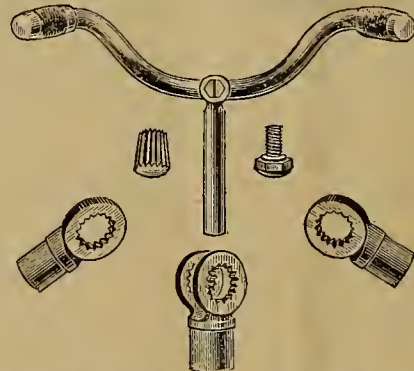
It is a well known fact that seamless tubing is often sent out from the mills in a hard-drawn condition. So it was reasonable to suppose that the seamless tubing used in the second test might have gained in stiffness over the Clincher because of it not having been annealed. Another piece was cut from the same bar of seamless tubing and, being found to be in the hard drawn condition, was annealed in a brazer flame, it being heated to about the average brazing heat and then allowed to cool slowly. This placed the seamless and the Clincher on the same basis as far as annealing was concerned, but, in order to make sure that the Clincher was annealed to the extent that it would be by being heated in a brazing flame, it, too, was placed in the flame and annealed in the same manner as the seamless. The two pieces were then placed in the vise side by side and the vise tightened. The seamless tubing smashed nearly flat before the Clincher began to crush. The result showed that when both were in the annealed condition, as either would be at points around the frame connections after having been built and brazed in a bicycle frame, the Clincher tubing was much more able to resist compression strains than was the seamless, thus carrying out the maker's original statement.

#### GROSS SECURES POPE'S MILWAUKEE AGENCY.

After maintaining a magnificent emporium in Milwaukee for a number of years, the Pope Mfg. Co. has made arrangements to place its Milwaukee agency for the entire line with the Philip Gross Hardware Co. Ira D. Lundy, well known to the trade for many years as the manager of the Cream City Cycle Company, has been secured to take charge of the cycle department.

#### ADJUSTS TO ANY POSITION

The Frederick adjustable handle bar manufactured by the Frederick Mfg. Co., 220 Broadway, New York city, may not only be adjusted within ordinary narrow limits, but is capable of being lowered to the deepest scorching position and of being raised to a position correspondingly high. The locking screw, being furnished with a hexagonal slotted head, may be turned with either a screw driver or a wrench, thus allowing the rider to change the adjustment of the bar with whichever tool he has at hand.



There being both a front and a back lug at the top of the stem, the appearance of the bar at the hinge is symmetrical and the head almost if not quite as strong as that of a rigid bar. The taper ratchet plug draws the hinge parts together with ample security and at the same time does not bind when the locking nut is released. The bars are sold both to manufacturers buying in large quantities and to dealers and repairers. The former may obtain them either black or finished. The bar tubes are 7-8 inch in diameter and the forged stems are furnished either 7-8 or 13-16 inch in diameter.

#### FAUBER HANGERS IN GROWING DEMAND.

Fauber hangers continue to be in ever increasing demand. The sales have already doubled those of last season. The factory is





# Fittings

... AND ...

# Sundries

Experience teaches that the best is the cheapest

TIME IS MONEY—our fittings save you time. Orders are filled same day as received—builders should consider this. Our prices are right—our Stock of Fittings and Sundries is complete. Catalogue on application.

GEO. HILSENDEGEN,

Long Distance Phone  
Western Union Telegraph  
in Connection....

Detroit,

Mich.

working 23 hours a day; 300 hands are now employed and as soon as the rush deliveries come the force will be increased to 400. Mr. Fauber estimates the output of hangers for this season at 300,000, this estimate being based on the orders already booked. There may be an increase over this, but he has stock on hand for this quantity and is pushing the production as rapidly as possible.

### IVER JOHNSON CYCLE REVOLVERS.

Cyclists desiring revolvers which furnish ready protection on the road against vicious dogs and tramps and which may be conveniently carried in the pocket have had their wants anticipated by Iver Johnson's Arms & Cycle Works of Fitchburg, Mass. The company is now making a small, reliable 32-calibre cycle revolver in both hammer and hammerless patterns. One of the desirable features of the weapon is that the operating mechanism is such that it cannot be discharged except by pulling the trigger.

### BUNDY LAMPS IN THE WEST.

The Frank E. Bundy Lamp Co. of Elmira, N. Y., has placed the Bundy acetylene lamp in the hands of H. W. Coolidge & Co., 135 Lake street, Chicago, for representation in northern Illinois, Wisconsin, Iowa and Minnesota. W. F. Coolidge of the latter firm is now on the road in the interests of the lamp, being at present in Minnesota, whence he reports an excellent business in his line.

### REMINGTON TRAVELERS RECALLED.

The orders received up to the present time for Remington bicycles are so much in excess of the early anticipations of the Remington Arms Co. of Ilion, N. Y., that the company has taken its entire traveling force from the road and is devoting all its energies toward filling promptly the orders now on the books.

There has been a change at the rubber tire factory of H. N. Wayne of Watertown, Mass., and the concern will hereafter be known as the Watertown Rubber Co. C. G. Macaula, representing them, is traveling New England.

H. M. Putnam, formerly connected with the Simonds Rolling Machine Co., and later with the Fitchburg Steel Ball Co., has accepted a position with Iver Johnson's Arms & Cycle Works of Fitchburg, Mass.

## MISCELLANEOUS.

Advertisements under this head 5 cents per word first insertion; 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders or stamps received.

### WANTED.

**SIDE LINE**—Salesmen in the bicycle and hardware trades wanted to sell standard bicycle sundry on commission. Quick seller and liberal commission. Samples carried in vest pocket. B. H. DIVINE, Utica, New York.

### FOR SALE.

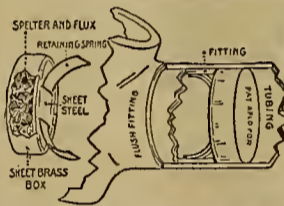
**CLOSING OUT SALE**—Until closed out, we shall offer the following: 600 pairs finished, flat cranks, regular thread, rights and lefts, at 20c per pair, 6 in.; 2200 pairs brazed forksides 1 1/4 in., 10c; 350 pairs brazed forksides 1/2 in., 10c; 4360 seat post forgings, 2c each; 630 crown forgings, 2c each; 2700 pairs upper back stay forgings, 1c each; 2200 lower adjustment forgings, 1 1/2c each. CORTLAND CARRIAGE GOODS CO., Cortland, N. Y.

**FOR SALE**—500 Remington Hangers at a bargain; propositions considered for one or all. H. GEER, 906 Pine St., St. Louis, Mo.

### AUTOMATIC BICYCLE PUMPS... (Penny-in-the-slot)

—DO A CASH BUSINESS—  
Thoroughly tested —Testimonials— Guaranteed  
Sold outright at moderate price. Exclusive territory assigned when quantity purchased. Write today and secure choice points. R. L. PEGRAM, Western Agent, care Cycle Age.

**TWO Handle-Bar Benders** to be closed out for \$10 cash each. Perfect condition; latest improved; suitable for repairman or small manufacturer; absolutely guaranteed to form perfect bars. BAR BENDER Co., P. O. box 804, Lowell, Mass.

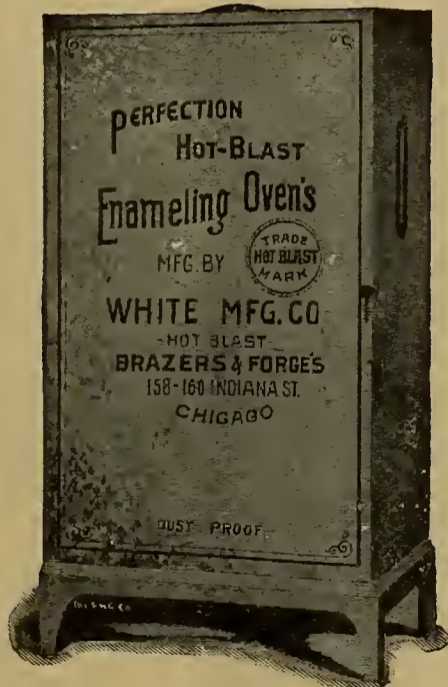


WHITE'S  
LOADED  
BRAZING  
CAP.

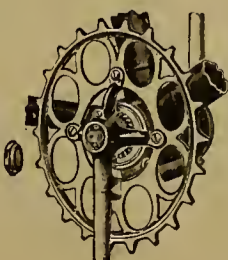
(The cap is loaded with spelter and flux.)

WHITE BROS. CYCLE WORKS, 616 N. California Ave., Chicago

## ENAMELING



## OVENS.



### "D. & J."

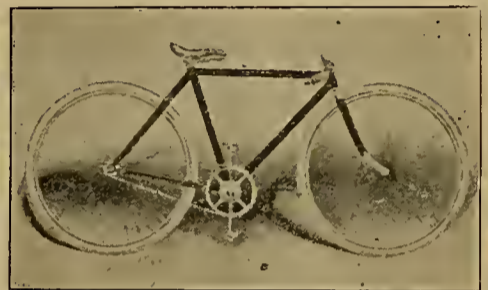
Single, Tandem, Triplet, Quad....

### Hangers

We make Hangers for only high grade wheels.

Park City Mfg. Co.,  
N. W. Cor. Jackson & Clinton  
Streets, CHICAGO.

### A NEW PROPOSITION:



### Wheels Built to Order \$12

upwards. FROM HIGH GRADE MATERIAL and fittings of your own selection.

SEND FOR CATALOGUE of the

Famous TEMPLE 3 CROWN Frames

and all standard makes of bicycle parts and fittings. Make your Selection. We build the bicycle accordingly. LOWEST PRICES GUARANTEED.

WRITE TO-DAY

and send for Catalogue of "MAGIC"  
\$2.00 GAS LAMP—BEST MADE.

Graphophones and Cameras.

RALPH TEMPLE CO.

81 Lake Street, CHICAGO.

### OILERS

"PERFECT" 25c.

"STAR" 10c.

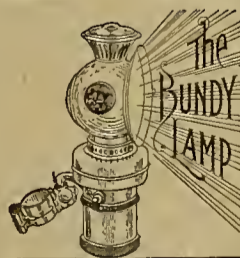


"LEADER" 10c.

"GEM" 7c.



Our name on an oiler proves its quality.  
CUSHMAN & DENISON, 159 Ninth Ave., NEW YORK.



## Mr. Jobber

Did you ever wonder why the "BUNDY" acetylene gas lamp is so often specified? You'd better investigate.

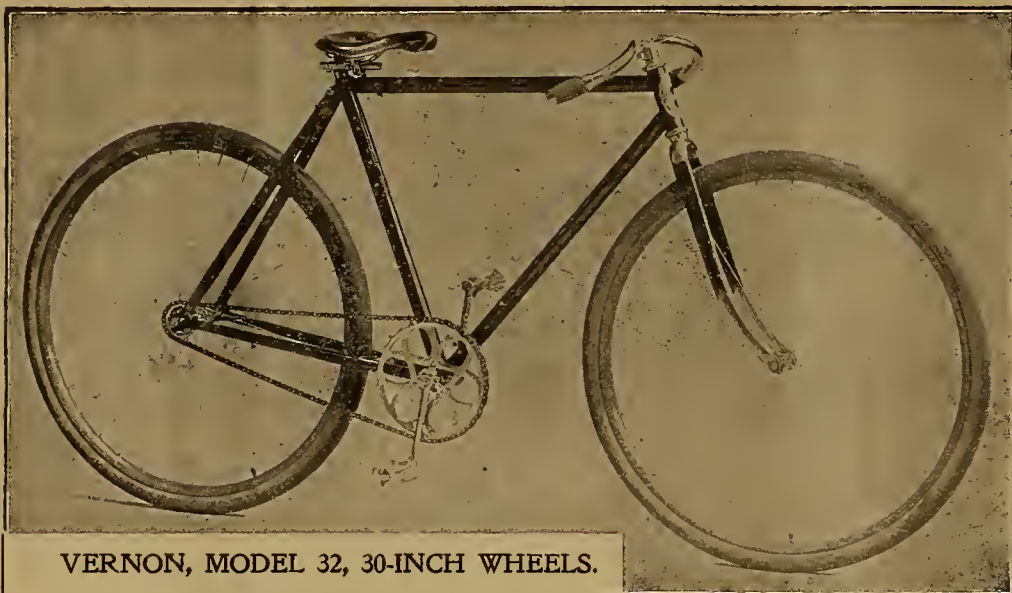
THE FRANK E. BUNDY LAMP CO.,  
Elmira, N. Y.



### INDIANA CHAINS.

Send 26c. for Aluminum Fob. Gold Plated, \$1.

INDIANA CHAIN COMPANY, - - Indianapolis, Ind.



VERNON, MODEL 32, 30-INCH WHEELS.

# We Sell Wheels!

SEE OUR '99 CATALOGUE  
YOU ARE NOT POSTED UNTIL YOU DO  
IT WILL SAVE YOU MONEY

## 7 Models of Vernons

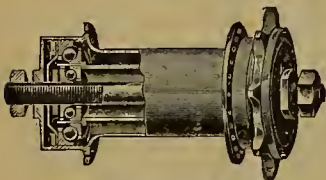
WRITE US IMMEDIATELY

VERNON CYCLE COMPANY

79 Lake St., Chicago, Ill., U.S.A.

N. B.—We want agents in every town in the U. S.

### J. P. THOMAS Revolving Hubs and Hangers



**DOUBLE BALL BEARINGS**  
with Inner Revolving  
Sleeve Increases the  
Speed 40 per cent with  
the Same Power.

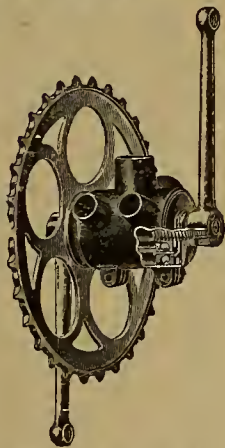
Patented in U. S. Dec. 28, 1897.

These bearings have created such a demand that we find it necessary to increase our capacity. In nearly every instance where sample orders have been shipped we have received regular orders for stock. Large manufacturers and supply houses are figuring with us on quantities.

We are determined to reach all riders and dealers that have not yet tried the J. P. Thomas revolving hubs and hangers, and have therefore decided to offer a better discount from the list to manufacturers and dealers on any size orders from one set or more.

Oscar Holdberg, 3,000 Wentworth Ave., Chicago, rode a bicycle fitted with J. P. Thomas revolving hubs and hangers in a contest and won the three first prizes.

NOTICE these great points of interest: Travels 40 per cent faster with the same power; a dust proof cap prevents dust entering the bearings; oil feeder, needs oiling but once in a season; no cleaning or repairing the entire riding season; lasts twice as long as the ordinary bearings; we guarantee what we claim or money refunded; we have no traveling salesman. Furnish dealers with all advertising matters. Write for terms and catalogue.



Pat. in U. S. Dec. 28, 1897

J. P. THOMAS & CO.

439-441-443 Thirty-First St., CHICAGO, ILLS., U. S. A.

## Liquid Brazing Crucibles

All sizes and shapes as required to fit any make of furnace, made by the original makers of brazing crucibles and the largest and oldest manufacturers of plumbago or graphite crucibles in the world.

JOSEPH DIXON CRUCIBLE CO.,

Jersey City, . . . . . New Jersey.



### COMPLETE

with best quality material and workmanship. Morgan & Wright Tires, Waters one-piece hanger (made under Fauber licenses), any style handle bar, hubs—Waters Improved '99, best quality spokes and rims. Everything about the bicycle A-1.

Net Price to Dealers..... \$20 19  
CLIMAX, Guaranteed Tires..... 19.15

F. S. WATERS CO.

155 W. WASHINGTON ST. CHICAGO.

We have no connection with any other Chicago house.

### Reading Standard Bicycles

"The Standard of Excellence."

Are made right and sold right. It pays agents to write to us.

READING STANDARD MFG. CO., Reading, Pa.

### Stripped Bicycles WITH NAME PLATES AND FULLY GUARANTEED.

Equipments at cost if ordered with bicycles.  
Write for descriptive price lists.

WELLINGTON WHEEL WORKS,  
35 RANDOLPH ST., CHICAGO

#### SPECIALS.

- Morgan & Wright '99 Double Tires..... \$4.50 per pair
  - Schinner Bars, '99 Pattern..... .40
  - Perfecto Hubs..... 1.10 per pair
  - Columbia Guaranteed Tires..... 2.80 per pair
  - Vimoid Repair Kits..... 1.50 per doz.
- We issue a semi-monthly price list. Send for it; will make money for you.

VIM BICYCLE COMPANY

Sundry Department. 56 Fifth Avenue, Chicago.

### The Only House of its Kind on Earth.

We furnish Repairs of parts for any Bicycle manufactured in this country or Europe, including Frames, Wheels, Forks, Handle Bars, Tires, Chains, Hubs, Spokes, Rims, Cranks, Cups, Cones, Axles, Nuts, Balls, Etc.

Our specialty is parts for old Bicycles, the manufacture of which has been discontinued.

#### NOTE OUR PRICES.

- 28-inch "Columbia" tires (written guarantee for one year with each pair) \$2.85
- 30-inch "Columbia" tires (written guarantee for one year with each pair) 3.15
- 28-inch Unguaranteed Tires 2.05
- 20, 22, 24 and 26-inch tires 1.90
- Hubs, turned from solid bar 1.10
- Pedals, high grade, 1899 45
- Built-up wheels, best rims, swaged spokes, Plew hubs 2.95
- Handle bars, any style, nicked on copper 48

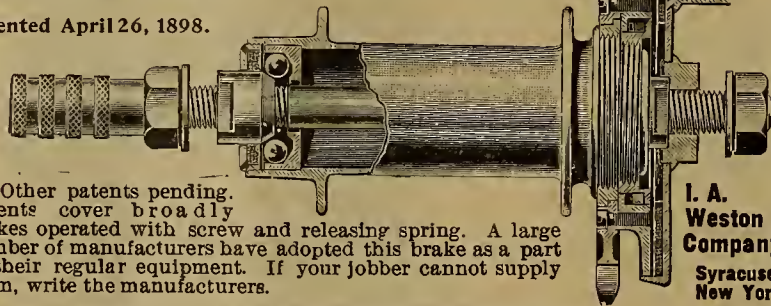
- Saddles..... 80
- Wheeler style..... 80
- Brown style..... 80
- Gilliam..... 48

Prices on Cycles and Sundries lower than all others.  
CYCLE REPAIRS CO., 52 to 60 Fifth Ave., CHICAGO.  
Reference: Early's Merchantile Agency, Chicago.

### CHAMPION HUBS GANFIELD BRAKES

is a combination that should be on every bicycle.

Patented April 26, 1898.



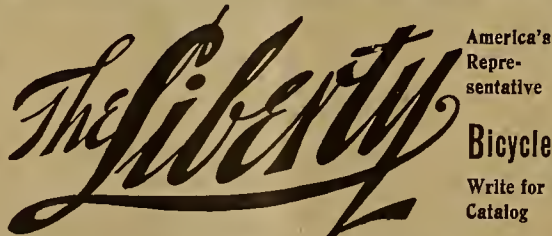
Other patents pending. Patents cover broadly brakes operated with screw and releasing spring. A large number of manufacturers have adopted this brake as a part of their regular equipment. If your jobber cannot supply them, write the manufacturers.

I. A. Weston Company,  
Syracuse, New York.

### MODERN CYCLE REPAIRS

130 Pages  
100 Illustrations  
\$2.00

CYCLE AGE, Chicago




America's Representative  
Bicycle  
Write for Catalog

BRIDGEPORT, CONN.



Complete Catalogue Ready

Peoria Rubber & Mfg. Co.  
Peoria, Ill.



**ADLAKE BICYCLES**  
THE WHEELS OF HIGH DEGREE.  
THE ADAMS & WESTLAKE CO. MAKERS. CHICAGO.

**"THE AMERICA"**  
THE ONLY TRUSS FRAME BICYCLE  
SOLD BY AGENTS.  
MECHANICALLY STRONGER AND  
A GOOD SELLING FEATURE.  
DAVID BRADLEY MFG. CO., CHICAGO, ILL.



# THE CYCLE AGE

VOL XXII—No 23.

CHICAGO, APRIL 6, 1899.

NEW SERIES No. 72.

## ACCOUNTANTS HARD AT WORK

### Factory Options Are All in—Guessing at Intentions Towards Parts and Equipment Makers.

For a week past expert accountants have been at work in the bicycle factories upon which options have been given to the syndicate of capitalists who wish to effect a consolidation. They have made their appearance simultaneously in several large centers of the industry and should have their work completed within three weeks. Mr. Spalding is of the opinion that all the options required are now in hand, although it is plain to outsiders who have a turn for investigation that there are many concerns of considerable importance which as yet have not been asked to sell.

#### The Jobbers Are Uneasy.

Much speculation is rife with respect to the part which the leading parts, material and equipment makers will play in the consolidation. The jobbers and the firms which make for them, too, are being discussed, and that these groups of the trade are not disposed to sit idly by and see their trade dissipated is evidenced in the following communication:

We most sincerely hope that some successful method can be devised that will cement firmly all deserving manufacturers, those who are making a good article and have their money invested in finely equipped plants. There are, comparatively speaking, very few who have plants equipped for the manufacture of bicycles, a great majority being simply assemblers; and these people have made it hard for the legitimate manufacturer to market his goods at a reasonable profit during the past three years.

If the part makers were bought up, and their plants locked up, we could do away with the competition from the assemblers. Our factory is fully equipped to enable us to manufacture bicycles without buying a dollar's worth of goods from the part houses, if necessary, and we would be very glad to do so if the part makers were to close down. This would make it necessary for the assemblers to either invest a large amount of money in machinery and tools to manufacture the parts for their machines, or retire from the business, and such competition would, of course, very naturally be shortened, and the legitimate manufacturers would be on an equal basis.

For the proposed bicycle combination to meet with success they will be obliged to include in the combination a great many undesirable concerns. If they do not do this they will find the capital of the jobbers pouring into these concerns, operating them at as lively a rate as ever, building machines for themselves. We ourselves have had two propositions from large buyers to take our plant off of our hands at a fair price, we to operate the plant solely in their interests. We are also familiar with the fact that this same proposition has been made to two other concerns, and as the jobbers in question have millions of dollars, they would be able to operate without any trouble twelve or fifteen plants, and prove warm competitors for the combination.

Kenosha, Wis. CHAS. H. SIEG MFG. CO.

#### Correcting False Impressions.

In order to correct false impressions the following bulletin has been issued from headquarters:

My attention has been called to certain misleading statements relative to the proposed bicycle alliance that have recently

appeared in the press in the way of special articles and alleged interviews with various men in the trade, and I am prompted to say that nearly all such articles and so-called interviews, so far as they relate to the future policy of the proposed combination, are entirely misleading and without authority or direction of those in a position to speak for the new company.

An interview with a gentleman prominently identified with the trade, to the effect that in towns where ten agents are now located the new company would get along with two, is entirely misleading, and the gentleman in question denies ever having given expression to such a thought. Other statements of a similar character are equally as misleading.

It is not the intention of the new company to crush anybody, but it is the hope that with such a combination many of the evils that now beset the bicycle trade can be diminished and an improved condition all around obtained. Knowing, as I do, the general intentions of those identified with this movement, I feel safe in assuring the bicycle trade generally that the policy this new company will adopt will tend to improve present conditions, be better for the manufacturers, better for the agents, better for the parts makers, better for the riders and, in fact, better for everybody identified with the trade.

Matters in connection with the alliance are progressing as rapidly and satisfactorily as could be expected, and just as soon as there is anything definite to announce the press will be fully informed, but in the meantime it will be well to make allowance for any misleading statements and so-called interviews that may appear.

A. G. SPALDING.

New York City, April 1.

#### Union Label on Sieg Product.

After a four-years' struggle with the trade unions, the Charles H. Sieg Manufacturing Company, of Kenosha, Wis., has just made an agreement with President Mulholland, of the Bicycle Workers Union, to place the union label on every bicycle sent out of the factory. This action on the part of the managers will put an end to all the differences between Mr. Sieg and his employees.

#### Sheriff's Sale of Rex Stock.

The sale of the stock of the Rex Cycle Company, at Seventy-second and Sherman streets, Chicago, was ordered last week by court to satisfy a judgment in favor of creditors of the concern. The entire stock, valued at \$3,000, was purchased at sheriff's sale Friday by Robert Thacker for \$1,405.

## TRADE ASSOCIATION BOOMING

### Good Feeling Prevails Among Minneapolis Tradesmen—Fewer Frames Cut Down.

Minneapolis, April 3.—Ninety-five per cent of the cycle dealers of this city have agreed to maintain the schedule of prices for repair work and rental rates recently adopted for the season of 1899. Those who have not agreed to it are unimportant and are located in the suburbs of the city. The Minneapolis Cycle Trade Association has been organized for about sixty days. Its meetings are well attended and much interest is taken in them. They are "free and easy," not too formal, and the best of feeling exists among the members. A bonus of \$25 is put up by each member as a guarantee to maintain prices. Dues are 50 cents per month. Meetings are held in the various places of business.

#### Want St. Paul Dealers to Come In.

Benchmen tried to form a union, but could not get together on it, seemingly, and the dealers took hold of it. An effort is being made to include St. Paul dealers in it also and the chances are good of doing so. The intention later on is to rent a hall and fix it up for meetings and as a general club room. Members signing the agreement number about sixty-five and more are coming in all the time. The benchmen are all inclined to think that it means better wages than in the past. Good all around men, able to do all kinds of lathè work, brazing, etc., are getting about \$3 per day; others from \$9 to \$12 and \$15 per week; boys to wipe off, \$2.50 and \$3 per week. Employment throughout the year is given to very few now. The majority are able to work only during the very busy season, probably six months in most cases.

#### Reduced Lists Affect Repair Work.

The disposition of dealers to employ men only for a short term has resulted in the springing up of repair shops all over the city. A number of shops have been busy all winter building machines to order for riders who want to select their own fittings, but there has not been so much of this kind of work as there was a year ago on account of the reduced prices of standard bicycles. Fewer frames have been cut down also on account of the reduction of lists, riders preferring to trade in their old machines for new machines. Many of the larger houses that carry bicycles as a side line have done away with their repair shops and made arrangements with some nearby shop to do their work on a fixed scale, say 20 per cent. below list. They think it will be a much more satisfactory way of doing. There is one concern that does nothing but repair tires, and it is doing well.

The commissioners of Fairmont Park, Philadelphia, have made a rule prohibiting the running of motor vehicles of any description within the park limits.

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## BIG STORES IN NEW ROLE

### Chicago Department Houses Seek Repairing at Cut Prices —Venturing on Sale of Fittings

It is now the repairman's turn to endure with what equanimity he can the plaguing competition of the department store. This by no means implies that the bicycle dealer has known the last of such competition. On the contrary, it is his lot to be a powerless spectator of the

#### NICKEL PLATING PRICES.

Handle bars	25cts.
Cranks	10 "
Pedals, per pair	35 "
Front sprocket	30 "
Rear sprocket	10 "
Fork crown and tips	30 "
Chains	50 "
Hubs	35 "
Cones	5 "

crippling of his co-worker, while at the same time his own business in sundries and cheap models is being undermined. The wings of the department store have been clipped, but its talons have not yet been drawn.

#### Fifty Per Cent Prices for Remodeling.

In no city of the Union does the department store fare better at the hands of the people than in Chicago, and naturally it is here that one looks for the early outcropping of that trade enmity which through custom is annually anticipated by the bicycle trade. One of the

HAVE YOUR WHEEL  
CUT DOWN AND REMODELED  
TO 99 STYLE \$4.85

big establishments, which from its earliest identification with the bicycle business, has played havoc with the Chicago retail trade, this year grapples with the repairman and placards its sporting goods department with announcements which show pretty plainly that it is the intention to fight to the last ditch rather than be edged out of the bicycle trade. Nickel plating work is solicited at prices which dismay repairmen. Glancing down the table of prices, it is observed that current charges have been cut almost 50 per cent, on the average. The offer to cut down and remodel bicycles for \$4.85 is another evidence of the bitterness with which this big store is waging war against its humble competitors, for the usual price for such work in Chicago is \$7, depending, of course, upon the nature and difficulty of the work. The enameling prices which are quoted in this store show a reduction of more than 50 per cent.

One of the largest department houses in the western metropolis is venturing

cautiously and quietly into the sale of fittings, and is offering a few eccentric hangers complete for \$5 and rear hangers for tandems at \$7.50. A special hanger with gold plated sprocket wheel and cranks was marked \$12. Only one sample of each was displayed, and it is not known how large a stock is in reserve. They are this year's production of one of the largest and most reputable parts making concerns in the country and it is exceedingly improbable that the hangers were purchased direct from the makers.

#### Thirty-Inchers at Cut Prices.

Taking advantage of the fact that there is considerable talk about 30-inch wheel models, the department stores are quoting such patterns at \$29.75, guaranteeing them for one year, giving any options which the purchaser may desire, and certifying, in the language of one of the eclectic salesmen of these establishments, that the connections are made of "malleable steel." As a matter of fact, these machines look well, though to the practiced eye there is roughness in finish upon close examination. Not all of the

WE CALL FOR YOUR WHEEL  
AND  
ENAMEL IT ANY COLOR.

Plain enamel	1.25
Enameled and striped	1.50
Enameled and striped with transfers	1.75
Bicycle cleaned and repacked with vaseline 75cents extra.	

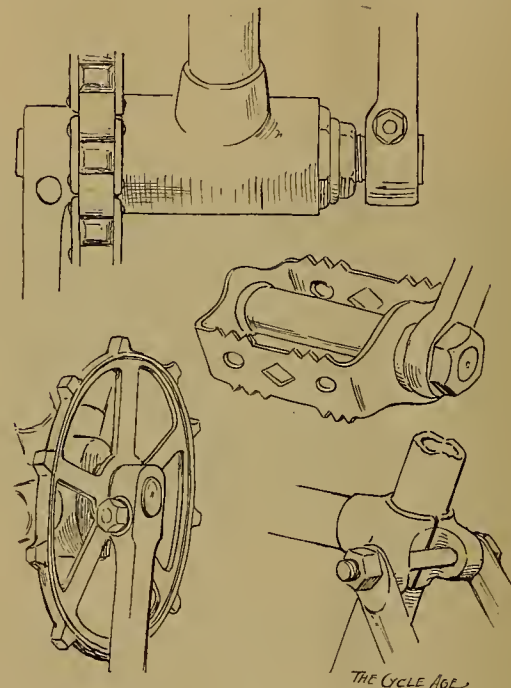
department stores in Chicago are handling 30-inch wheel machines. There is as much diversity of opinion concerning the demand for them and as much rivalry in running them down among such establishments as is displayed in antagonizing the movement in favor of the use of chainless models. There is but one big store in Chicago where any serious pretense is made to sell bicycles of a reliable brand, and in this house this virtue is offset by the slaughter prices which are quoted on sundries. The most diligent search does not disclose a single

pattern of high grade or high price. In this respect the department store trade of Chicago is in marked contrast to the policy which reigned in such establishments at this time a year ago.

It will not be the fault of the Chicago department stores if acetylene gas lamps are not in wide use this year, for there are few houses in which capable demonstrators are not at work all day long, explaining the method of generating gas, regulating water flow, cleaning tips, etc.

#### Fire Fights Fire.

A few days ago one of the large stores announced a sale of bicycles at such a low price that a competing store was



thrown into a paroxysm of jealousy, the ill effects of which did not disappear until it had advertised machines at \$4.98. The details of this "special cash sale" are displayed in this page. The aggressors had advertised machines at \$9.98 complete. The concern which advertised machines at \$4.98 complete had the best of the competition until it was discovered that employes of the rival store had purchased twenty out of the twenty-five machines for sale and that the machines were again on sale in the store of their employers at \$9.98.

Naturally the trade is curious to know something about the appearance of these machines. A glance at the group of mechanical drawings will eloquently express the method of construction employed in the important visible parts. The ordinary cheap machine of modern manufacture is as superior to the models offered for sale as Hyperion is to Satyr. They were constructed of old-fashioned parts which had evidently been resurrected from the scrap heap. They were equipped with ancient saddles and handle bars, but they were guaranteed for a year—by word of mouth.

## SPECIAL CASH SALE

TO SHOW THE PUBLIC WE ARE IN THE BICYCLE BUSINESS.

At 10 o'clock Monday we will sell 50 high-grade BICYCLES, at....

**\$4.98**

NO MORE—  
NO LESS.

We have the best values on earth at \$9.75, \$12.98, \$13.25, \$15.48, \$17.48, \$19.95, \$20.48, \$23.48 and \$27.50.

**WILL BEGIN WITH A SCRAMBLE****PUBLIC IS FEVERISH TO BUY**

**Brisk Sales May Create a Brief Shortage in Assembled Stock—Trade Awaiting Good Weather.**

Cleveland, April 3.—With a foot of snow on the ground, the bicycle business is almost at a standstill here in all its branches. The material makers have filled nearly all of the first orders for supplies and are now anxiously trying to induce the bicycle makers to furnish more specifications or to allow them to ship goods already completed. Most of the bicycle makers have shipped the first stocks to the dealers and still have a fair number of completed machines on hand; hence they are not inclined to receive more supplies until they are assured of a steady demand for more machines. All of the local dealers have a good supply of bicycles in the warehouses, but it will take only a few days of pleasant weather to dispose of these, and then there will be a grand rush. A prominent maker of parts who has recently visited all of the factories in this section states that the cold weather has put a decided damper on the energy of the bicycle manufacturers and that the prospects are there will be a decided shortage of machines when the season has fairly opened.

**Hustling While They Wait.**

Despite the cold weather there are plenty of visitors and some buyers at the retail stores. Nearly every store in town reports a sale or two every day and the long-headed dealers are making especial efforts to induce prospective buyers to allow them to set aside machines in order that they may have them in readiness, fully equipped to suit their wishes, in time for the first day of open weather. One enterprising concern is succeeding in corraling a number of early orders by the pass-book savings bank scheme. The prospective buyer is given a book in which are entered amounts paid in, and when the rider has paid one-third the price of the machine, he is allowed to take it, giving a mortgage for the balance. Another agent has been very successful in inducing riders to visit his store "early and often" by a guessing contest as to the plurality which will be received by the successful candidate for mayor at the coming election. The scheme not only brings riders into the store, but after the contest is over the dealer will have the names and addresses of several thousand wheelmen which he proposes to thoroughly circularize.

**Good Call for Second-Hand Stock.**

While the majority of the early sales are in the better grades of machines, there seems to be an unusually strong demand for good second-hand bicycles, especially of the drop-frame variety. The demand for ladies' second-hand machines is so pronounced that the old stocks have all been sold, and as very little trading has yet been done, the shortage will continue until warmer weather.

Local dealers are at a loss what move to make regarding the sale of sundries, and several of the prominent concerns have decided to carry only enough stock to fill immediate demands and to confine themselves only to the most popular lines. Last year the dealers were induced by very low prices to patronize a leading department store which had gone into the sundry jobbing business on quite an extensive scale. By purchasing in large quantities this concern was enabled to secure rock bottom prices and it offered very attractive figures. But, no sooner had the retailers laid in large stocks than the "enterprising" department store cut

its retail prices, offering its goods at practically jobbing prices, which of course did not tend to improve the business of the retailers. This year the concern in question is attempting to carry out much the same tactics. Hence the dealers have decided to go slow on sundries.

**PASS-BOOK PLAN SUCCEEDS**

**Many Early Sales Made in Buffalo Through Advance Installment Scheme—Will Try Renting.**

Buffalo, April 3.—Five hundred bicycles were sold by one local branch store, it is claimed, through the passbook system between January and March 1, when the offer closed. Of this number not more than fifteen took advantage of the agreement whereby the money paid in could be drawn out if for any reason the depositor desired to do so.

Renting will be made a regular branch of the retail business here by most of the reputable stores this season. Up to last year the Buffalo dealers, with one or two exceptions, made no effort to cater to this remunerative branch of the business, but the revenue derived by those dealers who conducted such a department last season was so gratifying that it led to the determination on the part of the majority of the trade to operate a fully equipped livery department this season. The livery business, it is believed, not only affords a neat income but also acts as a good stimulus to sales.

Second-hand bicycles will be largely used for renting, but only such stock as is in the best of condition will be put into service. "It was a noticeable fact last year," said one dealer who did renting last season, "that that portion of the public which hired bicycles did not want nor would it ride any but a good looking mount, and as was frequently the case a buyer would often be found among those people by simply paying a little attention to their wants." Those of the trade who have not already accumulated a stock for this purpose will recruit up to the desired equipment through the "trading-in" plan.

Of the machines rented out last year a theft seldom occurred, and as a rule the machine was returned in as good condition as when it was sent out. Tandems were in great demand last year, and as there were not more than half a dozen available, reservations were frequently made a week in advance.

**Gotham's Spring Show a Success.**

New York City, April 3.—The dealers' cycle show, which came to an end last Saturday, proved a decided success in point of public attendance. The management made money and the exhibitors were satisfied. It is the intention to repeat this show next year, when it is expected the number of exhibitors will be three times as large as on the recent occasion.

**Enameling Machines for 75 Cents.**

From present indications there promises to be a good sized rate war this season among bicycle dealers and repairers in Winona, Minn. As the result of an announcement by one establishment to enamel bicycles for \$1 each, the dealers' association now offers to do the same work for 75 cents. Prospects are excellent for a cut in other lines.

During the last nine months of 1898 the number of bicycles imported into Switzerland rose to 2,146, of a value of \$642,940. Such high figures have never been reached before. The exports of cycles has also made a jump, the fifty-seven factories exporting to the value of \$17,800.

**SUNDRIES IN THE ANTIPODES****GAS LAMPS BECOMING POPULAR**

**English Tire Repair Outfits Expensive—Thumb Operated Brake—Growth of Home Building.**

Sydney, March 10.—The acetylene lamp is becoming popular in Australia. Bennett & Wood, Limited, of Sydney, sold 100 in January. The lamp they push is the Phenomenon, made in England, and the price charged for it is \$3.60. The weight when fully charged is 22 ounces. Other acetylene lamps have been given exhaustive trials, but considerable trouble has been experienced with them owing to the burners getting clogged with the soot generated by the gas. In the Phenomenon a purifier has been introduced in the shape of a small bag of carbon through which the gas passes. The reservoir is a little larger than usual. When fully charged it will burn for from four to five hours.

**No American Repair Kits.**

If a person calls at a cycle agency and purchases a "repair outfit" he is always supplied with one of English manufacture. How is this? Are there no American repair outfits on the Australian market? The price charged by the agents for a repair outfit is exorbitant. They are never sold for less than 24 cents. And what are they composed of? Simply a small tin box, enclosed in which is a very small tube of solution, a small box of chalk, a small piece of sandpaper, a few small pieces of rubber, about two inches of canvas and three or four valve rubbers. And this is what riders are asked to pay 24 cents for.

The lamp brackets fitted to some American machines are really a disgrace. They are too weak and some of them bend under the mere weight of a heavy lamp. Such unimportant and inexpensive attachments as the lamp bracket are nevertheless taken into account by purchasers. The American manufacturer should fit a solid lamp bracket. The Australian roads are not smooth, and when a machine is ridden at a good pace over rough roads it soon "plays up" with a weak bracket when a lamp weighing 1½ pounds is attached to it.

**Growth of Local Industry.**

It is remarkable how the local manufacturers have sprung up in Australia, more especially Victoria, where there are hundreds of them and the number is daily increasing. The majority build their machines from English parts and all seem to get a good living. They never build a wheel for less than \$60 and some charge more than \$110. There are also many firms springing up for the manufacture of tires, all of which are made on the double tube, Dunlop principle. One firm lists its tire, the Reliance, at \$12, a big cut under the Dunlop price.

Machines with wood rims do not find such a ready sale as the steel rimmed bicycles. The Westwood (steel) rim is in almost universal use. Ninety-nine purchasers out of a hundred specify Westwood rims for their mounts.

**Thumb Operated Australian Brake.**

The most popular brake on the market is what is known as the "thumb brake." It is fitted in the ordinary way to the fork crown, but instead of being made so that it is used from the handle grip it terminates at the head of the machine. The rider puts his hands on the middle of the handle bars close to the head and sets the brake with his two thumbs. The brake is exactly the same as the ordinary one in all other respects. It is just as effective as other lever brakes or even more so.

# THE BEST SELLING WHEEL



Nobody wants a poor wheel at any price, but thousands are looking for a high-grade wheel at a low figure. . . . There has never been anything fancy about CRESCENT prices, but the wheel itself has proven more than fancy painted it. The record, the quality and the price keep Crescents spinning.

CATALOGUE No. 2—FREE

...CHICAGO—WESTERN WHEEL WORKS—NEW YORK

NEW TESTIMONIALS EACH WEEK.

# MILWAUKEE TIRES

—PUNCTURE PROOF—

Pneumatic

Resilient



Single Tube

Easy Riding

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PRESENTING TESTIMONIALS.

JOHN A. DADD & SON, Druggists and Pharmacists  
221 GRAND AVENUE  
MILWAUKEE, WIS., June 9, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen: Replying to your favor of 6th inst., would say that the Milwaukee Patent Puncture-Proof Tire is O. K. I have ridden them since the beginning of the season. They ride easily and I have proven their puncture-proof qualities. Enclosed please find a tack which I found driven into the tire its full length, and it must have been in the tire some time, as you will see upon examination, as the head is ground off on one side. Yet on pulling this out I found no leakage and rode 25 miles that morning and have used it ever since without trouble of any kind. I am perfectly satisfied that they fill a long-felt want.  
Sincerely yours,  
(Signed) ROBERT M. DADD.

JOHN I. JENNINGS  
With Chicago Lumbering Company  
MANISTIQUE, MICH., November 21, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen: Having ridden a wheel fitted with your Puncture-Proof Tires the past season, I can recommend them to be what you claim for them—a strictly puncture-proof tire.  
Yours respectfully,  
(Signed) JOHN I. JENNINGS.

Representatives Wanted.  
Write for Prices and other Information.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.

# THE CYCLE AGE

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## REPAIR PRICE SCHEDULES

On another page there is presented a list of the repair prices prevailing in various towns in Illinois and Michigan. The towns vary in size from two millions to three hundred inhabitants. The smallest are Algonquin, Princeville, Atlanta and Fairfield in Illinois and Dayton, Central Lake, Paw-Paw, Alma and Mason in Michigan. The rest are of sufficient size to be supposed to afford all necessary facilities for economical bicycle repairing and sufficient patronage for developing the skill of repairmen.

In looking over the list it is at once apparent that great irregularities in prices prevail; that the same piece of work is estimated as being worth very much more in one town than in another. In several instances towns in which greatly varying prices are charged, are so close together on the map that it must happen frequently that cyclists from one of the towns visit the other town and have occasion to become acquainted with the variation in charges.

The moral effect of this condition is, of course, to prime the public thoroughly with the idea that all repair prices are arbitrary and extravagant and thereby bring about a general suspiciousness which ultimately forces prices all over to the lowest notch. When that point has been reached, as in Chicago, the ambition to do good work, on the part of the repairman, must gradually vanish and give way to a desire to do as little as is absolutely required for obtaining the depressed price which the customer grudgingly pays.

If a somewhat uniform scale of prices could be adhered to the downward tendency which has already gone too far, might perhaps be arrested and a higher standard of workmanship would eventually follow.

The experience with uniform price schedules has, however, not been altogether successful except in places far removed from the centers of the bicycle and parts-making industries, and before any attempt is made to reach a general and fair estimate of what each of the most common repair jobs is worth, the causes of previous failures should be looked into.

One of these causes has already been referred to. The schedules which have been adopted have been too purely local. The cyclist who went to a neighboring town with his repair readily found that the prices charged in his own town were founded more upon agreement between repairmen than upon the nature of each case and the work or skill required.

Comparison of the columns in the table in this issue will show that the prices are usually highest in the very small towns, where competition is readily restricted and where facilities, or skill, are at a low ebb. Price schedules prevailing in such places or in towns where very few bicycles are in use or where wages are much above the average, can hardly afford any criterion for computing a reasonable charge in places differently located.

Prices in western mining camps and in the extreme western states generally cannot probably be made subject to rules which would fit other localities nearer to the industrial centers.

In trying to arrive at fair and tenable estimates for such states as Illinois, Michigan, Ohio, etc., neither western prices nor village prices can be considered, and probably it might be found practicable to divide the entire country into four or five districts, each with its schedule suitable to its requirements. The village repairman can take care of himself. It cannot hurt the general trade if he charges somewhat in excess of an otherwise generally prevailing rate.

Reverting to the troubles with previous schedules it is first of all noticed that the repairmen's associations which promulgated them, in all cases when trouble ensued, elected to fix a

minimum rate to which the members were expected to adhere, under penalty for going below them. They were clearly intended to restrict competition and were in opposition not only to the public's desire for the cheapest possible repair, but also to the desires of those repairmen whose skill or facilities enabled them to turn work out below such fixed rates and yet earn a good profit.

In all probability the main cause for their inefficiency is to be found at this point. A repair price schedule should be flexible enough to suit existing conditions, and it should not be plainly inimical to the interests of the public who are expected to pay the charges.

Better results may be expected from a schedule which gives maximum prices for the information and protection of the public while leaving the repairman all the latitude which he may desire for showing special favors to customers by lower quotations when circumstances warrant them. Such a list of standard prices may be compiled, without fear of doing anybody injustice, from the information conveyed in the tables printed in this issue of The Cycle Age and others which will be printed later, by selecting the highest charge made and obtained for each job, respectively, in, say, three towns of large and medium size and making it the limit or standard for all repairmen in the same district.

A table compiled on this plan may be kept tacked up in a conspicuous place in every repair shop, accessible to the public, and while it would be futile to expect that the prices specified on it would always be obtained, it would indicate the spirit—if properly worded—of aiming to protect the cyclist against extortion and would gradually establish an upward tendency of prices toward the standard set, instead of the downward tendency which at present results from the declared antagonism between the trade and its supporters and which draws the repairman irresistibly toward botch work and trickery and diminishes the pleasure and safety of the cyclist.

## AGENTS CULTIVATING BANKERS

It is to be most earnestly considered if the relations between cycle dealers and their local bankers are of the nature and order calculated to work the utmost good and benefit to the business of the former, and inspire the latter with all desirable confidence. In other words, are cycle dealers such regular and valued customers of their local banks as their business would safely warrant? It is not believed that, as a general thing, they are. Yet they should be.

Retailers who can, without assistance, cash discount bills for sufficient stock to equip their stores in good shape for the opening of a heavy buying season, or who can even restock as necessity and convenience require, with their own unaided capital, are a very small minority among the whole. Installment selling, when practiced to any great extent, adds, for weeks or months, to the amount of capital required for the conduct of the business. Rent and office expenses, help and miscellaneous items, draw still more upon the same source, to say nothing about new improvements in the store, new equipment, perhaps greater stock than heretofore carried, etc. Any person or firm having command of enough ready and free capital to meet all current needs, and profit by every opportunity presented, usually puts it otherwise than in such a retail cycle store as would be denominated the average. Ergo, to seek outside assistance, at carefully determined times, and in conservative amounts, is perfectly natural. No citizen of a community knows and appreciates this fact better than the banker. Indeed, there is no reason why the credit of a cycle dealer at his bank should not be equal to the best.

Cordial and confidential relations with local bankers hold one opportunity of positive advantage which, strangely enough, seems never to have been brought to the particular attention of cycle tradesmen. To the bankers of a small city or town especially, the financial standing and responsibility of nearly every person in the community or vicinity is apt to be quite accurately known, and this intelligence may usually be drawn upon by borrowers on reasonable, timely and well-planned inquiry.

Do not be nonplussed if some of your own customers happen to discover that you are a borrower; the fact that the state of your credit and the estimation in which you are held, allows it, will do you more good than harm.

## BRAZING BY IMMERSION

### Open-Top Furnaces Operated Successfully—Even Distribution of Draft—Sunken Ash Pits

It is almost the universal custom in building immersion brazing furnaces to cover the top of the brick structure with tiles, or with a series of fire bricks, so that the heat and flame arising from the fire box will be directed horizontally across the crucible. Such construction has been deemed necessary that the brass in all parts of the crucible may be kept at a uniform heat and the cold drafts from above may not cool off the surface brass. There are two known instances



of furnace building in which the attempt was made to do away with the horizontally projecting cover of flame and heat by laying the upper brick work in such a fashion that the top of the furnace was tightly closed against the passage of heat. Both furnaces were failures.

Doubtless the only instance of successfully operating furnaces in which the common horizontal or slightly inclined cover tiles have been dispensed with is found in the three furnaces now in constant operation in the factory of the Black Mfg. Co., of Erie, Pa. The furnaces are of two styles, one of them having an ordinary brass founder's round crucible and being used for brazing small parts. The other two, which are used for brazing bicycle frames, have the regular oblong trough crucible. The crucibles in these two latter are supported in the common way above a fire box fed with coal and raked down through doors in the ends of the furnaces. The inner side walls of the furnaces are far enough apart to leave slightly more than one inch space between the side of the crucible and the walls. The brick work is not discontinued when it has reached the same height as the top of the crucible, but is extended upward for about six inches further, leaving a longitudinal opening six inches deep and slightly wider than the crucible along the top of the furnace. The flame and heat arising from the fire thus come upward alongside of the crucible in the same manner that they do in the Fulton, Chicago, Welland-Vale and other standard furnaces, but instead of being projected laterally when the upper edges of the crucible are reached, they continue to rise along the wall of the extended brick work until gradually lost in the constant exhaust draft in the hood above.

#### Tube Not Exposed to Fire.

The Black company has experienced no trouble in operating these furnaces, but is not prepared to say if more heat is required than would be necessary were

the cover tiles used. It is probable that the original reason for allowing the flames to rise unhindered and thus lose a part of their efficiency was to obviate passing the frame joints to be dipped through a cover of flame before immersion began.

The point thus taken by the company is a meritorious one from a theoretical standpoint but the value of this caution depends upon the decision of the question regarding the possible injury to the metal when it is lowered through a thin cover of flame, it being kept in mind also that the possibility is lessened in importance by the utility of the flame cover both in keeping the surface spelter in the crucible at the desired temperature and in preventing to a certain ex-



tent the oxygen in the air above from attacking the spelter and causing the volatile zinc in the alloy to burn out.

#### Round Crucible Banked With Coals.

The third furnace in the Tribune factory—that having the round crucible and used for brazing small parts—is quite simple in construction, the crucible being unsupported by aught else than the coal in the fire box, which is banked around the crucible to within an inch of its upper edge. The heat in this furnace covers the entire top of the crucible on account of the small size of the latter in comparison with the large uncovered fire surrounding it. In both styles of furnaces the crucibles have given satisfactory service for three weeks or more, the heat during use being maintained at a temperature sufficient to keep in a molten condition spelter containing from 65 to 75 per cent copper. The furnace with the round crucible presents a somewhat crude appearance in comparison with some of the more elaborate furnaces in use, but the operators state that it has given perfect satisfaction in every respect, and that it is very easily managed.

#### Distribution of Air Draft.

In each of the Tribune furnaces the incoming draft under the fire box is distributed in an original fashion. The inlet pipes are two inches in diameter and carry air under a six-ounce pressure to each end of the furnaces. From there the diameter of the pipes is reduced to one inch, these inch pipes extending inwardly below the fire box in a longi-

tudinal direction. The ends of the pipes are closed, but each is perforated along its upper side, there being on each pipe a series of one-eighth-inch holes. Direct air draft is thus furnished every part of the fire box, the distribution being much more even than if the draft were fed through a couple of comparatively large openings. The fuel used in all three of the furnaces is coke, it being preferred to anthracite coal by the operators because no clinkers form in the fire box when it is burned.

#### Ash Pit Below Floor Level.

The company realizing that systematic and easy handling of work is of as much importance in successful immersion brazing as well heated spelter, designed its furnaces so that the workmen would not be compelled to lift the frames and parts to be brazed to an undue height in dipping them. So the ash pits below the grates were sunk below the floor level, and an exterior pit in front of each furnace end left in the shop floor that the ashes from the interior pit might be conveniently raked from the furnace. This feature is new, and where dip brazing furnaces are installed in ground floor rooms of factories can be adopted with but little added expense or trouble. The top of the crucible can thus be lowered about six inches and the operator saved the work of raising each frame just that much.

#### Removing Impurities from Spelter.

But little attention is generally paid to the iron which scales from the frame tubing and mixes with the spelter in a crucible used constantly. Just what percentage of iron is thus mixed with the brass is hard to determine, and to what extent it becomes a detriment to the spelter is a question upon which no exact data has as yet been gathered. The Black company, however, in order to be on the safe side endeavors to flux out every second day what iron has been left in the brass, and uses in doing so a specially prepared flux which attracts the particles of iron and draws them to the surface, where they may be skimmed off with an ordinary ladle.

Dip brazing has proven an unqualified success in this factory and while the managers are too conservative to make bold statements concerning lightened brazing expenses beyond the matter of reduced fuel costs, they believe and say that the quality of the brazing turned out is so superior to the results from ordinary flame brazing that the immersion process is worthy of wide adoption regardless of the financial side of the proposition.

## BEEBE STRIKE ENDED

### Difficulty Settled by President of Bicycle Workers Union—Men Return to Work.

The piece workers in the factory of the Beebe Mfg. Co., of Racine, Wis., who went on a strike March 25 because demands of discontented frame filers had not been acceded to, have all returned to work, the matter having been amicably settled. The cause of the strike was the installation in the Beebe plant of a chemical frame cleaning process which took away part of the filers' work and so necessitated a reduction in the piece work scale for filing frames. The management states that at the time of the change the filers agreed to a readjustment of wages and were able to make as much, if not more, money per day than formerly. Later on, however, the filers became dissatisfied and declared that if their wages were not raised the entire factory force would be called out on a sympathetic strike. The demands of the filers were not granted and the men went out.

In effecting a settlement slight changes in the factory system of handling the work which is cleaned of part of its

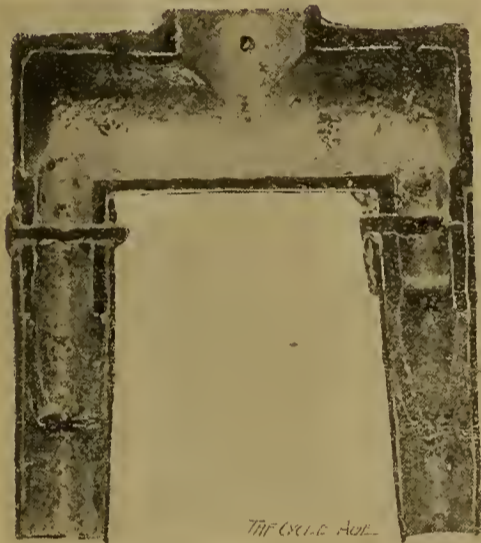


superfluous spelter by chemical means and afterward finished by filing, were suggested and adopted, so that the relations between the filers and their employers should be more pleasant in the future.

### DIP BRAZED FORK CROWN

Fork Sides Securely Brazed to Tubular Crown—  
Method Employed by Ariel Cycle Mfg. Co.

The accompanying half-tone illustration is a reproduction from a fork crown brazed by immersion and then sawed in two to note the flow of brass on the inside. The work was done in the factory of the Ariel Cycle Mfg. Co., of Goshen, Ind. Though the exact appearance of the coating of brass cannot be seen in the illustration, it was nevertheless noticed in the original that but few lumps formed on the inner walls of the tubular crown and tubing, the brass having filled the joints and then flowed out of the part as it was lifted from the crucible, leaving only a thin coating over the interior surfaces of the fork. The Ariel Com-



pany uses the dipping process exclusively in brazing fork blades to the crowns. The fork stems are afterward brazed to the crowns on an ordinary flame brazing table.

### MONEY IS PLENTIFUL

Local Industrial Conditions in Milwaukee Presage  
Large Sales of New and Second-Hand Cycles.

Milwaukee, April 3.—Bicycle riding will be more popular here this year than ever before if indications count for anything and the usual signs by which dealers are wont to base their prognostications upon do not fail. While there have been few actual purchases as yet, inquiries have been many and from people in all walks of life. There is one noticeable feature this season, and that is the fact that everybody seems to have plenty of cash. There are various reasons for this. The town has not quite recovered from the savings bank panic and the failure of several building and loan associations recently, so that the people have little confidence in these institutions. This, together with the fact that factories and shops have been running full nearly all winter at better wages than for the past five years, has operated to give Milwaukee people, particularly the working classes, a surplus of cash such as they have not known for years, and in consequence bicycle dealers are anticipating a good season.

Another peculiar feature and one that shows that hundreds of people will ride this year who never rode before, is that most of the dealers are requested to figure on second-hand machines. Dealers came out about even on second-hand ma-

chines last year, but they are expecting to make money out of the trade this year because there have been numerous inquiries with but small supply. Agents will allow only what they think they can sell the old machines for, in making trades. Second-hand bicycles at from \$7 to \$15 go fast, though as high as \$20 has been received for a machine of the vintage of '96 in good condition.

A careful canvas of the cycle repair shops and the smaller establishments reveals that Milwaukee has exactly eighty-three places where sick wheels can be cured. As a result of the work that has been done in the interests of the Milwaukee Repairmen's Protective Association, seventy-three out of the number have agreed to join the association and a committee is now hard at work mapping out a constitution, one that will be sufficiently effective in guaranteeing its members protection by punishing those who do not observe the rules and regulations. At the present time nearly every dealer has his own list of prices, and no two are alike, which is demoralizing to the trade. A schedule will be made up at the meeting this week which will be uniform and which will determine what prices shall be charged during the season.

### VARIABLE PRICES A BOON

Peculiar Conditions of Repair Trade in Lynn Justify  
Refusal to Adopt Standard Prices.

Lynn, Mass., April 3.—The issue of the Cycle Age for March 23 conveyed much information of the adoption of repair and stock schedules by cycle dealers in various parts of the country, and in the same issue is mentioned a single instance in which friendly co-operation to insure uniformity of prices was apparently refused. Had the last named fact been quoted as occurring in any other considerable city in New England except Lynn, surprise might have been naturally occasioned, but to those who are sufficiently familiar with the peculiar situation of this ancient town, and its trade relations to the surrounding territory, the refusal to so combine assumes a certain form of reasonableness.

Lynn is a great manufacturing center, a majority of whose inhabitants are workers in the many shoe and other factories located in or near the city. Wages are not high, living is cheap, and almost the entire business of the town feels the influence of the humble means at the command of the great mass of the people. Selling stocks of all kinds are of lower average grades than those found in the wealthier and more aristocratic localities immediately adjoining.

Another feature having an important bearing on the case is the fact that, to a considerable extent, the moneyed people of Lynn make their purchases in Boston and elsewhere, leaving the local business very largely in the hands of residents of moderate means. As a result, the bicycle tradesman who expects to cater to all-the-year-round home patronage, either selling, renting or repairing, must content himself with small charges and meager profits—which are, however, seldom sacrificed on the altar of bad credit.

The transient patronage falling to the lot of the cycle dealers of Lynn is, however, of a most radically different nature. Through that city passes, throughout the summer-time, undoubtedly the most constant stream of pleasure-seeking cyclists to be seen on this continent, if not in the whole world. It is the converging point for all the highways and railroads northeastward from Boston. The wagon roads from East Boston and Winthrop, across the Saugus meadows, take you inevitably there, as do also those lead-

ing from Charlestown, Cambridge, Somerville, Medford and other suburbs, in the same direction, it is on the direct route to Beverly, Salem and Marblehead—to Portsmouth, Portland, the Maine coast and the White mountains, and it is the background of the popular peninsula of Nahant, to which hundreds of visitors go by boat daily. The whole region is, from May to October, a veritable cluster of resorts. It is the harvest season for the cycle men of these localities—many of whom could not exist on the sluggish home patronage alone. At all hours of the day and night—and especially on Sundays—punctures, breakdowns, etc., occur, and to the nearest repair shop come the bothered riders, every one of them anxious that his piece of work shall be done without delay.

It is only reasonable to suppose that, having such widely different classes of patrons to deal with, absolute uniformity in prices—such as would be rendered obligatory by a general agreement among competitors to that effect—could not be adhered to save at a loss of a considerable sum to each dealer during the season. It is perfectly right, both in theory and practice, to charge slightly higher prices for work done under unfavorable conditions. The passing rider who asks or insists that you shall drop your work at the sound of his footstep on the door-sill and attend to his wants immediately, does not, as a rule, object to paying reasonably for the inconvenience his job involves over another who may bring a piece of work in and call for it a day or two later. This transient rider very likely says to himself: "This puncture (or break-down) is unlucky for my purse, but it don't happen every day," and goes on his way rejoicing. That Sunday and late night work deserve additional compensation no one competent to judge will deny. Of this the repairmen of Lynn and vicinity have a great deal to do, perhaps more than those of Salem, Beverly, Danvers, Peabody and other surrounding towns combined. For this reason they do not feel exactly like binding themselves to a uniform scale of prices, suited necessarily much more to others than to themselves. The purpose of the present communication is to explain how the "Refusal to Combine," noted in The Cycle Age, was not prompted on the part of the cycle dealers of Lynn by any unwillingness to consider the welfare of others together with their own, but to show the unusual conditions with which these tradesmen have to deal. VERITAS.

### Stamp Drafts When Issuing.

Washington, April 3.—The following letter has been extensively circulated over the signature of a western bicycle manufacturing company, viz:

Collection drafts, according to a recent decision of the Treasury Department, become subject to the war tax stamp duty upon payment only, and if payment is refused no stamps are required to be attached to papers of this kind.

We, therefore, ask you to affix the proper stamp to within draft and cancel same for us when paid and add amount to your collection charges.

The attention of the commissioner of internal revenue has been called to the above letter, and he says there is no foundation for such a statement, no such ruling having been made. On the contrary, there has been a uniform ruling to the effect that all drafts must be stamped at the time they are issued to the drawer. Every person, firm or corporation circulating the above notice is promoting and advising a violation of the war-revenue act, and collectors of customs throughout the United States have been called upon to aid the department in the suppression of this or any similar notice.

# IRREGULAR REPAIR PRICES.

ILLINOIS.

	Chicago.	Streator.	Blue Isl'd.	Kankakee.	Ottawa.	Princeton.	Algonquin.	Fairfield.	Atlanta.	Princeville.
<b>Frame Repairs.</b>										
Replacing top tube . . . . .	\$2.00	\$2.50	\$2.00	\$2.50	\$2.00-2.50	\$1.50	\$3.50	\$2.50	\$2.50	\$2.00-2.50
“ lower tube . . . . .	2.00	2.50	2.50	2.50	2.00-2.50	1.50	3.50	2.50	2.50	2.00-3.00
“ top and bottom tubes . . . . .	4.00	4.00	4.00	4.00	3.00-4.00	2.00	6.00	4.00	4.00	4.00-4.50
“ one rear fork side . . . . .	1.75	2.00	1.75	2.25	1.75	1.00	2.50	2.50	2.00	2.00
“ two rear fork sides . . . . .	3.00	3.50	2.50	3.75	3.00	1.50	4.50	4.00	3.00	3.50
“ seat post mast . . . . .	2.50	3.50	1.50-2.75	3.50	2.00-2.50	1.75	....	3.50	3.00	2.50-3.00
“ head . . . . .	1.50	2.00	3.00	3.00	2.00	1.00	3.00	2.50	2.50	2.00-2.50
“ head frame connection . . . . .	1.00	2.00	1.75	2.00	1.50-2.00	.75	....	2.00	2.00	.75-1.00
“ seat post connection . . . . .	1.25	3.00	1.00	3.00	1.50-3.00	.75	....	3.00	2.50	1.00-1.50
“ crank hanger bracket . . . . .	3.25	4.50	3.00	5.00	3.00 up	2.00	....	6.00	5.00	3.00-5.00
“ one rear fork end . . . . .	.75	1.50	1.00	1.50	1.50	.75	1.00	1.75	1.50	.75-1.00
“ two rear fork ends . . . . .	1.50	2.50	1.50	2.75	2.75	1.25	1.75	2.75	2.50	1.50
Repairing unbrazed joint . . . . .	.50	1.50	1.00-3.00	1.00	1.00 up	.50	....	1.00	1.00	.50-1.00
Lining up frames . . . . .	1.50	1.50	.50-2.00	.50-2.00	.75-1.50	1.00	1.00-1.50	1.00	1.00	.50-.75
Splicing tube . . . . .	1.00-1.50	1.00	1.50	.75	1.50	1.00	2.00	....	2.00	.75-1.00
Repairing dents, each . . . . .	....	....	....	....	....	....	....	.50	....	....
<b>Rims and Spokes.</b>										
Wood rim, common, 1½ to 1¾ inches..	1.25	1.75	1.25	1.50	1.50	1.50	1.50	2.00	1.75	1.75-2.00
“ “ extra quality . . . . .	1.50	2.50	1.75	2.25	2.00	2.00	2.00-3.00	2.75	2.25	2.00-2.25
“ “ racing or tandem . . . . .	1.75	2.50	1.50	2.00	2.25	2.00	2.50	3.00	2.50	2.00
“ “ detachable tires . . . . .	1.75	2.50	2.25	3.00	2.25	2.00	2.50	4.00	2.50	2.25-2.50
Metal rim . . . . .	1.25	3.00	....	2.25	2.50	1.75	....	4.00	2.00	....
Truing wheels, each . . . . .	.50	.25-.50	.20	.50-1.00	.25-.50	.30	.25-.75	.25-.50	.25 up	.25
Wood rim and spokes . . . . .	1.75	3.50	2.25	1.50	3.00 up	3.00	2.50	3.25	3.00	2.50
Respoking without rim . . . . .	1.00	2.00	1.25	1.00	2.00	2.50	2.00	2.50	1.75	.75-1.00
One spoke . . . . .	.10	.25	.10	.25	.25	.15	.25	.25	.15	.25
Two spokes . . . . .	.20	.40	.20	.35	.35	.25	.35	.40	.25	.35
Each additional spoke . . . . .	....	.10	.05	.10	.05-.10	.10	.10	.10	.10	.05-.10
<b>Chain and Mud Guards.</b>										
Silk lacing on mud or chain guard . . . . .	.25	.75	.40	1.00-1.50	.35-.50	.50	.35-.75	1.00	.40	.25-.40
“ “ on both guards . . . . .	.50	1.25	.75	2.00	.75	.85	.75-1.25	1.50	.75	.75
Wood mud guard on ladies' bicycle . . . . .	1.00	1.00	1.00	.75	.75	1.00	.60	.75	1.00	.75
“ chain guard on ladies' bicycle . . . . .	1.75	1.00	.75	.75	1.00	1.00	.50	.75	1.00	.50
<b>Nickel Plating.</b>										
Frame and forks . . . . .	8.00	15.00	5.00	....	....	....	....	....	....	....
Handle bar . . . . .	.50	1.00	.50	....	....	....	....	.75	....	.75
Large sprocket . . . . .	.50	.75	.50	....	....	....	....	.75	....	.25-.50
Medium sprocket . . . . .	.35	.50	.50	....	....	....	....	.50	....	.25-.50
Small sprocket . . . . .	.25	.25	.40	....	....	....	....	.35	....	.25
Fork crown and tips . . . . .	.75	.75	.60	....	....	....	....	.75	....	.75
“ “ only . . . . .	.50	.50	.50	....	....	....	....	.50	....	.50
Spider crank . . . . .	.20	.40	.25	....	....	....	....	.50	....	.50
Pedal . . . . .	.50	.50	.25	....	....	....	....	.50	....	.25
Hub . . . . .	.60	.40	.25	....	....	....	....	.50	....	1.00
Crank . . . . .	.15	.25	.20	....	....	....	....	.30	....	.25-.35
Seat post . . . . .	.20	.25	.25	....	....	....	....	.30	....	.25-.35
Small parts and fittings, each . . . . .	.05-.10	.10-.25	.05	....	....	....	....	.20	....	.05-.15
<b>Enameling.</b>										
Frame and forks, any dark color . . . . .	2.25	3.00	1.75	2.50	3.00	2.50	....	3.50	3.00	2.50-3.00
“ “ “ any light color . . . . .	3.00	3.50	2.50	3.50	3.50	3.00	....	4.50	4.00	3.00
“ “ “ white . . . . .	3.50	6.00	3.50	.50	4.00	3.50	....	7.00	5.00	5.00
Front forks . . . . .	.50	1.00	.50	.75	2.00	.75	....	1.50	1.00	1.00
Striping frame, plain, extra . . . . .	....	.50	.50	.50	.75	.50	....	.75	....	.50-.75
“ and decorating, extra . . . . .	....	1.00	.75	1.00	1.00	1.00	....	1.25	....	.75-1.00
Enameling rims, each . . . . .	.25	.75	.25	.50	.75	.75	....	.50	.25	.35
“ two rims . . . . .	.50	1.00	.50	1.00	1.25	1.00	....	1.00	.50	.50
Air drying frame and fork . . . . .	....	....	....	....	....	....	....	....	....	....
<b>Tire Repairs.</b>										
Punctures, single tube tires, each . . . . .	.35	.25	.25	.25	.15-.35	.25	.25	.25	.25	.25-.50
“ double tube tires, each . . . . .	.50	.40	.40	.35	.50	.50	.40	.35	.25	.35
Vulcanizing, small patches . . . . .	.50	.50	.50	....	.50	....	....	.50	.50	.50
“ large patches . . . . .	.75	1.00	.75	....	.75	1.00	....	.75-1.50	.75 up	.75-1.00
Cementing on tires, each . . . . .	.25	.25	.20	.25	.15-.25	.25	.35	.25	.25	.25
New valve . . . . .	.25	.25-.50	.25	.25	.35	.15	.25	.35	.25	.25
“ and stem . . . . .	.50	.50	.50	.35	.50	.30	.50	.40	.40	.40
“ stem . . . . .	.25	.25-.50	.25	.25	.35	.25	.35	.10	.25	.25
<b>General Repairs.</b>										
Front axles, each . . . . .	.35	.25-.50	.60	.20-.35	.50	.50	.50	.50	.25	.25-.40
“ wheel cones, each . . . . .	.35	.50-1.00	.60	.50-1.00	.75	.50	.50-.75	.50-.75	.50 up	.50-.75
“ wheel cups . . . . .	.25	.50-1.00	.50-.75	.50-1.00	.50	.60	.75	.75	.50	.75
Front or rear wheel nuts, each . . . . .	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
Rear axles, each . . . . .	.40	.50	.60	.25	.50	.70	.60	.50	.35	.35
“ wheel cones . . . . .	.40	.50-1.00	.60	.50-1.00	.75	.50	.75	.75	.75	.35-1.00
“ wheel cups . . . . .	.35	.75-1.00	.60	.50-1.00	.75	.70	.75-1.00	.75	.75	.75-1.00
Crank hanger cones . . . . .	1.00-1.25	.75-2.00	.50-.75	.75-1.50	1.00	.80	1.00-1.50	1.50	.75 up	1.00
“ cups . . . . .	.75	.75-1.50	.50-.75	.75-1.50	.75	.80	.75-1.25	1.50	.75 up	.75-1.00
“ axles . . . . .	1.50	2.00-4.00	1.50-1.70	1.50-1.00	1.50	1.00	1.50-2.50	1.50-3.00	1.00 up	1.00-2.00
Straightening crank . . . . .	.40	.15-.25	.20	.25-.75	.15-.25	.25	.10-.25	.25	.25	.25
Straightening pedal pin . . . . .	.40	.25	.20	.25	.25	.40	.25-.50	.25	.25	.15-.25
Cleaning bicycle inside and out . . . . .	1.50	2.00	1.00	1.50	1.00	1.50	1.00	2.00	1.00	1.00-1.50
Cleaning bearings . . . . .	....	....	....	1.00	....	....	....	1.25	....	....
Cleaning crank hanger . . . . .	....	....	....	....	....	....	....	.40	....	....
Pedal rubbers, set . . . . .	....	....	....	....	....	....	....	....	....	....
Cementing grips . . . . .	....	....	....	....	....	....	....	....	....	....
Handle bar expander . . . . .	....	....	....	....	....	....	....	....	....	....
<b>Front Fork Repairs.</b>										
Lining up forks . . . . .	.50 up	.50-.75	.60	.25-.75	.50-.75	.50	.50-.75	.50	.50	.25-.50
One new side . . . . .	1.00	1.75	1.00	1.50	1.75	1.00	1.50-2.00	1.50	1.75	1.00-1.50
Two new sides . . . . .	1.75	2.50	1.75	2.50	3.00	1.75	3.00-3.50	2.50	3.00	2.50-3.00
New stem . . . . .	2.00	1.50	1.50	1.50	2.00	.75	1.50	1.50	2.00	1.50-2.00
New arched crown . . . . .	2.50	2.50	1.50	2.50	3.00	1.50	1.50	2.50	2.00	1.50
One fork end tip . . . . .	.50	1.00	.75	.75	1.00	.85	.75	1.25	.75	.75
Two fork end tips . . . . .	.75	2.00	1.25	1.50	1.50	1.50	1.25	2.00	1.25	1.25
Complete forks, arched crown . . . . .	4.00	4.00-5.00	4.00	5.00	4.00	3.00	5.00	4.50	5.00	3.00-4.00
<b>Sprocket and Crank Repairs.</b>										
Making rear sprocket, 7-8-9-10 teeth . . . . .	1.25	1.00-1.50	1.25	....	1.50 up	....	....	1.50	.75 up	.75-1.25
New front sprocket . . . . .	....	....	1.50-3.00	....	....	....	....	....	....	....
Truing front sprocket . . . . .	.50	.50	.25	.50-.75	.25 up	.50	.25-.75	.50-.75	.25	.25
Crank . . . . .	....	....	....	....	....	....	....	....	....	....
Crank pin . . . . .	....	....	....	....	....	....	....	....	....	....
<b>Chain Repairs.</b>										
Putting in one link . . . . .	.25	.25	.20	.25	.25	.15	.25	.20	.25	.25
Cleaning and lubricating . . . . .	.25	.25	.20	.50	.15-.50	.20	.10-.50	.10	.25	.25
Taking out one link . . . . .	.25	.15	.20	.10	.15	.10	.10	.10	.10	.10

# IRREGULAR REPAIR PRICES.

MICHIGAN.

	St. Clair.	Iron M'n.	Leslie.	Paw Paw.	Coldwater.	Dayton.	Alma.	Gd. Rapids.	Mason.	Gen. Lake.
<b>Frame Repairs.</b>										
Replacing top tube . . . . .	\$2.50	\$3.00	\$2.25	\$2.50	\$2.50	\$2.00	\$2.75	\$2.00	....	....
" lower tube . . . . .	2.50	3.00	2.50	3.00	2.50	2.50	2.75	2.00	....	....
" top and bottom tubes . . . . .	4.50	4.50	4.50	....	3.50	4.00	....	....	....	....
" one rear fork side . . . . .	2.00	1.00	2.50	1.50	1.50	2.00	1.50	....	....	....
" two rear fork sides . . . . .	3.75	1.50	5.00	2.50	3.00	4.00	....	....	....	....
" seat post mast . . . . .	3.00	3.00	2.75	2.50	2.50	3.50	....	....	....	....
" head . . . . .	2.50	3.00	2.50 up	....	3.00	2.50	....	....	....	....
" head frame connection . . . . .	2.50	.75	2.00	....	2.50	2.00	....	....	....	....
" seat post connection . . . . .	3.25	.75	2.75	....	2.50	3.00-3.50	....	....	....	....
" crank hanger bracket . . . . .	5.00	4.00	4.50 up	....	4.50	4.00-5.00	....	....	....	....
" one rear fork end . . . . .	1.50	.75	1.00	....	1.50	1.50	....	....	....	....
" two rear fork ends . . . . .	2.50	1.50	2.00	....	3.00	2.75	....	....	....	....
Repairing unbrazed joint . . . . .	1.50	1.50	....	1.00	1.00	.50-1.50	.50	....	....	....
Lining up frames . . . . .	1.75	1.50 up	.75 up	.75-1.50	.50	1.00-2.25	.25-1.00	....	....	....
Splicing tube . . . . .	1.50	1.50 up	.75	1.00	1.50	1.00-2.00	1.00	....	....	....
Repairing dents, each . . . . .	....	....	....	....	....	....	....	....	....	....
<b>Rims and Spokes.</b>										
Wood rim, common, 1½ to 1¾ inches..	1.50	1.50	2.00	1.50	1.50	1.50 up	1.50	1.50	1.50	1.75
" " extra quality . . . . .	2.00	2.50	2.25	2.00	....	2.00-2.50	....	2.00	1.75	2.00
" " racing or tandem . . . . .	2.50	3.00	....	....	....	2.50-2.75	....	....	....	2.50
" " detachable tires . . . . .	3.00	3.00	2.50	2.00	....	2.50-3.00	....	2.00	1.75	2.00
Metal rim . . . . .	3.50	3.00	2.00	....	1.50	1.50-2.00	....	....	....	2.00
Truing wheels, each . . . . .	.50	.50 up	.40	.15-.35	.25	.25-.75	.25-1.00	.25 up	.15-.40	.25-.50
Wood rim and spokes . . . . .	3.50	4.00 up	3.00	2.50	3.00	2.75	....	....	2.50	2.50
Respoking without rim . . . . .	2.50	2.00	1.50	....	2.50	1.25	....	1.50	1.50	2.25
One spoke . . . . .	.25	.25	.15	.15	.15	.25	.15-.35	.15	.15	.15
Two spokes . . . . .	.40	.35	.25	.25	.25	.35	....	.20	.25	.25
Each additional spoke . . . . .	.10	.10	.05	.10	.10	.10	.10	.10	.05	.10
<b>Chain and Mud Guards.</b>										
Silk lacing on mud or chain guard . . . . .	1.00	1.00	.65	.35	.50	1.00	.25-.75	.50-.75	....	.50
" " on both guards . . . . .	1.50	1.25	1.00	.75	.75	1.50	.75-1.25	....	....	.75
Wood mud guard on ladies' bicycle . . . . .	.75	.75	.75	.75	.75	.75	.50	....	....	1.00
" chain guard on ladies' bicycle . . . . .	.75	.50	.75	.75	.75	.75	.75	....	....	1.00
<b>Nickel Plating.</b>										
Frame and forks . . . . .	14.00	....	....	....	....	....	....	.75	....	....
Handle bar . . . . .	1.25	1.00	....	....	....	....	....	.50	....	....
Large sprocket . . . . .	1.00	.50	....	....	....	....	....	....	....	....
Medium sprocket . . . . .	.60	.50	....	....	....	....	....	....	....	....
Small sprocket . . . . .	.40	.25	....	....	....	....	....	.25	....	....
Fork crown and tips . . . . .	1.00	.75	....	....	....	....	....	....	....	....
" " only . . . . .	.60	.50	....	....	....	....	....	....	....	....
Spider crank . . . . .	.50	.50	....	....	....	....	....	....	....	....
Pedal . . . . .	.60	.50	....	....	....	....	....	....	....	....
Hub . . . . .	.50	.50	....	....	....	....	....	....	....	....
Crank . . . . .	.35	.50	....	....	....	....	....	.25	....	....
Seat post . . . . .	.35	.50	....	....	....	....	....	.25	....	....
Small parts and fittings, each . . . . .	.15-.60	....	....	....	....	....	....	....	....	....
<b>Enameling.</b>										
Frame and forks, any dark color . . . . .	3.00	2.50	....	....	2.00	1.50-2.50	2.75	3.00	....	....
" " " any light color . . . . .	3.50	3.50	....	....	....	2.50-3.50	2.75	....	....	....
" " " white . . . . .	5.00	5.00	....	....	5.00	5.00	....	....	....	....
Front forks . . . . .	1.00	.75	....	....	....	.75	....	....	....	....
Stripping frame, plain, extra . . . . .	.75	.75	....	....	.50	.50	....	....	....	....
" and decorating, extra . . . . .	1.25	1.00	....	....	....	1.00	.50	....	....	....
Enameling rims, each . . . . .	.75	.50	....	....	.25	.50	.25	....	....	....
" two rims . . . . .	1.00	1.00	....	....	.50	1.00	.50	....	....	....
Air drying frame and fork . . . . .	....	....	....	....	....	1.00	....	....	....	....
<b>Tire Repairs.</b>										
Punctures, single tube tires, each . . . . .	.25	.25	.25	.25-.50	.35	.25	....	.25	.25	.25
" double tube tires, each . . . . .	.35	.50	.10 up	.25	.35	.50	.25 up	....	.25	.40
Vulcanizing, small patches . . . . .	.50	.50	.50	.50	.50	.50	.50	.50	.50	....
" large patches . . . . .	1.00	.75 up	.75	.75	.50-1.00	1.00-1.50	.75	....	.75	....
Cementing on tires, each . . . . .	.15	.25	.25	.15	.25	.25	.25	.15	.20	.25
New valve . . . . .	.20	.25	.25	.10	.25	.15	.25	.25	.25	.25
" and stem . . . . .	.35	.50	.40	.35	.50	.25	.40	.40	.35	.50
" stem . . . . .	.20	.25	.15	.25	.35	.10	.25	.25	.25	.40
<b>General Repairs.</b>										
Front axles, each . . . . .	.25	.25-.35	.50	.50	.35	.25	.50	.50	.50	....
" wheel cones, each . . . . .	.50-1.50	.60 up	.75	.50-.60	.50	.25-1.00	.35-.50	.50 up	.40	....
" wheel cups . . . . .	.50-2.00	.35 up	.25-.50	....	.35-.50	.20-.40	.25-.75	.50 up	.35	....
Front or rear wheel nuts, each . . . . .	.15	.10	.10	.10	.10	.10	.10	....	.10	....
Rear axles, each . . . . .	.40	.35-.50	.50	.40	.35	.25-.35	....	.50	.75	....
" wheel cones . . . . .	.75-1.50	.65-.75	.75	.75	.50	.35-1.00	....	.50 up	.50	....
" wheel cups . . . . .	.75-1.50	.50	....	....	.35-.50	.25-.50	....	.50 up	.35	....
Crank hanger cones . . . . .	.75-2.00	1.00 up	.75-1.00	.85	.50	.50-1.50	.75-1.50	.50 up	.50-.75	....
" cups . . . . .	.75-2.00	.50 up	.50-.75	....	.50	.35-.50	.50-1.25	.50 up	.50-.75	....
" axles . . . . .	2.00-5.00	2.00 up	1.00-1.50	.75 up	1.25-1.75	.75-1.00	1.75	1.00	2.00	....
Straightening crank . . . . .	.25-.75	.50 up	.25	.15	.25	.25	.25	....	.25-.50	....
Straightening pedal pin . . . . .	.15-.35	.25	.10	.15	.25	.15-.35	.35	....	.10-.35	....
Cleaning bicycle inside and out . . . . .	1.00-2.00	1.50	1.00	1.00	1.00	1.20-2.00	1.00-1.50	1.00	1.00	....
Cleaning bearings . . . . .	....	....	....	....	....	....	....	....	....	....
Cleaning crank hanger . . . . .	....	....	....	....	....	.25	....	....	....	....
Pedal rubbers, set . . . . .	....	....	....	....	....	....	....	....	....	....
Cementing grips . . . . .	....	....	....	....	....	.25	....	....	....	....
Handle bar expander . . . . .	....	....	....	....	.50	....	....	....	....	....
<b>Front Fork Repairs.</b>										
Lining up forks . . . . .	1.50	.50 up	.50	....	.50	.25-1.00	.25	.35	....	....
One new side . . . . .	1.00	1.50	1.00	1.25	1.50	1.75	1.25	1.00	....	....
Two new sides . . . . .	1.75	2.00	2.00	2.00	3.00	2.50	2.00	....	....	....
New stem . . . . .	1.00	1.00	2.00	1.25	1.50	1.50	1.25	1.00	....	....
New arched crown . . . . .	2.50	2.00	2.00	1.50	2.00	2.75	1.50	1.00	....	....
One fork end tip . . . . .	.75	.50	.75	.50	1.00	1.00	.50	.75	....	....
Two fork end tips . . . . .	1.50	1.00	1.50	.75	2.00	1.75	1.00	....	....	....
Complete forks, arched crown . . . . .	5.00	4.50	3.50	3.50	4.00	4.00-5.00	3.00	....	....	....
<b>Sprocket and Crank Repairs.</b>										
Making rear sprocket, 7-8-9-10 teeth . . . . .	1.75	1.50	1.50	1.00	1.00	1.00-1.50	.75	1.00 up	....	....
New front sprocket . . . . .	....	.75	.25	....	.25	.25-.75	.25	1.50-2.00	....	....
Truing front sprocket . . . . .	.60	.75	....	....	....	....	....	.75	....	1.00
Crank . . . . .	....	....	....	....	....	....	....	.25	....	.25
Crank pin . . . . .	....	....	....	....	....	....	....	....	....	....
<b>Chain Repairs.</b>										
Putting in one link . . . . .	.20	.25	.25	.20	.15	.15	.25	.20	.10	.25
Cleaning and lubricating . . . . .	.35	.15	.25	.25	.10	.35	.25	....	.10	.25
Taking out one link . . . . .	.20	.15	.10	.15	.10	.15	.10	....	.10	.10

## PLAIN TALK TO DEALERS

### The Nature of the Public Demand is Regulated By the Work Methods of Makers and Sellers

What is the immediate future of the retail cycle trade? What influences are at work for the good, and what for the ill of the trade? What mistakes have been made in the near-by past, and what should be learned therefrom? I will not say "What shall we do to be saved?" for we are not yet lost, but we are, many of us, on the wrong track, and now is the time of all times, now the moment of calm preceding the rush of spring selling when serious thought should be given these questions which lie so close to the purses of the retailers everywhere. Let every dealer metaphorically take himself one side to some quiet spot and talk things over frankly with himself. Don't try to fool yourself; don't try to reassure yourself with vague, undefined hopes that "this year everything will be all right;" don't leave your future actions and policy for chance to determine. You can't afford to do any of these things. The last man on earth who you can afford to "fool" is yourself.

The selling of bicycles is a business, and like any other business must be carried on on business principles and by business men to be successful. The man who is successful in other lines will be successful with bicycles if he will apply the plain rules of business to the wheel line.

#### The Eternal Cry is "Cheaper Wheels!"

So much for generalities, now to get down to business talk. What, if anything, is wrong with the trade today? Is cycling decreasing? No. Has public buying decreased? No. Is the market overcrowded? Not so much as formerly. Are prices too high? Well, hardly. Are times hard? Decidedly not. What is wrong, then?

Well, for one thing, you, Mr. Dealer, have thoughtlessly allowed yourself as a class to be led into the craze, born of a scalper sired by a department store and espoused by the auctioneer, for crying for "cheaper wheels, cheaper wheels, cheaper wheels!" And when you got them still again renewing the cry, seemingly feeling that price was the only consideration and that quality cut no figure either for you or your patrons. Now you for two years past have had your cheap bicycles, and what good have they done you? Have they increased your profits? Have they added to your prestige? Have they made friends for you? Have they given you less trouble than you formerly had?

Right here I want to say that, in common with any well informed person, I believe in honest priced bicycles, not fictitious prices, but first of all good bicycles, then fair prices. By "cheap" is meant any cycle retailing for \$25 or less. Reliable cycles are not being made or sold at such prices.

#### Analyzing the "Public Demand."

But you say: "The public demands these cheap bicycles." Nonsense. The public demands whatever the trade and dealer teaches it to demand. Have you forgotten that it is only two years since this same much talked of public demand was for bicycles at \$100?

Was the public ever better satisfied than at that time? And why? Simply because they were furnished good bicycles for their money. True such a price would be unfairly high for the conditions under which cycles are now made and

marketed; but it possessed one great advantage for the public that it was to a large extent a guarantee of first-class goods, for there did not exist the present temptation, or perhaps I may better say necessity, for makers to tamper with the quality of their product.

Have you forgotten that the bicycle trade was developed from nothing at all up to its most prosperous condition and maximum volume at from \$100 to \$150? The public did not demand anything below these admittedly abnormal values until the trade taught them to. The public today does not demand anything below a fair price for a reliable article only as it is told to do so by some short-sighted dealer or some scalper that the Faque is "just as good" and it is only \$18.67. That is the kind of talk that is wholly responsible for all this much talked of demand for cheap machines, and without such talk there would be no such demand, and every honest dealer who is unwise enough to talk such things to his trade and to supply that class of goods is his own worst enemy, and the scalper's best friend.

The great bulk of the public really and honestly desire to purchase reliable bicycles; they do not want and, if properly informed, will not buy trashy stuff. Not one man in one hundred will knowingly buy a snide bicycle. How many hundreds and thousands have innocently bought such stuff, and been imposed upon to their disgust and anger? It is pretty safe to say that no dealer ever fooled a customer the second time in this matter of selling him some one of these wonderful "just as good" machines.

Did you ever know a man who bought a cheap bicycle the second time? Did you ever see an experienced rider using one of them? Do well informed people ever throw away their money on this kind of trash? Can a reputable retailer afford to sell such stuff under any circumstances?

#### Philosophy of "Just as Good."

Supposing the majority of retail jewelers should at once commence telling their customers that some of the \$1 and \$1.50 watches were "just as good" as an Elgin or Waltham. Well informed people would carefully keep away from any store where they had been told such a palpable untruth, and would make their purchases elsewhere. But the uninformed would in large numbers believe and buy. And what then? First, the watch market would be upset; second, the dealers would find their trade running toward a class of goods on which the percentage of profit might be all right, but the aggregate in dollars and cents would not pay them; third, the deluded people who bought those "just as good" watches would have their mistake brought home to them, more or less forcefully, and would buy another and better watch of some other dealer. There is nothing particularly new in this argument, but it is so true that it has always been admitted as applying to all lines of trade, although truth compels the statement that in the mad rush to get under an imaginary cover a large part of the retail cycle trade seem to have forgotten this and many other truths which it might have been better to carefully remember.

You have probably often realized that the department store and the cheap cash

order house are the enemy of the legitimate retailer of bicycles. Did you ever stop to think that the maker of the very low priced bicycle is in the same class; that all three alike and together are joined in a short-sighted, reckless scramble to educate the public to expect constantly lowering prices, and to be satisfied with constantly decreasing quality? The only inducement they offer a buyer is price, and their business depends on being able to offer lower and lower prices day after day; and when they reach bottom and have nothing more to offer, their argument is gone and their trade lost. The retailer who tries to follow their lead suffers, for they are always ahead of him and getting the best of him, and pretty soon he finds his profit, his reputation and his trade all gone, and all to the glory of the scalper.

#### Impossible to Beat the Scaplers.

You cannot beat these people at their own game, and the more you try it the more you help them and hurt yourself. You haven't their opportunities for picking up and marketing large job lots of trashy bicycles, and, even if you had, do you want to do it? Do you want to become identified with that line of trade? Would it not ruin your standing in all your staple lines? Do you want to help these people educate the public to their ideas, and thus induce buyers to expect and demand what you can never profitably supply?

Your present profit and your future business life depend upon actively opposing those who would undermine your trade, and who will cause you to tear down and ruin what you have built up by past work if you attempt to beat them at their own game. Follow the other course. Expend your effort and your talk in teaching and showing the public the difference between good and bad bicycles; in making it clear that first-class goods cannot be had for third-class prices in bicycles any more than in other lines. Appeal to the reason of your customers; call on their common sense; show them the advantage of dealing with a responsible dealer who has the interest of his customers at heart, and who will be on hand when wanted; let them see the value of buying the product of a responsible manufacturer whose goods are known to be as represented, and whose integrity and reliability are established beyond question; give the prospective buyer something to think about; don't let him thoughtlessly waste his money on some piece of clap-trap just because it can be had at a clap-trap price.

#### Three Things to Remember.

Educate the public away from department store and bargain counter ideas; then they will buy of you. But every time you persuade a man into the "just as good" idea you make a prospective customer for your own worst enemy and lose a customer yourself.

Sell bicycles which will build up your trade, not tear it down; bicycles which you know are all right and reliable and which you can conscientiously recommend; bicycles which will establish and constantly improve your standing in your community.

Another point: Don't think too much of quantity, of volume of business done. The dealer who sells the greatest number of bicycles is frequently the most unhappy. Better sell a reasonable number of good machines at a fair profit on each than to dispose of a great lot of "bargains" at unhealthy margins and give your customers a lot of so-called bicycles which keep them and you in hot water perpetually.

#### The Trade That Pays.

The retailer's only safe, sure and profitable course is to be the true and trusted



TRADE MARK



# The Dunlop Catalogue



For 1899 is ready for distribution. We want to send some to every dealer. If you have not already sent in your request, we shall be pleased to hear from you by return mail



## The American Dunlop Tire Company

Belleville, N. J. Chicago, Ill.



TRADE MARK



# THE STERLING

“BUILT LIKE A WATCH”

### QUALITY VERSUS PRICE.

Some manufacturers are able to sell their product at better market prices than their competitors. Their output may not be as large, nor their advertising as extensive, but their goods find a more ready sale.

### WHY?

Because they have established for their wares a reputation for actual merit combined with progressive features, and buyers know exactly what to expect in return for the investment of their money.

### STERLINGS, FOR INSTANCE,

have founded their well-known reputation upon *honest construction, honest dealings, and honest protection* to their agents. The material composing them is the best, the workmanship of the highest class, the features radical and distinctive, the equipment high grade only, the guarantee liberal and the policy broadguage.

THEY ARE SOLD UPON MERIT, NOT UPON PRICE. Decidedly it is to your interest to represent a wheel of this kind. Our proposition awaits you.



## STERLING CYCLE WORKS KENOSHA, WIS.

friend and adviser of his customers. Any man feels perfectly safe in buying a pound of nails at the first hardware store he comes to, but when it comes to the purchase of an expensive article of special manufacture, regarding which he feels the need of correct information and honest advice, he goes where he feels he can place confidence. A man will walk several blocks to deal where he knows he will be told the truth and given just what he is promised, and when he gets there he will nine times in ten buy a good article and pay what it is worth if all sides of the matter are fully, fairly and intelligently shown up to him. That is the kind of trade that pays, and when once established cannot be lost except by abuse of the confidence reposed. No other dealer with all his frantic cries about "bargains," "just as good," etc., etc., can ever disturb you if you have earned and secured the confidence of your trade.

RETAILER.

**Receiver Held Liable for Purchases.**

The action brought by the Sager Saddle Manufacturing Company of Rochester against Frank Sullivan Smith, receiver of the Worcester Cycle Company of Worcester, Mass., to recover the sum of \$225, alleged to be due on account of the purchase of a number of saddles April 29, 1898, was last week decided in favor of the plaintiff. Some days ago the attorney for the defendant moved for the dismissal of the complaint, the principal ground being that Smith was sued as an individual and not as receiver of the works.

The court declined to dismiss the complaint. In his decision Justice Nash settled the point in the following language:

A receiver of an insolvent corporation cannot charge the estate by his executory contracts unless especially authorized and empowered by the court, and without such authority he acts upon his own responsibility and is individually liable upon his contracts.

The decree authorized the defendant to carry on and continue the business of the company for the purposes specified in the decree. It is questionable whether the authority was sufficient to purchase goods generally in the transaction of the business without regard to the purpose for which they were purchased.

But there is a further ground upon which the defendant must be held personally liable for the purchase price of the goods, and that is, the defendant could not transact the business *virtute officii* in this state, that outside of the jurisdiction of the court appointing him as receiver he acts as an individual.

The persons with whom he deals are not presumed to know his authority. He cannot go to the court appointing him for instructions or authority for his acts here, and persons with whom he contracts cannot apply to the court to enforce its orders with respect to the transactions of the receiver within this jurisdiction.

**Receiver for Cream City Co.**

The Cream City Cycle Company of Milwaukee, Wis., passed into the hands of the courts last Saturday and William J. Krauthoefer was appointed receiver to take charge of the company's affairs under a bond of \$5,000. The receivership is the result of a suit instituted by the Claus Handle Bar Company in December to recover \$205.42 on account. Judgment was entered against the company for \$245.60, and as no one appeared to contest the suit the court issued an order restraining the creditors of the company from bringing suit against the company or the receiver. The creditors are also ordered to file their claims with the clerk of the court within six months. There will be no notice to the creditors beyond that conveyed by an official publication in a little weekly paper published in Milwaukee.

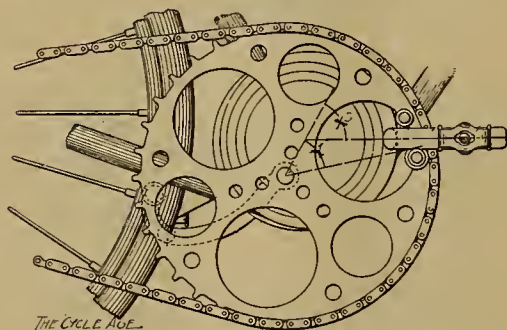
For a number of years the Cream City Cycle Company maintained one of the largest retail stores in Milwaukee, and handled a large line of bicycles in addition to several of those of its own manu-

facture. The president of the company was at one time president of the Claus Handle Bar Company, the present plaintiff in the suit. The appointment of a receiver has caused considerable surprise among dealers in the city, who supposed the company was in fair circumstances.

**LONG DOWNWARD STROKE**

**Inventors of Irregular Crank Motions Disregard Uneven Torque on the Bicycle Crank Shaft.**

While motor vehicle makers and every other manufacturer of machinery realize that the driving power should operate with a constant torque upon the driving shaft, if possible, in order to get the greatest efficiency, and employ fly-wheels for this purpose when they can do no better, designers of bicycles—some of them—persist in following a diametrically opposite course. If the bicycle were not in itself a fly wheel which by its momentum assists the rider in getting over dead centers, these designers would find themselves quickly able to discover that they are on the wrong track, whenever they provide for "long leverage on the



down stroke." They seem to reason that because a rider can apply power economically for only about 90 degrees of the pedal circuit for each foot, he should be enabled to apply as much power as possible during that portion of the circuit, so as to kick the crank around for 90 degrees more. That is precisely what the piston of a single cylinder gas engine does and what the fly wheel is designed to neutralize. It is also precisely what constructions of gas engines or steam engines in which power is divided between two or more cylinders, are designed to obviate. The bicycle designers do not seem to perceive that whenever they lengthen the crank for the downstroke the sprocket wheel is rotated a smaller angle while this additional power is being applied, than the cranks are rotated.

The dead centers are increased. On the other hand a more nearly constant torque would be obtained if the sprocket wheel were forced around a greater angle than that traversed by the pedal while the rider is in a favorable position to apply power. That would be the result if the crank were shortened for the downstroke.

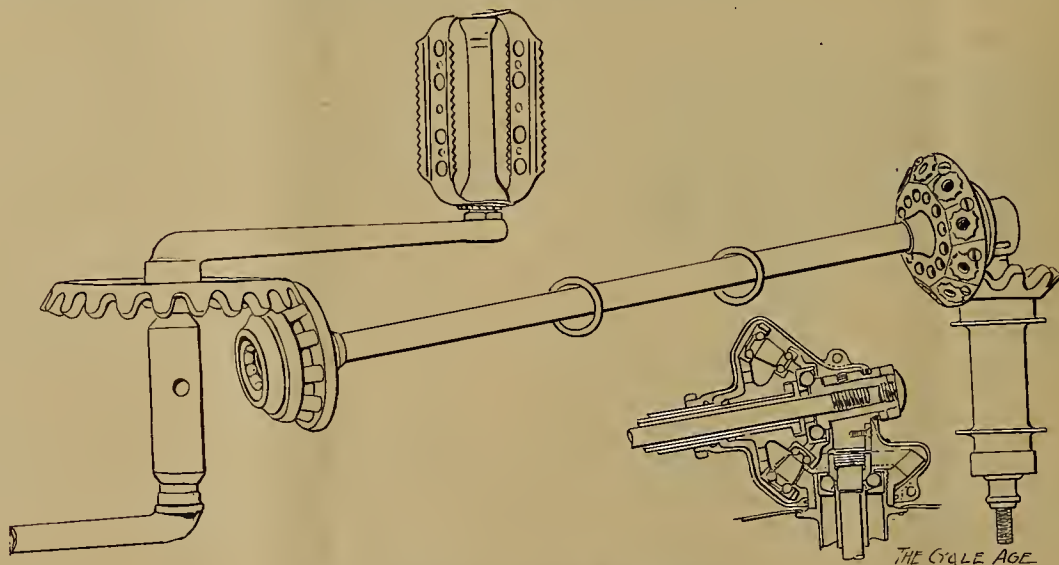
The most recent application of the wrong principle—the "kicking" system, has just been patented by a Rochester inventor and is shown in the accompanying illustration. It would be made rational if the disk to which the cranks are attached had their center to the rear of, instead of in front of, the center of the sprocket wheel. By making this change the inventor would find himself able to climb a steeper hill or face a stronger gale than with his proposed arrangement. As he has it in his patent, while his foot travels the angle x his sprocket wheel travels only the angle y, which is smaller. The difference must be made up by momentum, and on a hill or against a strong wind the momentum tends toward zero.

**Exports of Cycles and Materials.**

Exports of cycles and cycle materials from the port of New York for the week ending March 28 are recorded as follows:

	Bicycles.	M't'ls.
Germany . . . . .	\$ 70,809	\$ 9,472
England . . . . .	12,066	14,067
Denmark . . . . .	21,922	764
Holland . . . . .	14,611	3,051
Sweden . . . . .	10,976	1,796
Argentina . . . . .	9,611	537
Belgium . . . . .	6,845	1,088
Russia . . . . .	3,529	230
British West Indies . . . . .	2,408	976
Cuba . . . . .	1,041	28
Australia . . . . .	795	583
Mexico . . . . .	550	356
British Guiana . . . . .	498	10
Austria . . . . .	...	321
Greece . . . . .	274	...
Egypt . . . . .	273	...
Bavaria . . . . .	...	207
Prussia . . . . .	...	200
British East Indies . . . . .	...	140
Brazil . . . . .	...	108
Scotland . . . . .	90	...
Uruguay . . . . .	73	...
Italy . . . . .	40	33
Portugal . . . . .	40	...
Totals . . . . .	\$156,451	\$33,967

Austria manufactured 70,000 bicycles in 1898, which is almost twice as many as were made there the year before. Of this number 8,690 machines were exported during the year, as against 5,735 the previous year. The imports increased 37 per cent.



**LA DANOISE CHAINLESS PATTERN.**

From the elaborate and artistic catalogue of Northern Cycle Mfg. Co., at the freeport of Copenhagen, Denmark, it is seen that the "La Danoise" chainless pattern of which this company makes a specialty has been reduced in weight to 28 pounds and that its makers consider it the most successful pattern of chainless machines made in Europe. It is constructed mostly from American material—Williams forgings, Union stampings, Garford and Hunt saddles and Billings & Spencer forkcrowns. The driving gear is a beveled crown gear meshing with rollers revolving each in adjustable ball bearings as shown in the illustration. This elaborate form of construction is probably accountable for the width of tread and large spread between rear forks. The price at which the machine is sold in Denmark is 400 kroner, equal to about \$110; but in proportion to the earning capacity of the average cyclist in Denmark and adjoining countries it represents a considerably larger amount in American money.

## COMMERCE IN FOREIGN MARKETS

### LIMITED MARKET IN WEST INDIES

The bicycle is not yet established among the people of Trinidad in the British West Indies on account of the poverty existing. It is very popular, however, with the better class who are able to purchase. The masses would like to own them and low priced machines could be marketed to advantage. The roads are fair and the cities are very well provided for the pastime.

Nearly all the bicycles in use there are from the United States and Great Britain. The retail price is from \$25 to \$125, cash or time payment. The merchants usually handle bicycles as a side line. Catalogues and information should be printed in the English language.

### HOW TO TRAVEL IN SOUTH AMERICA

A traveler looking for business in South America should arrange to consign samples to firms along the route, as by so doing he can legally exempt himself from paying the foreign commercial travelers' licenses which are enforced in a great majority of South American cities. By transferring samples to agents and having them come through the custom house consigned to them you temporarily transfer your allegiance from the home concern and become an employe of your agents. Do business under their supervision, or allow them to do it for you. You are then working under the privilege granted to your agents by the payment of their annual tax, and cannot therefore be classed as representing a foreign concern.

If possible get up a special cable code which will apply directly to your own requirements. For the transmission of general information the published codes are useful, but with the exception of the staple products none of them can be used either practically or economically for forwarding rush orders. It is not a difficult matter to build up a private code, which, with from three to five composite words, will convey a detail order. By adopting a short root word for each article and variations of it in your line, and having a set of prefixes which can be added to the root to denote grade and a suffix to denote some other important detail, a great deal of information can be conveyed in one word.

Get a passport. Revolutions are frequent in some parts of South America, and often break out when least expected. During such periods of war, when suspicion is aroused and a great deal of responsibility is given to ignorant soldier-policemen, an American passport may be found a convenient thing to possess, owing to its identification feature.

Don't depend upon receiving regular remittances from the United States in order to continue your journey, as the mails are infrequent and very irregular. Get a letter of credit sufficient to cover the total expense of the trip and allow a fair margin for unexpected expenditures.

Get as many letters of introduction to South American merchants as you possibly can, but be sure that they are of the right sort. A letter from an intimate acquaintance who can vouch in strong terms for your character and standing, directed to a friend who is a person of influence, especially if the party be a native South American, is worth a great deal. It will often procure for you both business and social favors which money could not buy. It is a mistake, however,

to convey or present the ordinary letters, which are the least difficult to secure. From such letters you may obtain more or less information and perhaps a little attention, but experienced travelers do not depend much on them.

Several months previous to starting on your trip institute a systematic campaign of advertising, so planned as to make all possible buyers along the line acquainted with your concern and the goods it manufactures. This scheme is especially advisable in cases where a concern's product is unknown.

Above all things secure from your house a power of attorney in English and Spanish, so constructed as to leave no doubt in the minds of agents, customers or anyone you are likely to transact business with, as to just what powers have been invested in you. This is positively essential. In the past so many unauthorized individuals have made contracts with South American buyers which have never been fulfilled, and thus caused no end of trouble and loss, that a power of attorney is now invariably requested when a contract of any importance is to be signed. Especially is this required in case you are commissioned to make any collections, transact any legal business, register trade marks, secure patents or establish agencies.

### JAPS PREFER HOME MADE BICYCLES

There are very few bicycles in use in Nagasaki district of Japan, but importers report the demand to be steadily increasing. American, British and Japanese machines are sold, the American model being the favorite with purchasers, but on account of its being higher priced than the other machines there are fewer of them in use. The native machine is most in demand. American machines sell from 75 to 125 yen, British from 65 to 85 yen. The yen is about equal to 50 cents gold. The American machines now for sale at Nagasaki are from the establishment of a large grange house in Chicago and a scale manufacturer with headquarters in New York City, but the original name plates have been removed and others substituted.

### AMERICAN BICYCLES IN FORMOSA

Bicycles which can be sold for \$50 and still leave a little profit to the importer are most in demand in the island of Formosa. If a strong bicycle with good tires could be laid down there to sell for \$37.50 it would be very much in demand. The first bicycle in Formosa was brought there last spring. There have been many inquiries made for bicycles, but, owing to the absence of a house understanding the trade and willing to order a stock, but few machines have been obtained. As evidence of the interest shown, it may be stated that a consignment of one dozen was sold the same day it was unpacked. A woman has never been seen astride a bicycle in Formosa.

There is a very limited demand for parts and sundries. There are a number of roads suitable for bicycles which have been constructed by the Japanese during the last few years, and the mileage is steadily increasing. The bicycle trade with this country could be improved by placing with the American consuls catalogues with lowest discounts, in order that inquirers may ascertain just what machine they consider best suited to the island and learn just what the cost will

be without resorting to correspondence, which means three months' delay and is discouraging at the outstart. Goods from America are sent either from San Francisco to Hong Kong via Pacific lines, then on to Formosa by Douglas S. S. Co., or via Suez steamers from New York to Hong Kong.

American makes are the only ones represented in the island at present, and if some suitable machines could be quickly introduced there would probably be no danger from outside competition for some time. Bicycles sent to Formosa should be complete with all attachments—bells, lamps, repairing outfits, pumps, tool bags and tools and, without fail, brakes. Residents here have an idea that no machine is complete without the latter attachment. Some machines should be equipped with steel rims, which many people prefer.

Two consignments of American bicycles have been lately received, and they were found very satisfactory, with the exception that the order, which called for a complete outfit—bell, lamp, brake, pump, etc., as these articles are not to be obtained here—was not filled, the machines being sent in one case without the bell and brake and in the other without pumps for inflating the tires. The result is that the latter machines must remain on the dealer's hands, losing in the climate much of their brightness, during the three months necessary to obtain the pumps from New York. In the first instance, the exporter wrote that the machines were not equipped with a brake because this was of no practical use and was sure to injure the tire. The result was that two customers, for whom machines had been specially ordered, refused to accept them; and the native dealer, who had for the first time received a shipment from America, while able to dispose of the whole consignment, was considerably annoyed.

### SELLING AND SHIPPING TO RUSSIA

Bicycle traveling salesmen should visit Russia during January, certainly not later than February. All machines must be delivered in March or April. It is only possible to ride out of doors in Russia four or five months of the year. Five or six weeks must be allowed for the time between dispatch and actual delivery of the goods. Shipping firms will declare that three weeks' time is sufficient for the dispatch of goods, but in practice this does not prove to be the case. Cycle salesmen must speak German; prices must be reasonable and the goods attractive and up-to-date. A Russian buyer is fond of the products of foreign countries.

### AUSTRALIANS LEANING TOWARD AMERICA

The people of New South Wales are awakening to the fact that they can purchase a better grade of goods from the United States at lower prices than they can purchase from England. Business men have expressed their willingness to co-operate with the United States consul in his attempts to bring about closer business relations between this country and their colony.

The municipal council of Budapest, Hungary, has established a bicycle tax of \$2.20 per machine. Foreigners staying more than eight days in the city will be subject to the license.

## HINTS FOR REPAIRMEN

### Removing Large and Small Frame Dents—Convenient Filers' Tool—Cure for Wrong Length Spokes

Dents Removed  
by Air  
Pressure

A correspondent who has successfully removed kinks and dents in frame tubes by means of compressed air, contributes some suggestions regarding the pneumatic method described in the issue of March 16 of Cycle Age. One obvious improvement upon the method suggested is that in most cases the seat post in the frame to be repaired will close the seat mast practically air tight, and by leaving it in place no clamp will be needed at this point, and the valve for the inflation of the tube may be placed in either the head or hanger clamps. The use of a universal clamping piece for the seat mast is thus avoided.

The correspondent further suggests that, in order to limit the heat applied to the tube to the exact location of the dent, wet cloths be wrapped around the tubing on either side of the dent. The cloths also keep the enamel from being burned at any other point than exactly at the dent. This provision is valuable when the customer for whom the job is being accomplished is not such a stickler for appearances that he will require the entire frame to be enameled, but will allow the repairer to patch as well as possible the spot where the enamel was burned from the frame. When the tube has expanded till it is nearly round, a small light hammer may be used to finish the work by rapidly and lightly tapping around the edge of the dent. This will have the effect of bringing out the hollow parts rather than of denting the tubing where the blows are struck. Usually, however, the use of the hammer is not necessary, the expansive power of the compressed air at the heated portion of the tube being sufficient to restore it to normal shape.

Should the frame have a number of dents close to each other in one general spot, and they do not come out evenly, the dented portion of the tube should be heated and immediately clamped between a pair of metal tubing clamps in a vise, the tubing being worked between the clamps and the internal air pressure increased until the tubing is expanded so that it binds in the clamps. This process will generally leave the work in a condition so that it can be readily finished with a hammer used in the manner just mentioned. No attempts of this character should be made over reinforced tubes, as the reinforced tube wall will be found to be too strong to yield readily and the heating required might cause the brass between the tube and the liner to melt and run from the joint.

Quick Cure  
for Small  
Kinks

Anent the general subject of removing dents from frame tubes the respective practices of three western repairers in taking out quite small dents furnish good illustrations of the readiness with which some mechanics arrive at the simplest manner of doing a certain thing that others can only accomplish after a tedious and much more expensive operation, and generally a less satisfactory method in the end. The first of the repairers in question proceeds as follows: A small hole is drilled in the middle of the dented portion of the tubing and

through it is slipped a hook made from a piece of wire, such as a spoke. The dented portion is then heated and the smashed-in wall pulled out to its normal position with the hooked wire. Afterward the hole is plugged and the tubing re-enameled.

The second repairer starts at the job in the same manner, but as soon as the hole is drilled he taps it out with a suitable tap and screws into it a threaded plug. By holding the projecting plug in a hand vise the tube wall is drawn outwardly into place. The hole, after the removal of the plug, is filled with a soft iron plug, filed off flush with the tubing and covered with a small daub of air drying enamel.

The third man, instead of drilling the hole through the tubing at the dented place, drills on the opposite side of the tube exactly back of the dent. Then with a small punch the dented wall is driven back into its proper position with a few light hammer taps. The hole is plugged with brass wire and the spot touched up with air drying enamel.

All three accomplish exactly the same result, but the first, on account of having to pull the wall out with a light wire hook, finds it necessary to heat the tube and thus ruins at least four square inches of enamel on the tube. Considering the job is merely that of removing a dent not more than one-half inch across, the injured enamel must prove as great if not a greater evil than the original dent. The second man does not resort to heat as an aid, but takes the pains to tap out the hole and to thread a steel plug with which he can get sufficient holding power to pull out the smashed wall. The third repairer obviates both the necessity of re-enameled and of threading the hole and making a plug to fit it by simply drilling the hole on the opposite side of the tubing and driving the tube wall out to place with a common punch such as is to be found on every mechanic's work bench.

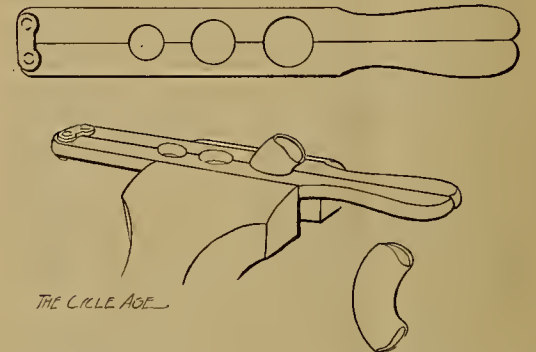
Utilizing  
Wrong Length  
Spokes

A country repairman was recently requested to do a job of bicycle remodeling which included the substitution of thirty-inch for original twenty-eight-inch wheels. He accordingly sent to the nearest market for spokes long enough for the thirty-inch wheels, not having any of such length in stock. The spokes were received shortly after the work of remodeling and enameled the frame had been completed, and the shopman promised his customer to deliver the completed machine on the day following. When the wheels had been laced up and the work of tightening the spokes was found that the spokes were fully one-fourth-inch too long and that the nipples would bind before the spokes had been pulled tight enough to allow the wheels to be trued. The machine was to be delivered the next day, there were no more spokes to be had within two hundred miles from the locality of the repairer, and there was no die in the shop or in the town matching the rolled threads on the spokes. To use his own term the repairer was "up against it." However, remembering the

old adage, that "necessity is the mother of invention," the repairer did not give up in despair, but thought upon the matter a few minutes and then unlaced both wheels and started in anew. This time he crossed each spoke over four of those running in the opposite direction from the hub flange instead of over the usual three and was rewarded by finding that his spokes by this crossing were exactly the right length. The wheels when trued up had a slightly heavier look than they would have had were the spokes crossed in the common fashion, but no one ignorant of the manner in which the job had been accomplished would have discovered the difference.

Filing  
Jig for Cross  
Braces

The illustration furnished herewith shows a convenient jig for holding rear fork and stay cross braces while filing the scarfed ends to fit the curvature of the tubes between which they fit. While these cross braces may be purchased ready formed at supply stores, the end scarfing is only approximate, it being impossible to keep in stock braces finished exactly to fit the many different styles of cranking used in rear forks and stays. Accordingly repairmen and other builders erecting machines in small lots are forced to file the ends of the cross braces by hand.



The curvature of the brace does not allow the piece to be held securely in the vise without clamping it so tight that the wall of the tube will be crushed or kinked.

The utility of the jig here shown is thus obvious. It consists simply of two square rods of iron hinged together at one end and provided with handles at the other, the completed tool having much the appearance of an ordinary nut cracker. Three sets of matching half holes are formed on the adjacent faces of the hinged parts, the notches forming when the tool is closed three holes, they being respectively slightly less than  $\frac{5}{8}$ ,  $\frac{3}{4}$  and  $\frac{7}{8}$ -inch in diameter, and so accommodating cross braces of these respective sizes. When it is desired to file out the ends of a brace, the piece is slipped between the arms of the holder and the latter brought together and held tightly by the handles. The holder is then placed in a vise and clamped securely. The workman may now file as much as he wants without danger of injuring the tubing. The tool will also be found convenient for making straight cross braces from scraps of tubing.

Ten years ago the United States was the fourth among the nations in the quantity of her exports; France, Germany and Great Britain being ahead of this country. In 1897 we had passed France and Germany, and our exports were but 26 per cent less than those of Great Britain. Now our exports of domestic merchandise exceed those of our Anglo-Saxon sister.

A French paper estimates that there has been an "overproduction" of 200,000 bicycles in Germany.



Garford

Hunt

The Wheeler  
EXTRA

Brown

Gilliam

P & F

# Comfort

**T**HE comfort of a saddle depends largely upon intelligent construction in the earlier stages of the work. It is easy to make something and call it a saddle, but is it just as necessary to have a thorough *practical* knowledge of what constitutes a perfect saddle, before one can be made, as it is to have a thorough knowledge of cutting before a good and well fitting suit of clothes can be made. The lack of such knowledge results in botch-work, and we see lots of it, both in clothes and in saddles.

Neither of them will ever command the respectful consideration of those who know (and their name is legion) what constitutes good work, and the makers of them are soon relegated to oblivion.

It is the strongest and most convincing evidence of the perfection in *style*, *durability*, and *comfort* of the saddles produced by this company, that their goods command the admiration of more than eighty per cent. of the riders of this country and a very large proportion of those of other countries. Write us for information and catalogues. We shall be happy to furnish either or both.



**American  
Saddle Company**

608-613 American Trust Bldg.

Cleveland, Ohio

## NEW TWO-SPEED HUB

### Device for Enabling Riders to Use Very High Gears— Very Low Gears in Reserve

Nearly every cyclist of experience is willing to admit that a changeable-speed gear is a very desirable feature of a bicycle in theory; but the majority will not make the same concession in practice. Rather than weaken hub or hanger with an intricate mechanism which is exposed to special wear and which easily gets out of order under ordinary riding strains, they submit to the ordeal of driving a high gear under conditions of strong resistance or dismounting and leading their machine over hills too steep for their driving power or over sandy roads where the surface is too uncertain to permit them to balance their machines when progressing with slow and laborious rotation of the pedal shaft.

It is this feature of a yielding road surface as much as the actual resistance that makes high gears impracticable on sandy roads, as balancing under such circumstances depends largely on the rapid shifting of weight from one pedal to the other. The same is true for riding on snow.

Cyclists have also always objected to riding machines in which a clumsy appearance or a conspicuous variation in external design and attachments proclaimed the crudity of the manufacturer's ideas.

#### A Much Sought Improvement.

In the forms of changeable gear which have gained any popularity at all, it is noticeable that the objectionable features here referred to are less pronounced than in the hundreds of change-gear mechanisms which pass through the patent office in this and other countries, but never reach the test of manufacture on a commercial scale; and it seems a reasonable inference that the complete removal of these features would at once make the two-speed machine the standard pattern among bicycles, provided, of course, that the bicycles in which such a perfect change-gear mechanism was incorporated were also in other respects equal to the best and in accordance with accepted ideas. Acting upon this or similar thoughts which promise a high reward in case of complete success, a large number of constructors connected with the bicycle industry, and latterly with the motor vehicle industry as well, are continually devising improvements in changeable gears.

Nothing of conspicuous novelty has, however, resulted from these efforts during the last couple of years until 1898, when the American Waltham Mfg. Company of Waltham, Mass.—now absorbed in the Stanton Mfg. Company of Boston—arrived at a satisfactory completion of its practical trials of the mechanism shown in the accompanying illustration. As a result of these tests this mechanism has now been adopted as an optional feature in the company's bicycles. Being novel, simple and mostly concealed within a hub of ordinary contour, besides representing certain definite features of construction which have not before been adapted to the same purpose, this mechanism enlists the interest of cyclists and the cycle trade strongly to investigate its merits.

#### Similar to Compensating Gear.

The Stanton company's device is called the "Waltham Two-Speed Hub." It possesses the radically new feature that the gearing used in it is always in mesh. It is most briefly described as a differential gear in which one of the vertical bevel

gear pinions may be locked entirely. It operates as a compensating gear on a tricycle or motor vehicle, except that either one of the two speeds is applied to one wheel—the rear wheel of the bicycle—optionally, instead of to two wheels concurrently.

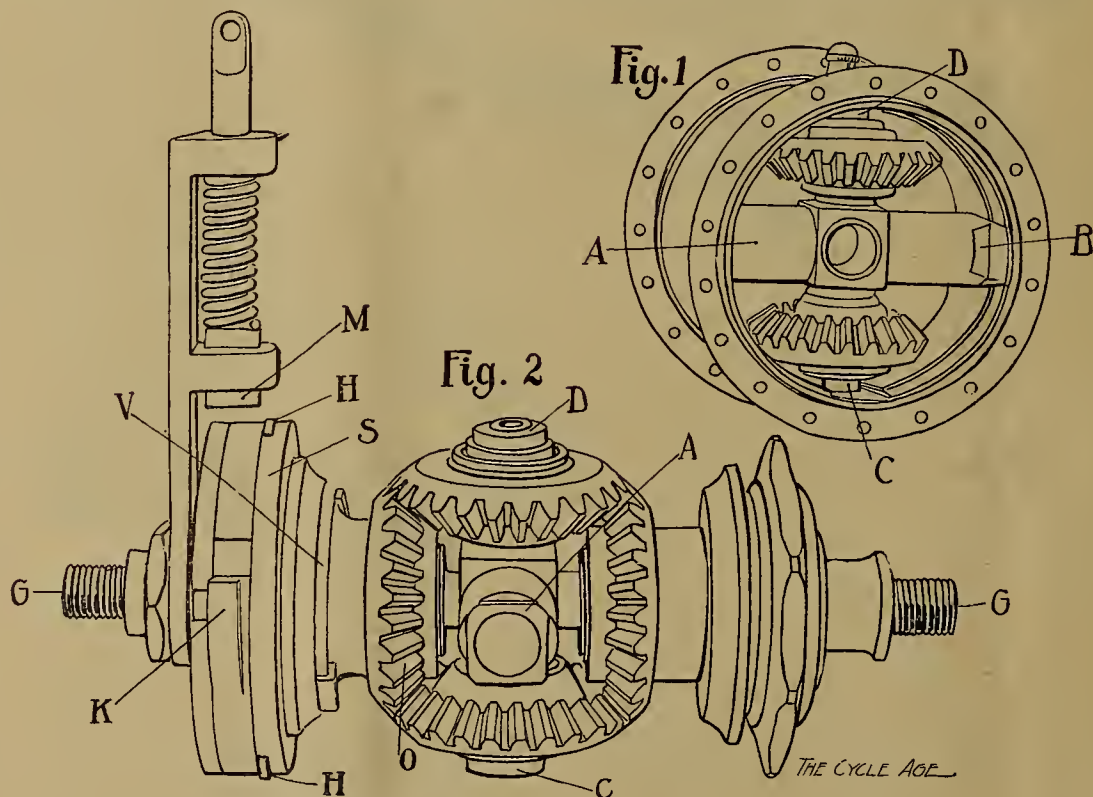
For those familiar with differential or compensating gears this explanation is perhaps sufficient to indicate the principle followed. While, however, a compensating gear is operated through ground friction of the wheel tires so that the speeds of the two wheels are automatically regulated in the correct relations to one another, it is with the Waltham Two-Speed Hub the rider who locks one pinion either to the frame or to the hub. There is no way of merely retarding one pinion in its rotation; and the two speeds are therefore necessarily as two to one, when all four pinions are of the same size.

Although it would be simple to produce a different speed relation by making the horizontal pinions larger than the vertical ones, and the change could be made without increasing the diameter of the hubs largely, the Stanton company has chosen the two to one relation as best adapted to the requirements of bicycle riders, believing that the great majority of cyclists will appreciate to have a gear of, say, 132 for all ordinary

In the illustration: Fig. 1 is the hub shell; Fig. 2 is the whole device minus the hub shell. In the first place it will be noticed that the spider A B C D is always one piece with the hub shell; this spider is the driving rod of the rear wheel; also the small bolts H and H are connected with the hub shell, so that the whole hub is locked together in all ordinary riding and absolutely no mechanism is working. It revolves upon the axle G precisely like the ordinary bicycle hub. For every one revolution of the rear sprocket wheel the whole rear wheel revolves once; it is in this condition when riding the high gear. Now to reduce the gear the bolt M is dropped, the trigger K comes in contact with it, which withdraws the bolts H and H, releasing the hub shell and holding the pinion O stationary. Under these conditions the sprocket wheel will have to revolve twice to revolve the spider A B C D—and consequently the rear wheel—once. Mechanically, the only change is this: In the high gear the whole of S is locked to the hub shell and travels with it. In the low gear the whole of S is locked to the frame and is held stationary. The whole device is enclosed in the rear hub so that dust will not interfere with its running.

#### The Speed Reduction.

For those not familiar with the old "Bronco" gear or any of the sun and planet gears in which one gear wheel is fixed, the motion by which the gear is reduced to one-half by fixing one pinion is perhaps most easily understood by imagining that one of the horizontal pinions is the driver and the pinion which is rigid with the sprocket wheel is the driven gear. It is then clear that the horizontal pinion revolving once on its own axis must travel once around the fixed pinion, which has the same number of teeth.



riding on level and smooth roads, provided they are enabled to change it immediately to a 66-gear when circumstances require it. A high gear of 100 and a low gear of fifty would, in the opinion of the writer, be preferable for all city cycling and is, of course, entirely within the scope of the manufacturers' plan. It is in fact one of the chief practical merits of the device that the rider can choose his high gear absolutely independent of the change gear mechanism by selecting the size of his sprocket wheels so as to produce the highest gear he wants. The mechanism then gives him in addition another gear of just one-half the speed which he chose as his maximum.

While doing this it carries the sprocket wheel pinion around with it once by its travel around the wheel axle, and once by its rotation on its own axle. The sprocket wheel pinion and the sprocket wheel must then turn twice around while the spider A B C D carrying the bicycle wheel with it completes one revolution. That the sprocket wheel in reality is the driver manifestly makes no difference in this motion.

The bolt for changing the gear is operated by means of a rod extending along the inner side of the left upper stay toward the seat cluster and terminating in a finger piece which may be easily reached by the rider in the saddle.



**T**HE rider of a National is always proud of his machine.

It's handsome and well made.

Like a good horse well groomed it adds to its owner's pleasure in simply being "all right."

The real satisfaction in the purchase of a National comes when the buyer finds that his first expenditure is his last. No repair charges or delays later to reduce his cash or spoil his pleasure.

One season on a National and he says—

*A National Rider Never Changes His Mount.*

Better join the procession.



**National Cycle Manufacturing Co.**

BAY CITY, MICH.

## How does this help the Andrae Agents?

In our '98 catalogue we printed three pages of Andrae '97 winnings.

If we had printed (in nonpareil type) a list of Andrae '98 winnings in this year's catalogue it would be thicker by six pages.

Almost every one of these races was won on

## ...The **ANDRAE** Racer

by amateurs—who paid full price for their wheels.

The rider who won races on the Andrae in '97 and '98, will buy an Andrae in '99.

The people who saw the Andrae win more races than any other wheel will want an Andrae. These hundreds of winnings have created a demand for the Andrae—people are looking for the Andrae agency.

That's how they help the Andrae agent.

Our monthly paper free.

Andrae  
Cycles  
Never  
Disappoint

**Julius Andrae & Sons Co.**

Milwaukee, Wisconsin.

**LUTHY & CO'S**

**NEW POPULAR PRICED WHEELS**

*The Fairy King*

MADE IN THE LUTHY FACTORY

**— UP-TO-DATE — BEAUTIES — SELLERS**

**AGENTS WANTED EVERYWHERE.**

**LUTHY & CO. PEORIA ILL.**

MAKERS OF THE LUTHY WHEEL

## A GREAT IMPROVEMENT IN CYCLE TUBING

Brass Lined By Special Dip Brazing Process—Claim to Absolutely Prevent Rust Outside of Tubes and Peeling Off of Enamel, also the Weakening of Cycle Frames Incidental to Rust Forming Within the Tubes.

Brass lined seamless and "Clincher" cycle tubing is the latest improvement added by The Wilmot & Hobbs Mfg. Co. to their already well known tubing for cycle frames, rear forks, rear stays, front forks, etc. By a special process an exceedingly thin layer of brass, some half of one-thousandth of an inch thick, is deposited on the inner wall of the tubing and the makers claim these advantages are gained:

Vapors and other moistures admitted into the tube during its assembling into cycle frames or at other times are prevented from forming a rust on the wall of the tube, and rusting through with its consequent danger to the rider's neck through breakage is completely done away with.

The sweating through of any dampness from the inside is also prevented and the outer coating of enamel is therefore preserved from cracking and peeling off.

A more perfectly brazed joint between the tubes and connections is also made possible with the brass lined tubing. This is found of special value in flush joint work, the brass lining being to the cycle manufacturers what the tinning of roof sheets, etc., is to the tinsmith.

The brass coating is not applied by an electro-plating process, but each piece of tubing is immersed in a crucible of molten brass for a certain length of time. By this method the desired density is obtained and all porosity of the metal eliminated. But so thin is the coating that no appreciable difference is made in the weight of a tube.

The Wilmot & Hobbs Mfg. Co. have been forced by the great demand for their brass lined "Clincher" tubing to add to their already extensive plant a new department. Here a large force of men are engaged day and night in immersing tubes for the market. Leading cycle manufacturers in great numbers have appreciated the good points of "Clincher" tubing with this brass lining and the extent of the mills affords an evidence of the volume of business done by the company. The makers of "Clincher" tubing will be pleased to show to their customers among the cycle manufacturers this process, believing that it would be a great benefit to them in dip brazing the joints in building their frames. The process of dip brazing having been carried by this company to a state of perfection far exceeding that in common use, undoubtedly many good points can be learned which will be of great benefit to the cycle manufacturer who is on the list of favored "Clincher" tubing customers. Many leading cycle manufacturers have already availed themselves of this privilege to great advantage to themselves.

Jobbers and dealers as well as the individual riders are insisting on having brass lined tubing, and this improvement, added to "Clincher" tubing, makes it still better adapted to the uses of the trade. In this connection The Wilmot & Hobbs Mfg. Co. submit the following copies of testimonials to the value of their tubing as a few among many that have been received:

I have ridden a — chainless bicycle during the season of 1898 and must say that I am delighted with it. At the beginning of the season I was one of the skeptics regarding a chainless wheel, and it was only from the fact that I desired to thoroughly test the Wilmot & Hobbs Mfg. Co.'s Swedoh,

spring steel, Clincher Tubing that I tried the chainless.

I have proven it to be a very durable wheel, and attribute that fact to your use of The Wilmot & Hobbs Mfg. Co.'s "Clincher tubing" and fork sides," which give great strength and rigidity to the frame and at the same time a pleasant sensation to the rider.

I have ridden during the past season a — bicycle, the frame of which is constructed throughout from The Wilmot & Hobbs Mfg. Co.'s "Clincher" tubing, No. 24 gauge, and consider it by far the most rigid and strongest tubing for bicycle frames ever made. I have ridden gutters and railroad ties and have had a number of collisions on the track in which other portions of the bicycle have suffered, but the frame today remains as good as ever.

To those who wish to combine speed with safety I would most certainly recommend "Clincher" tubing.

At the opening of the season of 1898 we had considerable call for machines built of your Patent "Clincher" 50 Per Cent Carbon "Swedoh" Spring Steel Tubing, Front Forks and Rear Stays, but as we had ordered Seamless for our entire output, we did not care to order "Clincher" Tubing, in as much as we had never made any tests of your tubing. However, orders kept coming in for machines calling for "Clincher" Tubing, and we finally decided to send for some pieces to test same. The result greatly surprised us.

We put this "Clincher" Tubing through all manner of tests and found it, when made into frames, without reinforcements, 43 per cent stronger than the Seamless frames made from same diameter and gauge of tubing and which had the reinforcements, and 93 per cent stronger than the same Seamless frames when the "Clincher" tubing frames were reinforced.

Being satisfied that this "Clincher" tubing was far superior to the Seamless, we ordered enough for several machines and put them on the road, giving them the hardest usage possible, and as they stood up all right we decided to order enough of your tubing for 500 machines, and before the close of the season we had orders for and sold 800 machines made of your "Clincher" Tubing, and are pleased to say we have not yet had a single complaint, although many of them have been ridden thousands of miles. We find this "Clincher" Tubing more accurate in size than the Seamless and the surface is so much smoother that we have had less work in finishing it for enameling.

We are satisfied with your tubing and consider it the best for bicycles and have given you our order for 1899. You are at liberty to use us as reference at any time.

### BAD SELLING METHODS

Rubber Houses Needing New Outlets for Trade Rushed Hastily Into the Making of Tires.

In the course of correspondence with a large mechanical rubber concern, once prominent as tire makers, a letter has come to the India Rubber World, saying: "It is unpleasant to be reminded of our former connection with the bicycle business and, as we have been out of it for a year and a half we think it would be best if you would try and forget that we were ever in it." This letter does not differ in tenor from some that have come from other rubber companies. Yet there has been no decline in cycling, and tires are just as essential to bicycles as they ever were. The demand for tires came into existence suddenly and on a very large scale, and their production belonged, by right, to the mechanical rubber trade. The manufacturers were in need of new outlets, business with some of them being dull, and they naturally seized upon the new demand as a means of improving their business. But more of them apparently found reason to regret their venture in tires than otherwise.

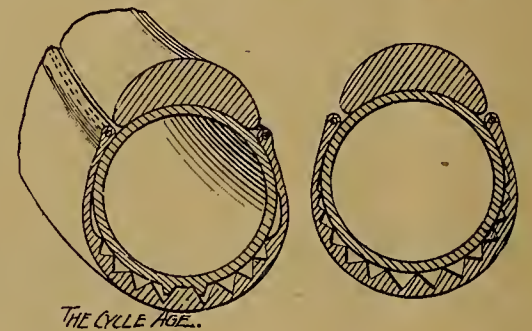
It is to be regretted that the past conduct of the tire business has not been

such as to yield more substantial returns to those engaged in it. A tithe of the amounts spent by some firms in making expensive demonstrations of their tires, would have afforded good dividends, instead of a deficit. But for such methods, the list of tire manufacturers still remaining in the field might now be longer.

Pertinent to the situation here is the fact that the tire industry in Europe, so far as can be learned, generally has been conducted at a profit, though the demand has been smaller than in America. But it remains to be shown that the manufacture abroad has been developed to a higher degree of perfection than here. The difference in financial returns, therefore, must be due to some other consideration than any growing out of the factory end. The trouble with our own manufacturers doubtless will be found to have been due to an unfortunate choice in selling methods.

### Protection for Light Tires.

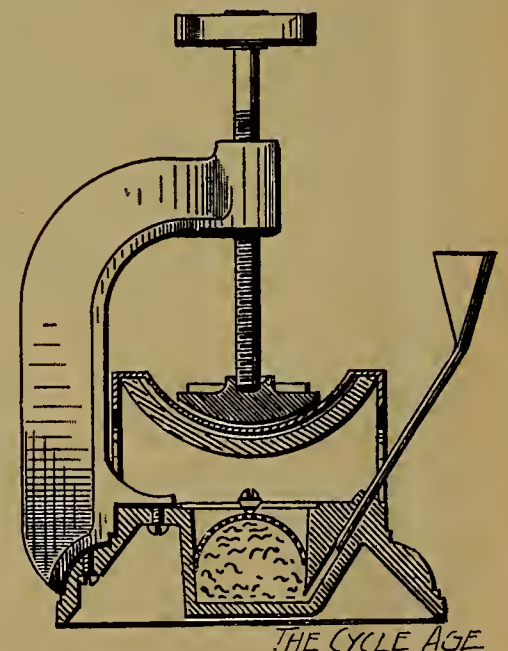
James A. Murphy and Amos D. Rowe of Holyoke, Mass., have patented a tire cover for the protection of light single tube tires. It is held on the tire by inflation of the latter, being provided with wired edges of a diameter too small to



pass over the inflated tire. The design is shown in two slightly differing patterns in the accompanying illustrations.

### Vulcanizers for Amateurs.

James E. Bancroft of Toledo has obtained patent for a vulcanizer in which overheating of the heat-plate is prevented by an arrangement for introducing a given amount of fuel for each act of vulcanizing. The fuel is absorbed in an as-



bestos wick and the quantity is so calculated that when it is burned up the tire is vulcanized.

### Rawhide for Wood Rims.

Prepared rawhide as one of the components of laminated bicycle wheel rims is proposed as a valuable improvement by George Beacock of Brockville, Can., who has secured United States patent for his method. The object is to prevent break-

# CYCLE AGE ADVERTISERS

Vol. XXII. No. 23.

THE CYCLE AGE OFFICE.

April 6, 1899.

## CYCLE AGE . . . . . . FACILITIES

### Cycle Age Catalogue Department.

Its object is to supply the catalogues of advertisers to readers and save them the trouble of writing a number of letters to the various houses. Apply direct to the Cycle Age, stating specifically whose catalogues you require, and enclosing stamps to cover postage. The catalogues will be sent by return mail.

Advertisers will please note that it is to their interest to keep the Cycle Age supplied with the latest literature. A record is kept of the persons to whom catalogues are sent and is supplied to manufacturers from time to time.

### Cycle Age Foreign Department.

The foreign department is designed to supply advertisers with any and all information obtainable concerning all the markets of the world. A partial list of the features covered is here given:

Populations of towns; nationality; principal ports; steamship lines; customs tariffs; packing; freight rates; express rates; buying season; condition of roads; domestic manufactures; principal machines sold; bonded warehouses; leading importers; retail dealers; American machines handled.

Advertisers and subscribers are invited to make use of the information contained in this department. It covers the whole civilized world.

### Cycle Age Circular Department.

The circular department is designed to address mail matter to the trade. The service is confined strictly to advertisers and a fixed charge is made and never varied. The Cycle Age lists contain about 56,000 names, of which about 37,000 are American and 19,000 foreign.

They are divided into countries, states, towns, manufacturers, agencies, jobbers and repairmen, so that any particular class may be reached.

Details are furnished in pamphlet, The Cycle Age lists, which will be forwarded on application.

### Cycle Age Patent Department.

This has been organized for the purpose of supplying information relative to numbers, dates of issue and ownership of patents, of instituting searches for possible interferences and of rendering service to advertisers and subscribers who contemplate applications. The charges in all cases will be as low as is consistent with efficient handling of the business.

### Cycle Age Registration Department.

The U. S. government has officially recognized the Cycle Age register of names of bicycles, and the ownership of same. The list is under constant revision and will appear in the Cycle Age in the first

issues of January, April, July and October.

### Cycle Age Leases.

The Cycle Age lease has been adopted in all parts of the country and has never been successfully attacked.

A sample will be forwarded on application.

Annual subscribers to the Cycle Age are supplied with blank leases without charge.

### Cycle Age Small Want Ads.

This is designed to supply a medium for the insertion of such advertisements as situations and help wanted, sales of small articles, exchanges, etc., at a moderate charge.

The cost is 5 cents per word for the first insertion and 3 cents for each subsequent insertion.

### Foreign Buyers Like It.

Twiner & Pursehouse, Goulburn, N. S. Wales:

Allow us to congratulate you on the get-up and general excellence of your paper. It stands apart from all other cycle trade papers inasmuch as its contents repay perusal and the advertising pages are works of art from a printer's point of view.

Scott & Hoare, Melbourne, Australia:  
The Cycle Age is a fine production, unapproached by any in any other country.

## CYCLE AGE DID IT

Sold the Entire Output of One of Its Advertisers Who Now Doubles Capacity.

The following extraordinary letter has been forwarded, absolutely without solicitation, by George D. Wilcox, of the Bullis Ball Gear Co., Rochester, N. Y.:

Up to the present time we have used your paper exclusively as an advertising medium, and feel safe in saying that the large number of inquiries we have received not only from the United States and Canada, but from England, France, Germany, and Russia, have been due to your broad circulation. We are more than pleased with the results thus shown and will say that through the use of your paper alone we have been able to secure enough contracts for our gear to cover our entire production. We are at present doubling the capacity of our output, and we wish to take advantage of this opportunity to express our entire satisfaction with your most excellent paper.—George D. Wilcox, Bullis Ball Gear Company.

Well satisfied advertisers attest their pleasure with great regularity. Here is another of the latest samples received:

We have had good results from what advertising has been done in the Cycle Age and want to continue later on.—The Kelly Mfg. Co., Greentown, Ind.

## Send in Your Literature

The Cycle Age will be glad to receive from readers suggestions which may be made valuable to agents. Recently an agent's card, containing a bright idea, reached this office and was reproduced in Cycle Age. It has since been used by many repairmen in their local advertising. It is here reproduced for the benefit of those who may have overlooked it.

Others who have bright ideas in the form of literature of any kind—cards, pamphlets, local newspaper ads., etc., will confer a favor by forwarding samples to this office.

Modern  
Cycle  
Repairs

140 page book  
100 illustrations

\$1

Cycle Age subscribers.

\$2

to others.

## BICYCLE REPAIR BARGAINS..

FOR 30 DAYS ONLY

Now is the time to get your bicycle put in good order for the season.

No. 1.—For \$1 I will send for your bicycle, clean, oil and adjust all the bearings.

No. 2.—For \$2 I will send for your bicycle, clean, oil and adjust all bearings, polish all nicked parts and brighten frame and forks.

No. 3.—For \$4.50 I will send for your bicycle, clean, oil, adjust, enamel the frame and fork black or maroon and polish nickel parts.

No. 4.—For \$6 I will send for your bicycle, clean, oil, adjust, enamel black or maroon, true both wheels, true frame, forks and cranks, repair tires if worth repairing, and polish nickel parts.

No. 5.—For \$8 I will send for bicycle, clean, oil, adjust, enamel black or maroon, true both wheels, true frame, forks and cranks, repair tires if worth repairing, nickel plate all parts except spokes and hubs.

No. 6.—For \$10 I will send for bicycle, clean, oil, adjust, enamel black or maroon, true both wheels, true frame, forks and cranks, repair tires as above, nickel all parts, put all new spokes in both wheels.

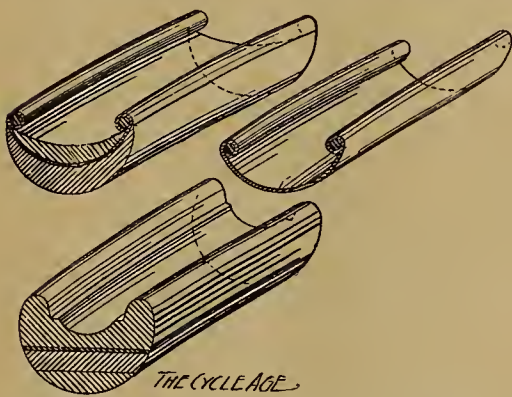
F. E. LOW

BICYCLE WORKS

221 MARKET ST.

age of the outer edges which retain detachable tires. In one form of the invention the rawhide strip is interposed flat between the laminae of wood as shown in one of the drawings. In the other form the edges of the rawhide are free and are rolled around wires, forming retaining edges that make special shapes for the wooden hoops unnecessary. The two shapes seem to be intended for the Dunlop and for the G. & J. patterns of tires, respectively.

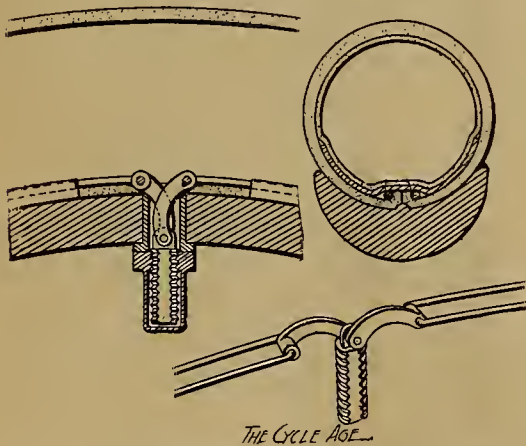
The rawhide is prepared without destroying or removing the gelatine in the hide and hardened by applying thereto a solution of sulphide of sodium and after-



ward a solution of borax to toughen it. The hide is split to the thinness desired, dried in a stretched state, then saturated with benzine or naphtha, and finally waterproofed by applying a waterproofing liquid. The prepared rawhide is cut into strips of suitable width and shaped in a machine to suit the curvature in cross-section, and while being so formed the edges of the strip are turned inwardly or folded upon itself and a wire D placed in the fold, whereby the wire will be covered by the rawhide. The strip should be wide enough to allow the wired edges to stand upon but not project outside the rim, so that the wired edges will offer resistance to the pressure of the tire when on the rim and assist the wood rim to withstand rough usage and frictional wear.

#### Fastening for Detachable Tires.

A fastening method for wired detachable tires has been patented by Charles G. Page of Oak Park, Ill., which reminds of the Burwell system. It differs for use on either plain crescent rims or crescent rim with a single central rib along the bottom of its concavity. The fulcrums for



the contracting device are so arranged that the leverage applied to contracting the wires increases as the contraction progresses and the resistance becomes greater. The illustrations show how this is accomplished.

#### Two Sets of Sprocket Gears.

Henry M. Kolb and Charles Fochl of Philadelphia have patented a change-gear mechanism of which the principle consists in the use of a double set of sprocket wheels, either of which may be made inoperative by releasing the front sprocket from the crank on the same side

with it, so as to permit it to revolve as an idler. The hub of the sprocket is thus made to clutch or not clutch the collar upon the crank shaft which it encircles. By refraining from making the mechanism automatic, so as to release one sprocket by the same act which clutches the other, great simplicity of the working parts is gained.

#### ROAD CONTESTS IN NICE

Heavy Vehicles Make Twenty Miles an Hour—Mile in 1:36 on Boulevard—Many Contestants.

An important motor vehicle exhibition and series of speed contests on the road were held at Nice, Italy, during the last week of March. The first race was over a fifty-mile course and was divided into two classes, the first for vehicles weighing more than 400 pounds and having seating capacity for not less than four persons, and the second for motorcycles weighing less than 400 pounds. There were twenty-four starters in the first class and fifteen in the second. The start was made at 7 a. m.

Lemaitre, one of the oldest "chaffeurs" in France, won the motor vehicle race with a sixteen horse-power road wagon in 2:52:50, winning the first prize of \$800. Second prize winner was 26½ minutes later in finishing.

The race for motorcycles was won by Teste in 2:59:00, who finished 21½ minutes ahead of Rigal, the next man, winning first prize of \$300.

A tourist speed contest over a course of about fifty-three miles was also run. It was divided into five classes, as follows: Two-seated vehicles, four-seated vehicles, vehicles seating six or more persons, motorcycles weighing less than 200 pounds, and motorcycles weighing from 200 to 400 pounds.

The prize in the motorcycle race was won by Geo, who finished in 2:21:56. Madame Dhasty, in a double-seated victoria, surprised the spectators and other contestants by finishing first in the second class in 2:58:18. Mercedes won the contest for four-seated vehicles in 2:27:30, while Buisson covered the fifty-three miles with a six-passenger coach in 3:54:00.

On March 23 a mile race for motor vehicles was run on the Promenade des Anglais amid a large concourse of Nice's most fashionable people. Most of the starters in the road contests took part. Lemaitre outdistanced all competitors with his powerful vehicle with the greatest ease, and in the final match heat to decide the contest covered the mile with standing start in 1:36. The race was run in pairs in eight heats, four semi-finals, two second semi-finals and one final. Gireaud made second best showing and covered the mile in the final in 1:45 1-5. The motorcycle race run the same day and place was won by Becormais.

#### Installing Electric Cab Service.

The close of the present week will see fourteen electric automobiles in service in Philadelphia. Seven of these will be cabs, seating four persons each; three broughams, seating four each; two open carts or tally-hos, with seats for five, and two opera buses, each accommodating eight. Additional vehicles will be placed in service as fast as they can be turned out, and before summer horseless carriages will be so numerous there as to excite no comment.

#### Will Stick to Bicycle Making.

H. A. Lozier, Jr., asserts that the Lozier Manufacturing Company is not preparing to embark in the motor carriage business. He stated a day or so ago that the naphtha engine which the company is preparing to manufacture at its Toledo

factory is designed wholly for use on launches and can not be utilized on automobiles. While in France last month Mr. Lozier became greatly interested in the automobile sport, and on his return to this country he brought with him one of the latest patterns of the De Dion-Bouton vehicles. This, he says, was purchased wholly for his own amusement and no significance need be attached to the move. He says that his company will confine itself as heretofore to the manufacture of bicycles and adds that Mr. Lozier, Sr., is not interested in the development of the motor carriage.

#### TIRES OF ELECTRIC CABS

Batteries Give No Trouble, But the Satisfactory Tire Has Not Yet Been Found.

Speaking of the electric cab service in New York city G. H. Condict, the manager of the system, says in *Horseless Age*: It has been impossible to make accurate tests of the efficiencies of motors, batteries, gearing, bearings, etc., although such data are now being obtained. There is still much to be desired, and in future equipments most material improvements will be made.

Outside of the consideration of large weight in proportion to power delivered, the battery has been given excellent service. Up to the present time there has been practically no expense for maintenance, and the old-time troubles of buckling, short-circuiting, sulphating and disintegrating are as yet entirely absent.

The tire situation is at present the absorbing subject of our day thoughts and night dreams. Were the streets in this great metropolis paved in an up-to-date manner there would be comparatively little cause for anxiety on this score, but with the antiquated and despicable cobble the case is far different. Over twenty separate and distinct types of tires have been tried, or are to be tried, in the near future, and others will probably follow. Solid, single and double-tube, pneumatic, cushion, clincher, sectional, protected and unprotected have all had, or are to have, a trial. Their faults are many, their virtues few, and we are still on the search. We have heard of some eminent authorities in the motor-vehicle field who say that the solid is the only tire. They are rendering judgment without full knowledge of the facts, and from a purely local standpoint. They are evidently not acquainted with the streets of Manhattan. A very satisfactory arrangement for broughams is that of rear pneumatic and front solids.

The wheels also require most serious consideration. The severe strains unavoidable in crossing railroad tracks and other inequalities, and running up against curbstones, speedily put out of service even the most substantial constructions. Everything, from the light and airy bicycle-wheel construction to the dish-pan wheels now so familiar on our streets, has been tried, and still there are more to follow.

#### New Motor Vehicle Co. Formed.

The United States Automobile Company, of Pawtucket, R. I., has recently been incorporated with a capital of \$250,000 for the purpose of manufacturing electric motor carriages and appliances. The incorporators are Frank Mosberg of Providence, President; Julian A. Chase of Pawtucket, treasurer, and D. McNiven of Pawtucket, secretary. The company has taken quarters at 623 Atwells avenue, Providence.

A motorcycle valued at \$545 and a motor carriage worth \$2,000 were shipped to Berlin a fortnight ago.

# One Swallow

Doesn't Make a Spring

but one week of fine weather makes a rush that you cannot take care of unless you are prepared for it. . . . .

## Everything for Bicycle Builders and Dealers

—Means just what it says.

You don't have to shop around. We have it. Come to

### Headquarters for Staple Fittings and Equipment

and while there we will show you all the new things on the market. . . . .

## Excelsior Supply Company

(ESTABLISHED 1876)

88-90 Lake St., Chicago

## BUYERS OF ROAD BICYCLES FIND GREATER VALUE

IN

The  
*Waverley*

THAN IN ANY OTHER BICYCLE  
MADE IN THE WORLD

REGARDLESS of price reduction we still adhere to the old fashioned idea of high class construction, and forge our frame joints, while our bearing parts are of tool steel hardened through in oil and ground to gauge. Perfect bearings are impossible where stampings are used. No castings or stampings find a place in the Waverley yet its 1899 price is

\$40

OUR IVANHOE line at from \$25 to \$35 completes a variety of up-to-date, honest bicycles not equaled by the output of any other factory that we know of.

OUR AGENCY is valuable. If we are not well represented in your locality, write. At least we should be pleased to send you our '99 catalogue whether we can do business or not.

INDIANA BICYCLE CO.  
INDIANAPOLIS, IND.

# THE PASTIME AND SPORT

## The L. A. W. Touring Department

In the establishment of a department of touring information the L. A. W. shows a commendable purpose to go further than ever before in providing practical benefits to its members outside of its tour books, official organ and fight for good roads and wheelmen's rights. The Cyclists' Touring Club of England is far in advance of the League of American Wheelmen in special conveniences offered to members, though the latter has doubtless really done far more on the whole for cyclists through its good roads legislation and its battles in court and legislatures for wheelmen's rights as exemplified by such *magna chartae* of cycling as the recognition of bicycles as vehicles on the road and as baggage on the railways. The C. T. C., however, has secured more personal conveniences in the way of customs, privileges, hotel and repair shop advantages and the provision of touring aids in the form of sign posts at cross roads and even repair boxes set up along the highways. In the promotion of these special advantages to members, the C. T. C. books play a far more important part in their applications and influence than does our own weekly bulletin. Over there a hotel license or a repair shop appointment cuts much more figure than do our no less formal but much less effective L. A. W. endorsements. Now that good roads and wheelmen's rights have been accepted here at least as an undisputed principle, it would be well for the L. A. W. to keep pace with new conditions and look more directly to what the League member gets for his dollar in the line of its new committee's purpose and the C. T. C.'s excellent example.

## "Jimmy's" Intentions Are Serious

Arthur Zimmerman's occasional "nights out" with the newspaper boys are usually followed by broadcast press "jollies" of the proposed return of "The Great Zim" to the track. This spring, however, he is to make a serious trial to discover what there is left of the speed that once was in him. "Jimmy" needs the money and thinks he can get it "in the same old way." He is now in negotiation for his first appearance, which will be at Berkeley Oval on Decoration day.

"The Skeeter" has had his troubles of late years. His parting with Joe McDermott, the successful manager and trainer of his palmy days, was an undoubted misfortune. His luckless trip abroad several seasons ago and his disastrous trip to Mexico last spring, which terminated in the culmination of the ills that were doubtless in his system throughout his trip, are sad memories to him and his admirers. But now the breach with McDermott has been healed and his old manager and trainer is back of him. "Zim" is still young, not having reached 30 yet. There is no reason why he should not have most of his old strength left and a great chance that the old sprint can be redeveloped. No racing man has ever approached the speed of his final sprint, in which he has been timed frequently at :11 and :11 1-5 for the eighth, which the very best of modern sprinters have done in 12 seconds. Could the race be slow to the stretch he would be even now worth a good bet in the final rush. Perhaps he still has the "stay," and experience may give him the ability to follow fast pace to the last quarter and then not be found wanting in the scramble down the back

stretch, around the curve and up the home to the tape. And who even at this stage of the game would risk much against "Jimmy's" chances in a match race without pace and without time limit, as he declares all races should be run? It is safe to say the public has not forgotten the greatest cycle racing idol it ever had and that "Jimmy's" success would mean much to the racing game.

## Sprint Races to Be Revived

There promises to be a revival by promoters the coming season of attention to sprint racing. It is proposed to feature special races and big handicaps for large purses rather than the ultra-expensive paced races of last season, so financially disastrous to the promoters of middle distance racing and the backers of big pacing teams. The A. C. R. A. spent \$8,000 on its pilots last season, and though there were in the aggregate larger crowds in attendance than ever before the association quit the game considerably to the bad. The troubles of the National Track Association have been in course of financial adjustment all the winter and the combination of tracks backing that team has just succeeded in concluding the payment of "the freight" and being restored to good standing with the L. A. W. board.

Unless the manufacturers take up the game and bear the whole expense, which is unlikely, middle distance racing on a continued big scale cannot consistently be looked for. Whatever we have will probably be between practical "scratch" teams gathered for the occasion, and this is more possible than formerly in view of our large stock of pacing machines and the very general experience riders have acquired in the pacing game.

To be sure, motor pacing may solve the problem. Fournier created much interest with his motor cycles this winter, going a mile in 1:35 on an indoor California track. He now proposes to have his brother with him in his pace furnishing project and talks about the wind shields he will attach to the rear of his machines. Counterparts of his motor pacers can easily be imported from Paris if our manufacturers are unwilling to build them. But the general adoption of motor pacing is not near enough to cut much figure in the game yet or to divert promoters from a trial at the public's willingness to patronize big money sprint races. The success of the great Quill Club \$2,000 handicap, two years ago, and the \$500 handicap at the last National meet are well remembered, and it is reported that 30,000 people saw the recent Austral wheel \$3,000 handicap. At any rate the trial is to be made. Nate Salsbury will put up \$500 for a handicap at the opening of the metropolitan district season at Ambrose park on May 20. This will be followed by one for a similar sum at Washington on Decoration day, and Blaurock will open Manhattan Beach on June 17 with the great Atlantic handicap.

## The Trade and the Sport

It does not seem likely that the trade will be mixed up in the racing game as an advertising proposition the coming season to any greater extent than it was last year. The Sager gear people gathered in the paced sprint records with Major Taylor at Philadelphia late last autumn under adverse conditions and still

have the all-around colored rider under contract. At one time it looked as though there might be a battle of the gears on the track and rumors were afloat that Colonel Pope had signed or contemplated signing Bald, Cooper, Gardiner and other cracks as the nucleus for a world beating, bevel gear pushing aggregation; but it is stated on the authority of one high in the racing game and close to the colonel on this proposition that all such intentions have been positively abandoned by him. Mr. Spalding will probably be too busy promoting the bicycle combination to saddle his concern with the further responsibility of a racing team. At least it is known that no attempt has been made as yet to renew his contract with his star, Eddie Bald. Tom Cooper has just been added to McFarland and Stevens as a cycloidal sprocket turning advertisement for the Tribune, and it has become a case of "I and Stevie and Tom" now. The Orient makers will pursue their policy of sticking to middle distance racing and paced record endeavor.

## Century Courses to Be Established

Century road riding seems to some to possess elements of danger in the temptations it presents to weak-limbed and inexperienced riders, while others look upon it as too insignificant an accomplishment in these days of fine roads and perfected bicycles to be recognized at all, much less with the formality of "century bars" as a feat worthy of record. The Century Road Club, its promoter and protector, however, still thinks it worthy of recognition together with riding for road speed records, and so believing has very consistently added new restrictions and conditions that should enhance the validity of the chains of the wearers of the hundred-mile medals bearing the club's affixed stamp. "Century courses" are being laid out in various sections of the country, over which all centuries must be run and along which the riders must be checked at special points to secure for this performance official recognition. Courses over the Merrick road on Long Island and between Englewood and New Brunswick in New Jersey have been recently laid out and designated as official for riders in the metropolitan district.

A race meet was given in Marseilles March 19 notwithstanding the warning of suspension by the U. V. F., and the suspended riders Jacquelin and Deschamps competed. The meet was very largely attended. Jacquelin was badly defeated in both scratch races, starting his sprint too late. Deschamps was the hero of the day, defeating Verheyen and Reboul by two lengths in the first event. The tandem race was won splendidly by Jacquelin and Octavie, the latter a woman rider.

The outdoor racing season in England was opened March 19 by a six-hour amateur multicycle race at Herne Hill track, London. There were thirteen starters. The Haysom-Duddles team won the event, covering 122 miles 460 yards. Bishop brothers were second.

The royal family of England has bought nine bicycles to be used by the personnel of Balmoral castle.

The national wheelmen's organization of Germany now has 43,000 members, as against 35,000 a year ago.



“The Advance Agent of Prosperity”

IN CYCLEDOM SELLS THE

# Famous Orient

Why don't you  
sell this well known  
wheel?

WALTHAM MANUFACTURING CO.  
WALTHAM, MASS.

## Olive Wheels

ARE POPULAR EVERYWHERE



Agents say they sell more readily than any other make ever handled. Riders claim it to be the easiest running wheel ever mounted. Represent or ride the Olive and you have the popular wheel on the market this season.

**The Olive Wheel Company**  
SYRACUSE, NEW YORK

# IF!



IT IS  
AS  
GOOD  
AS

“THE....

## HOLLENBECK

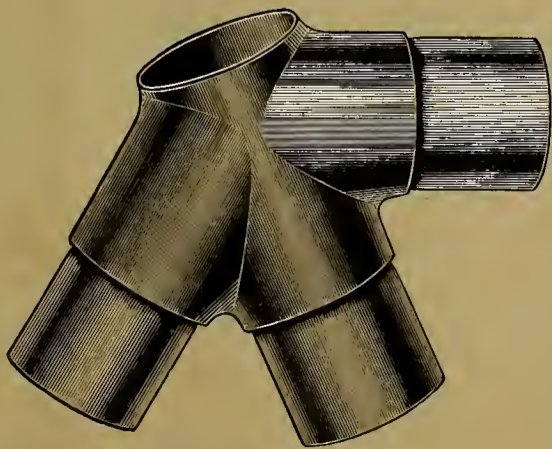
RAWHIDE SADDLE”

It costs more.

Mr. Dealer: All Jobbers supply them. If not, write us.

MAKERS

**HOLLENBECK SADDLE COMPANY**  
SYRACUSE, N. Y.



WE CARRY IN STOCK

# 3 LUG CLUSTERS

IN ALL ANGLES FOR 28 AND 30 INCH WHEELS.

MADE FROM OUR OWN PATTERNS  
ANY SIZE OR ANGLE YOU WANT  
MACHINED SO THEY FIT

**HAVE YOU SEEN OUR NEW RACING HUBS?**

Walker & Ehrman Mfg. Co., Washington and Union Sts., Chicago, Ill.

**SANGUINE VIEWS OF GERLACH****HE SEES NO TROUBLE AHEAD**

**Believes Suspended Racing Men Will Weaken and League Will Control the Sport Alone.**

The new chairman of the racing board reached his office in Chicago last Thursday, but declined to make any positive statement when asked if the League would reinstate the "outlaws" without the payment of their fines; neither would he deny that such a course had been decided on by the board in regard to the suspended riders. He did say that each rider would receive separate action and that the board would be guided by common sense in the matter. He also said that he had not the slightest doubt that the resolution of the big racing men to stay out of the L. A. W. would be broken, but declined to discuss the question when shown letters and telegrams regarding the stand the riders would take. He doubted the reports that handicaps for small fortunes as purses were to be offered down east, and said this would have no effect on the final result.

**Encouraged by Eastern Trip.**

His trip through the east had been one of constant encouragement. He had found nothing to discourage him and was sure that there would be but one controlling body and that one the L. A. W. He intimated that only Manhattan Beach track would be controlled by the N. C. A. He anticipated no further success for the opposition but what it had already obtained.

The chairman returned to Chicago with all the books of the board and at once buried himself in work. He will shortly issue a statement, otherwise a bulletin, and claims that there will be consternation in the ranks of the N. C. A. when it comes out. He is assured of the support of the A. A. U., of which James Sullivan is secretary, and he says that the A. A. U. will blacklist all the riders connected with the opposition.

**Will Offer Inducements to Foreigners.**

Mr. Gerlach says that Boston will have no trouble about funds, and that the L. A. W. will have no lack of prominent riders to follow its National circuit. Inducements will be held out to the foreigners to come to this country and compete at the National meet at Boston and also at the International meet in Montreal. He does not believe that the letter which Eck displayed had anything to do with the "outlaws," and says that the track manager evidently believed that the suspended riders would be restored to good standing long before that time. He had no doubt himself that they would be. The chairman said that the Ravenswood track in Chicago had notified him that it would stand by the League, and that other tracks were being added to the list of certainties every day. The building of two new tracks in the city for the N. C. A. did not bother him at all as the future might all be changed by conditions.

**The Fight in New England.**

Springfield, Mass., April 3.—New England is at present the storm center in the struggle between the League of American Wheelmen and the National Cycling Association. Both organizations claim everything in sight. L. A. W. stock has gone up a trifle since McDuffee, Nat Butler and Waller returned to the mother wing. The last issue of Ellibtt's official organ claimed that the Springfield, Hartford and Bridgeport tracks asked for sanctions on this season's National Circuit of the L. A. W. The N. C. A., how-

ever, is generally considered stronger than the L. A. W. in all of these cities. The suspension of the Springfield track was hastily raised by the L. A. W. when announcement was made that overtures were being made to the Springfield Bicycle Club by the N. C. A. The bicycle club will decide this week whether it will reconsider its determination to abandon the famous Springfield tournaments. If the club does not care to risk the venture it is likely that a race meet will be held in Hampden Park under private auspices. The dates of September 12, 13 and 14 have been offered to Springfield by the N. C. A.

**ROOT-GREENBURG SURPRISE**

**League Workers Make a Sudden Flop and Become Identified With National Cycling Association.**

It comes in the nature of a big surprise to not only League members, but to the "outlaws" as well to learn that Charles P. Root, of Chicago, ex-League handicapper for Illinois, one-time champion of Mott and vice-president of the Chicago Cycling Club, and George G. Greenburg, auditor of the L. A. W. and chairman of the Illinois state racing board last year, have decided to cast their lots with the National Cycling Association and have burned the bridges behind them by accepting positions under the board of control of the latter organization.

Although the first announcement came out on April 1 it is no April fool joke that Greenburg has accepted the position of western member for the states of Ohio, Michigan, Indiana, Illinois, Wisconsin and Missouri, and that Root has been appointed handicapper for the district for the N. C. A. Root's sudden change is even more of a surprise than that of Greenburg because, while the latter has for a long time advocated the abandonment of racing control by the League, Root's vigorous letter to Batchelder declining to serve as western member of the board of control for the "outlaw" body is still fresh in mind. He explains that his change of front is due to subsequent events that have transpired in the conduct of League affairs and which are little to his liking. He is enthusiastic in behalf of the new organization and believes that he and Greenburg can swing the Chicago C. C. and many local cycling lights over to the support of the N. C. A. He says he can also influence one of the new tracks to be built in Chicago to the "outlaws" if he thinks it advisable, and altogether has taken a very long leap on the side of the fence that looks sunniest just now.

**Strange Affair at Fountain Ferry.**

The action of the Fountain Ferry track management is causing much agitation among the ranks of the N. C. A., who are unable to understand the justice of the L. A. W. racing board blacklisting eastern tracks for allowing suspended riders to train on them and then giving the Louisville track carte blanche to throw its gates open to the "outlaws" and League riders indiscriminately for training purposes. The fact that Fountain Ferry will not give race meets except under L. A. W. sanction does not in the least mitigate the offense for which many other and more prominent tracks have been fined and suspended.

Members of the L. A. W. in and around Bellefonte, Pa., have inaugurated a movement to secure special legislation for the central part of the state in the way of cycling paths along the most prominent thoroughfares, providing there is no enactment of a compulsory good roads law. The idea advanced is to secure state aid only in part toward defraying the expense of building the paths, and this only after a certain amount shall be raised in some other way yet to be determined.

**ANNUAL CONVENTION OF C. W. A.****POLITICS IN THE BACKGROUND**

**New Officers Cable to Secretary Sturmeay for Recognition of "Outlaws"—Rubenstein President.**

Toronto, April 1.—The annual meeting of the Canadian Wheelmen's Association was held yesterday in this city. There was no contest for the chief executive office, Louis Rubenstein, former vice-president, being elected by acclamation, and there was not the usual rivalry between the various cities over the Dominion meet, which was awarded to Brantford. There was only one contest of importance and that was for the vice presidency, between J. W. Prescott of Vancouver, B. C., and A. B. Rattray of Montreal, Que. As the new president of the Association is a Montreal man, there was a strong feeling that the next office should go to the west and Prescott was accordingly elected by a large majority. Fifty-seven clubs were represented by 170 delegates, and forty-one clubs voted by mail.

**Revision of Constitution.**

One of the most important matters passed on by the convention was the complete revision of the constitution and by-laws. The Association increased the annual fee for affiliated clubs from fifty cents to seventy-five cents, which includes subscription to the official organ. The compulsory fee has been abandoned.

In future the convention will last two days. The second day will be devoted to the question of the improvement of the roads and will be known as "Good Roads Day."

The report of Chairman Wilson of the transportation committee informed the members of a very satisfactory arrangement which had been effected with the United States authorities at Washington, whereby Canadian tourists who are members of the Association have the privilege of entering the United States with their bicycles free of duty for a period of four months. Exceptionally favorable rates have also been secured with a transatlantic steamship line for the benefit of the racing men and others from the old country desiring to attend the world's meet.

**Reports of Committees.**

The report of the chairman of the membership committee gave the present membership at about 8,000, a slight falling off from last year, but a substantial increase was shown in the cities of Toronto and Montreal.

The report of Chairman Howson of the roads and touring committee showed that the department had accomplished a great deal. The country roads have been almost completely provided with first-class signboards; beneficial contracts have been made with the best hotels in various localities; an elaborate guide book is being compiled and the gospel of "good roads" is being everywhere set forth.

The report of the rights and privileges committee dealt with the cycle path bill, which was last month introduced into the legislative assembly of this province. This bill was laid over till next session, owing to the desire of the attorney-general to finish the business of the assembly before Easter, but the government has promised to give the bill its support at the next session. This bill is based upon the law passed in the state of New York two years ago, as applied to Monroe county in the vicinity of Rochester.

Alderman Graham, chairman of the reception committee of the city council, extended the city's greeting to the wheelmen and invited them to a luncheon tendered by the civic authorities, at which

the delegates were welcomed by the mayor of the corporation, several of the aldermen and other distinguished citizens.

#### Must Have Prominent American Riders.

At the afternoon session the following resolution was moved by W. N. Irwin and seconded by T. A. E. World, for the purpose of evoking a discussion:

Resolved, That in view of the complicated and unusual condition of cycle racing in the United States, and in the interest of the international championship meet in Montreal, the C. W. A. hereby recommends to the I. C. A. that, pending the adjustment of the difficulties in a manner acceptable to the I. C. A., riders of the L. A. W. and N. C. A. be equally eligible to compete in races held under C. W. A. rules.

A letter was read from Mr. Sturmev, secretary of the I. C. A., in which he stated that the I. C. A. would recognize the body which wins, when it is quite clear that it has won, and that the I. C. A. thought it was an internal question which should be settled in the states. Subsequently the resolution was withdrawn and the matter was left to the new executive officers to deal with, who at a subsequent meeting discussed the relations between the N. C. A. and the L. A. W. and concluded that while the I. C. A. felt that it should preserve as much neutrality as possible, the success of the World's meet at Montreal could not be jeopardized and the presence of the fast riders now under N. C. A. jurisdiction would have to be secured.

#### Special Privileges for N. C. A. Riders.

As a result of the conference the executive committee passed a resolution requesting the International Cyclists' Association to require the L. A. W. to make good its claim that all professional riders in the United States will have returned to its standard on or before July 1; failing in this the C. W. A. requests the I. C. A. to grant equal privileges to the N. C. A. and L. A. W. riders in all bodies affiliated with the I. C. A. This resolution was cabled to Henry Sturmev at Paris, France, and will be read at the meeting of the I. C. A. which is at present in session there.

The effect of all this is that the C. W. A. intends to secure if possible all the best riders in the States for the World's meet and make the World's championships of the greatest international interest. If the L. A. W. cannot demonstrate that it controls the racing men before July 1, recognition of the N. C. A. by the I. C. A. is inevitable. The C. W. A. expects the largest deputation of foreign riders which has ever appeared in this country. The foreigners will sail on the steamer "Vancouver" from Liverpool July 20, which will give them about ten days in this country before the Montreal meet.

#### Starbuck Unplaced in Italy.

J. Frank Starbuck took part in a big race meet in Turin, Italy, March 19 and 20, but ran unplaced on both days, although he won his heat on the second day in the handicap race by seventy meters. Parly and Pontecchi also were unplaced. Singrossi won the scratch race the first day, in which the others "also ran," and Bixio finished second, followed by Ferrari and Eros. Singrossi and Dei won the tandem race. Prisini won the handicap event the second day.

#### Cyclists Take Part in Campaign.

The re-election of Carter Harrison as mayor of Chicago is partially due to the efforts of the cyclists, who have not failed to appreciate the favors he has shown them during the past two years. It was during his administration that the ordinance was passed making it compulsory for all vehicles to carry lights at night and that the sprinkling of streets

was first regulated with a view to the comfort of bicycle riders. The mayor was also instrumental in having the street railways lay grooved rails at the boulevard crossings to make them smoother and he also interested himself materially in the laying of cycle paths in sandy stretches of road both north and south of the city proper. For these reasons and because they, as citizens, approved of the mayor's conduct in office, a committee of 100 cyclists was organized on non-partisan lines to support the mayor for re-election and to influence other wheelmen to vote for him.

#### WALNE THE CHAMPION

##### Wins Mile Championship of Australia in Close Finish With Walker—Other Races.

Sydney, Feb. 25.—The League of South Australian Wheelmen held a two-days' meet February 11 and 18 at Adelaide. The first day the terrific heat—110 in the shade—prevented a large attendance, only about 2,000 people attending. The second day the attendance numbered 5,000. The principal events were a five-mile scratch, the one-mile professional championship of Australia, and the two-mile Adelaide wheel race for prizes aggregating \$750. W. C. Jackson brilliantly won the five-mile scratch from Bob Lewis, with Walne fourth. The latter was suspected of crooked riding and asked for an explanation, which was accepted.

The one-mile championship of Australia was run on the second day and was won by Walne by an inch in 2:12, after the most desperate race he has had in his life. Entering the straight he led by three lengths, but with a magnificent burst of speed Don Walker drew even just a few yards from the post, but Walne's final jump gave him the first of the Australian championships for 1898-9. Walker shares with Megron the name of being the fastest sprinter in Australia, but is very erratic. S. E. Gordon, the brilliant black rider, finished third.

The two-mile race was won by W. G. Symmonds from Aunger in 4:17.

#### Walthour Wins 12-Hour Race.

The six-day two-hours-a-day race run at Houston, Tex., last week by Jack Prince was won by Bob Walthour, who covered 245 miles 7 laps. There was a hard fight between Burt Repine and George Kraemer for second place, which was won by Repine in the final sprint.

#### NEWS IN BRIEF.

Harry Elkes has offered to engage Bob French as a pacemaker for the season and has even promised to take him to Europe with him. French did some very creditable pacemaking for Elkes last summer and Elkes has apparently kept it in mind.

Lord Beauchamp, newly appointed governor of New South Wales, is an ardent cyclist. Lord Hampden, the retiring governor, took to the bicycle while in office and gave the pastime a great fillip at the time, as the Australian society followed in his wake.

"Pop" Brewster's appointment as an official referee by the "outlaws" association was announced in the Saturday papers of Philadelphia, although he intimated that he had not as yet been officially notified of the honor thrust upon him and refused to state whether or not he would accept the appointment.

Charles Turville, the Philadelphia long-distance rider, is home from his trip to the Pacific slope with the "outlaws." He relates some tough experiences in connection with his trip, although he is at present in excellent condition. His brother Clem was forced to remain on the coast owing to a lack of funds.

Philadelphia's outdoor racing season was inaugurated, as usual, by the annual Good Friday five-mile handicap of the South End Wheelmen. The affair has heretofore been a road event, but, owing to the condition of the roads, it was decided on the Point

Breeze track this spring. There were nine entries of whom but six finished. The race was won by the limit man, Samuel Foster, 375 yards, who won out by 100 yards over J. Henry Smith, a 150-yard man, in 14:35.

It is announced that Floyd McFarland contemplates an attack on the mile record, and that the attempt will be made on the Woodside Park track, Philadelphia. As that track still retains its allegiance to the L. A. W. this report would seem to indicate that the tall Californian contemplated returning to the fold.

Russian and other European racing men have made such pretensions and such exorbitant demands that the Russian bicycle firms have agreed not to give their agents any money to pay to riders nor to themselves hire any riders without the consent of the house which formerly employed them. These resolutions went into effect January 9, to continue for three years.

President Metz of the Waltham Mfg. Co. has notified the Boston '99 Meet Club that it can draw on the makers of the Orient bicycles for \$500 as a portion of the entertainment fund to be expended during the League meet in Boston August 14 to 19. The club has established headquarters and secured the support of city and state officials.

By vote of the racing board the following have been appointed L. A. W. handicappers: Charles H. Norwood, of Paterson, for New Jersey; A. G. Powell, Philadelphia, for Pennsylvania; T. F. Myler, Pittsburg, for Pennsylvania; A. D. Smith, St. Paul, for Minnesota; George L. McCarthy, New York, for New York; J. F. Ollinger, Saline, for Kansas; J. C. Korlison, Boston, for Massachusetts, Connecticut and Rhode Island.

Mrs. John Rice, of Philadelphia, will come very near leading the lady riders of the country in the contest for the Century Road Club prize. Although Mrs. Rice refuses to make public the exact number of centuries she rode during the season of 1898 (her claim now being in the hands of the C. R. C. officials for adjudication,) it is known that she gathered in 52 hundreds in her last four months' riding.

The commissioners of the District of Columbia are alive to the benefits to be derived from the construction of a cycle path to connect Baltimore with the national capital and will do anything within their power to aid the project. They can grant the right of way, but are without authority to place any restrictions upon a free use of the path by non-members of the association. Through Maryland, however, the path will be for the exclusive use of the members of the associations building it, as the legislature of that state has practically assured the promoters that a law will be enacted making it a misdemeanor for others to ride upon it.

Little errors in the spelling of a rider's name oftentimes cause a permanent change in the name, regardless of the wishes of the rider himself. Some time ago McDuffee had articles drawn up for a race with Michael. His name was spelled McDuffie, and the rider so signed it, to save the trouble of changing it through the articles. This year the error was discovered by the press, which had generally accepted the wrong spelling, and the middle distancer became again McDuffee. The Swedish rider, Aronson, had his name spelled Aaronson when he entered for the six-day race this year. He himself does not know how the Aa came to be used.

Djakoff, the Russian, who, in 1897, won the N. C. U. 25-mile amateur championship at Wood Green, England, and afterward turned professional, has abandoned the racing path and opened a chemical factory near St. Petersburg. When racing he always meant business, and preferred to be alone, either cutting out a hard twenty-five miles an hour or sprinting time after time in the most insane manner, according to our views. He resented anybody hanging on to him, and his manner of jumping away from those who tried to do this was amusingly effective. As a matter of fact, it is doubted if any professional in England at that time could have held the Russian.

Southern California will have one and perhaps two representatives in the eastern circuit races this season. William Furman, a giant of 19 years, standing 6 feet 3 inches and weighing nearly 200 pounds, is one, and the other is Fritz Lacey, a nephew of Sir Arthur Sullivan, of England, the composer of "Pinafore." Furman was spoken of as a wonder by such riders as Bald, McFarland, Stevens, Eaton, Goodman and other eastern cracks when he rode in the Los Angeles races this winter. He is a strong sprinter and previous to taking to the track was the crack road rider of the coast and a member of the Bay City Wheelmen relay team. He turned professional during the recent indoor races at San Francisco and won money in the best company.

## RETAIL MISCELLANY

## General Information Concerning Cycle Agents and Repairmen Throughout the Country

**Alabama.**

The stock of pianos and bicycles of the Junger & Cass Co., Mobile, has been injured by water.

**Arizona.**

William Bowen will open a bicycle store in the Code-Salter building, Phoenix. He will carry a line of up-to-date machines and sporting goods and operate a repair shop.

**California.**

J. Leslie Hague has sold out his bicycle business in Escondido.

The Pasadena Cyclery, C. F. Hamlin, manager, has opened at the corner of Colorado street and Broadway, Pasadena. A complete repair shop will be run in connection with the business. A line of Victor and Featherstone models will be carried.

The Miller Cycle Co. of San Diego has gone into handsome new quarters at 1025 Fifth street. The rooms have been neatly refitted with a repair shop in the rear and when everything is in order the establishment will be one of the finest of its kind to be found anywhere. The Cleveland bicycle is the company's leader.

C. W. Burgess of San Bernardino, who for a number of years has been constructing and repairing oil burners for the Santa Fe company, has resigned his position and taken charge of the repair shop of the Columbia Cyclery, 433 Court street, same place.

Frank Wheeler of Long Beach has secured a gasoline engine and will attach it to a lathe in his bicycle shop. He contemplates building more room and adding other improvements to his shop.

The firm of Wright & Hill, Santa Ana, has dissolved partnership. H. C. Hill, however, will continue the retail bicycle business at the old stand and Mr. Wright will do the repairing in the shop in connection.

The San Diego Cycle & Arms Co. has filed articles of incorporation in the county clerk's office. The capital stock of the company is \$10,000.

C. E. Kocher has purchased the Trilby Cyclery and repair shop of Merced, formerly conducted by Wheeler & Davis and is now prepared to do all kinds of bicycle repairing.

**Canada.**

A. E. Shantz has leased a store at 59 King street, Brantford, Ont., and will open a bicycle showroom.

**Colorado.**

Charles Van Hoorebeke, a bicycle dealer in Grand Junction, has taken a partner. The firm is now Van Hoorebeke & Fluke.

**Connecticut.**

The new firm of Stockton & Goodyear will open a bicycle store in the building formerly occupied by A. Brassart at Naugatuck. The interior of the building has been remodeled to meet the requirements of the new business. The firm will carry several lines of bicycles and sundries and do all kinds of bicycle repairing.

Oscar Hagen will open the bicycle store in Meriden which was formerly conducted by Stow & Phillips. Mr. Hagen will do the bicycle work and repairing in the best possible manner.

**Delaware.**

The Pyle Cycle Co. have moved into a new store at the corner of Tenth and Orange streets, Wilmington. The store is 16 by 54 feet with a complete repair shop on the second floor 12 by 54 feet. Cleveland and Crescent models are the leading machines sold by this firm. There is a riding school attached 54 by 85 feet with a balcony 14 by 54 feet.

**Florida.**

W. T. May of De Funiak Springs has taken a partner and the new firm name is May & Cawthorn. They handle Crescent bicycles.

**Illinois.**

The bicycle room of John Ruppert of Paris is being remodeled and painted and when completed will afford a better opportunity to display new machines and sundries.

DeKalb has a new enterprise. F. L. Taylor has opened a general repair shop in the old Superior building.

George Decker has rented a store building in Sterling in which he expects to open a bicycle repair shop.

Charles A. Underwood has opened a bicycle repair shop in Beardstown. He is pre-

pared to do all kinds of repairing and expects to put in a fine line of bicycles and an assortment of supplies soon.

W. J. Wiley of the American Cycle Supply Co., Chicago, has retired from business.

H. B. Conyers will discontinue the jewelry and bicycle business in Chillicothe.

The firm of Stewart & Massie, Quincy, have dissolved by mutual consent. A. K. Stewart assumes all debts of the concern and will continue business at the old stand.

Andrew Wier has opened a bicycle repair shop in the Barr building, Braidwood, and is ready to do all kinds of bicycle repairing and cleaning.

Samuel P. Allen of Fall River has taken a partner in the hardware and bicycle business. The new firm is Allen & Reber.

**Indiana.**

A. C. Katt of Fort Wayne is a veteran bicycle dealer, having been in the business since 1887. After a four months' trip through Indiana for the Gormully & Jeffery Mfg. Co., he has opened a new store at 84 Clinton street, occupying the entire two-story building. He has a nicely furnished salesroom and bicycle livery on the lower floor and a well equipped repair shop on the second floor. Ramblers and Ideals are still his leaders, as they have been for the past ten years.

John S. Sharp, of the firm of Johanboeck & Sharp, Charlestown, is dead.

Stewart Bros of Marion have made arrangements for the erection of an addition to their bicycle salesroom on Third street. It will be used as their repair shop for the coming season and will be equipped with machinery for making all kinds of repairs.

M. C. Henley will open a bicycle store in Richmond. William Bell will be in charge.

J. W. Deitsch succeeds W. W. Briggs in the hardware and bicycle business at Geneva.

Simon J. Carroll has rented the building at 419 Market street, Logansport, and will place a stock of buggies and bicycles therein about April 15. This will not interfere with his regular business in Royal Center, but he is branching out on a larger scale. Bryce Burton will have charge of the Logansport establishment.

Priest & Hart of Bainbridge have sold out their hardware and bicycle business to Collier & Huffman.

Bennett & Bennett have dissolved partnership in the bicycle business at Richmond and John M. Bennett will continue the business.

**Iowa.**

O. L. Sturtevant & Son of Ogden have gone out of business. Bicycles were sold in their general store.

Nelson & Vooches, hardware, harness and bicycle dealers at Marble Rock, have dissolved partnership.

Bert Cotant has opened a bicycle repair shop and salesroom in New Hampton.

Mr. Stephens of Sioux City has taken charge of R. G. Fritz's second-hand store. In connection, Mr. Stephens will put in a complete outfit of tools for repairing bicycles and guns.

**Kansas.**

W. S. Daniels has leased his bicycle repair business at Newton.

W. J. Keyes who was in the bicycle business in Hutchinson last season is now in the bicycle department of the Hutchinson Hardware Co.

M. C. Kepple, a dealer in machinery and bicycles in Yates Centre, has sold out.

**Maine.**

Horace G. Larrabee will soon open a store for the sale of bicycles and their furnishings in Bridgton.

A. P. Blaisdell and J. A. Johnston, who recently bought out the work shop connected with the establishment of J. P. Wise & Son in Rockland, are now settled in their new quarters, where they do bicycle repairing in connection with other lines of work.

**Massachusetts.**

Barker & Belden, hardware and sporting goods dealers, 126 and 128 North street, Pittsfield, are to dissolve partnership and Mr. Barker will resign from the hardware part of the business. The new firm will be called the Hardware Supply Co. and will not handle bicycles. Mr. Barker will retain an office at 128 North street as manufac-

turers' agent for bicycles and specialties. Maxwell Eisner will continue to run the Barker & Belden bicycle repair shop at 128 North street.

Ernest B. Rines, bicycle dealer in Gardner since 1895, has been compelled to close out his business on account of poor collections, etc. He has lately filed a voluntary petition in bankruptcy. His liabilities are \$2,635.23 and there are no assets.

Whitten & Pollard have opened a bicycle establishment at 10 Andrew street, Lynn.

**Michigan.**

Fred A. Moore is opening a bicycle and repair shop in the Stewart building, Crosswell.

The Soo Cycle Co. of Sault Ste. Marie has sustained an estimated loss of \$400 by fire fully covered by insurance.

Joseph Sandburg is fitting up his new bicycle store on Main street, Menominee. He will have neat quarters.

Frank Allen has opened a bicycle repair shop in Sturgis.

Alderman Swiggert will open a bicycle repair shop in St. Joseph.

Sear & Lundy is the firm name under which a new business will be started in West Branch. A large stock of bicycles will be kept for sale and rent. A very complete repair shop will also be conducted, both members of the firm having had considerable experience in factories where bicycles are manufactured.

H. J. Richards will establish a bicycle livery and sundry store in Lapeer. He has the reputation of being a hustler.

Johnston & Recor, agents for Rambler, Crescent, Stearns and Crawford models at St. Clair, have dissolved.

It is reported that J. Heath, C. L. Barrett and J. P. Magna of Chicago are contemplating establishing a bicycle factory in Allegan.

Alex Ericson has reopened his repair shop at 114 Canda street, Ishpeming. He makes a specialty of bicycle work.

F. Cedar is reported to have opened a bicycle repair shop on Garfield avenue, Bay City.

**Minnesota.**

Carl M. Lund of Dawson has taken a partner in his tinning and bicycle business and the firm name is now C. M. Lund & Co.

Albert Gerde will open his hardware and bicycle store in Sacred Heart in about a week.

Bjarne Svensgaard, formerly of Winona, is now managing the B. R. Svensgaard Bicycle Co. at Fergus Falls. His brother, Harry Svensgaard, is traveling for the Excelsior Supply Co. of Chicago.

Liefer, Nichols & Co., incorporated, is the name of the firm which will succeed Nichols, Hornburg & Liefer in the hardware and bicycle business at Fairfax.

**Missouri.**

Sheets & Reeves, hardware and bicycle dealers of Blythedale, have sold out.

**New Jersey.**

Robert L. Thomas has moved his bicycle store and repair shop to 110 Church street, New Brunswick. He continues as the agent of the Lyndhurst and is also selling the Atlanta and White machines.

The Phillips Cycle Co. have discontinued business at Trenton.

**New York.**

The bicycle repair shop conducted by Post & Meacham at Le Roy was entered by burglars who carried away two bicycles and tools and sundries estimated at \$100.

Fred Burkhart and Fred Amann have opened a bicycle store and repair shop on Madison street, Syracuse.

C. R. Cook, an experienced machinist, has opened a bicycle repair shop in the basement of E. L. Heaton's jewelry store, Canton. He is also agent for Columbia and Hartford bicycles.

H. L. White and S. B. Pope of New Berlin have formed a partnership under the firm name of White & Pope, and will carry on a general hardware business and manufacture bicycles.

Tracy W. Nichols has sold out his bicycle business in Ballston Spa.

C. A. Ross, an expert bicycle builder from Syracuse, has opened a repair shop at 64 West Main street, Little Falls.

**North Carolina.**

J. O. Matthews & Brother will be succeeded in the bicycle repair business at Goldsboro by the Goldsboro Wheel Works.

F. B. Jones of Reidsville has retired from the firm of Joe Lindsey & Co., and gone in business for himself in the Harris building. He will handle bicycles, sewing machines and sundries and do repairing.

**Ohio.**

The firm of Ott & Hemley, doing business at 606 Monroe street, Toledo, has been dis-

solved by mutual consent, E. W. Ott retiring and D. A. Hemley continuing the business under the name of the Lucas Bicycle Mfg. Co.

M. L. Lasley, who has been located in Warren for nearly two years, will move to Baltimore where he will engage in the bicycle business.

The Raymond Cycle store, 910 Jefferson street, Toledo, has been entered by thieves. Two overcoats and a number of fittings were taken.

J. G. Mahr, a bicycle repairer in Toledo, has been burned out.

Renner & Nichodemus have dissolved partnership. They were hardware and bicycle dealers in Scott.

A gasoline explosion in the bicycle shop of J. G. Maher, Toledo, caused a loss of about \$600.

Charles Brown is opening his bicycle repair shop on South Second street, Gallipolis.

W. A. Simmons of Jefferson has sold his interest in the restaurant and bicycle shop to his partner, J. B. Clark, who will conduct the business.

E. W. Randolph, formerly of the firm of Newman & Randolph, mechanics, of Conneaut, has gone to Ashtabula to work for W. B. Stewart in the repair department of Stewart's bicycle store.

**Oregon.**

Articles of incorporation of the Crescent Cycle Co. have been filed in the county clerk's office, Portland. The incorporators are John Gebbie, W. J. Makelim, George J. Cameron; capital stock \$1,000.

**Pennsylvania.**

J. Kehoe has opened a bicycle store in Conshohocken.

John U. Longaker of Lansdale has reopened his bicycle shop in the basement of the Koffel building.

**Rhode Island.**

Andrew Budlong is contemplating an addition to his bicycle repair shop in Manville.

**Texas.**

N. N. Nunn & Co. have sold out their bicycle business at Bonham.

The Gorman Mercantile Co. is the name of a new firm which will succeed C. H.

Fee & Co. in the hardware and bicycle business at Gorman and Cisco.

**Wisconsin.**

Kaukauna has a full fledged repair shop. It is located on Wisconsin avenue and is conducted by A. Beucus & Co.

H. Kanaska of Milwaukee has been in Oconomowoc making arrangements for the opening of a bicycle and sporting goods establishment in the near future.

J. E. Garvin will open a bicycle shop in Loyal as soon as he can get a building.

Mr. Lee, a jeweler and bicycle dealer and repairer of Hebron, Ill., will be located in Footville the coming season. He favors the Monarch bicycle.

**Tire Company a Victim of Forgery.**

J. E. Keener was held to the criminal court in Chicago last Saturday under \$1,000 bonds to answer to the charge of forgery preferred by the New Brunswick Tire Company, 235 Lake street, which accuses Keener of buying a large number of bicycle tires from it and giving in payment a check for \$500, purported to be made by A. E. Bent, a responsible merchant of Chariton, Iowa, which has turned out to be a forgery. Keener claims the check came from one Charles Wanick, who has disappeared, and that he was imposed upon.

**Dealers Cautioned Against Swindler.**

A party representing himself as I. C. Warner and as a traveler for the Warner Bros. Corset Co. of Chicago, has been going through different cities and towns selling a paint for buggies and bicycles and giving his customers an order for either a Columbia, Rambler or Syracuse bicycle. He explains that the premium is in order to introduce the paint which he delivers and for which he collects. The bicycle never puts in its appearance, however, it is reported. Giles Bros. of Quincy, Ill., investigated the matter and claim to have found that neither Warher

Bros. nor any of the bicycle companies mentioned knew anything concerning the man. The Quincy dealer wishes that cycle dealers would be on the lookout for Mr. Warner, who is about forty-five years old, heavy set, sports a 2 karat diamond and is a smooth talker.

**Importance of Weather Conditions.**

Southern bicycle dealers will be interested in the climatological statistics for 1898 presented in the appended table. A few choice deductions are made therefrom by the Abbott Cycle Co., of New Orleans. Rain means mud, and mud means bad bicycle business. Last year southern dealers had rain, mud, war and quarantine to contend with; ergo, if last season did not ruin dealers, this year should make them rich, for it is an axiom among southern meteorological sharps that a bad year is followed by a good one, and added to this the war and quarantine are eliminated.

	Partly			
	Rainy Days	Clear Days	Cloudy Days	Cloudy Days
Abbeville .....	131	167	96	102
Alexandria .....	150	140	61	164
Amite .....	131	101	234	30
Farmerville .....	91	153	120	92
Franklin .....	123	...	...	...
Jeanerette .....	125	131	86	148
Jennings .....	82	194	85	86
Lions P. O. ....	114	133	157	75
Lake Charles .....	105	192	53	120
Liberty Hill .....	99	192	74	99
Mansfield .....	67	163	86	116
Melville .....	90	189	25	151
Monroe .....	103	196	23	146
Natchez, Miss. ....	78	160	56	149
New Orleans .....	124	131	127	107
Opelousas. ....	104	154	102	109
Plain Dealing .....	94	181	79	105
Robeline .....	80	182	91	92
Schriever .....	47	213	48	104
State Exper. Sta. ....	150	152	41	172
Vicksburg, Miss. ....	122	149	124	92

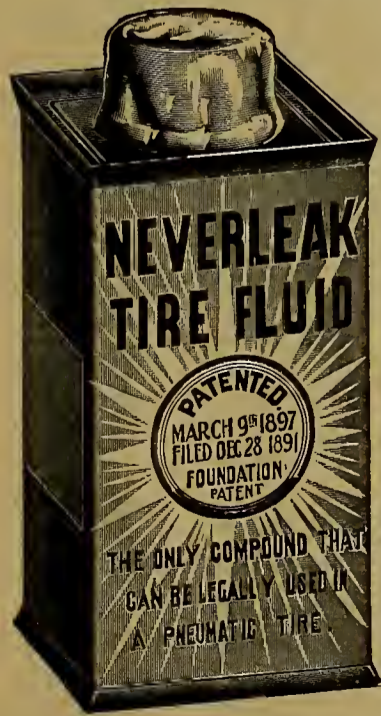
A German company has been formed with \$40,000 capital to manufacture chainless bicycles.

# LAWSUIT NOTICE

WE HAVE COMMENCED suit in the United States Circuit Court against H. Grinberg & Co., and the Manhattan Storage Co., of Philadelphia, for infringement of our rights under the Duryea patent, in selling and offering for sale a compound for pneumatic tires.

Our attorneys will press same with all possible expedition to obtain an early adjudication of our rights. We have every confidence that our patent will be fully sustained and are prepared, if necessary, to carry the matter to the court of the last resort.

In the meantime we shall strictly insist upon our rights being respected.



## NEVERLEAK

is the only Tire Compound that can be legally used or sold. In handling it you have the positive assurance that it is the standard, the best, the only one used and recognized by Tire Makers and the only one you can buy, use or sell without buying a lawsuit.

We are daily asked to license others under our patent. We grant no licenses under any circumstances or consideration.

### OUR 1899 BRAND

Will close punctures fully three times as large as formerly, making it marvelously effective. It will preserve the tire, and overcome all the troubles.

**BUFFALO SPECIALTY MFG. CO. BUFFALO N. Y.**



SOME people would say this was bad business—'TIS! Don't imitate this and tie up with an unsafe line.

The.....

**Alcazar** (Chainless, Chain and 30-in.)

**New Castle**

...and **Atlas**

form the complete line of the year for the progressive dealer—a perfectly safe one to tie to.

Our Catalogue Furnishes a Fund of Information Which is Valuable to You

Prices? Marvels of Economy With Quality

**Speeder Cycle Co.**  
NEW CASTLE, IND.

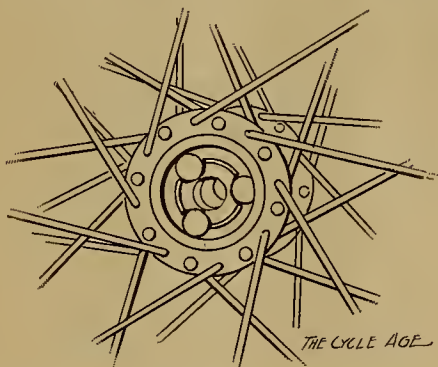
We should like to talk with you —strictly business

# INFORMATION FOR BUYERS

## HISTORY OF BALL SEPARATORS.

Four years ago the American Waltham Company brought to the notice of the cycling world its three-ball bearing which formed the most distinguishing feature of the company's bicycle, the Waltham Comet. The three balls in the bearing were placed in a separator which kept them always 120 degrees apart. Since then minor details of the separator device have been somewhat changed, but the company has seen no reason to change the main principle which they were the first to advocate: that in a ball bearing the number of balls should be as small as possible, and that each ball should be prevented from rubbing against the balls next to it and hindering their free rolling motion. In a bearing filled up with balls the two balls on which the greatest pressure rests at any given time are in contact with other balls which also sustain a considerable pressure when there is a load on the machine and therefore oppose the rolling motion of the adjacent balls very effectively. The ball-separating device on the other hand is entirely relieved from weight and plays freely within the limits of the small clearance left between each ball and it. When therefore the load-carrying ball—or balls—in its rolling motion jostles against the edge of the separator there is practically no resistance to the ball's motion from this source, but the separator adjusts itself automatically by the slight impulses which it receives to stay clear of the balls. After motion is once started the contact of the balls with the ball races on which they roll maintains them at their given distance from each other, and then even the minute automatic impulses which serve to adjust the separator cease. The smaller the number of balls the less clearance will evidently be required between balls and separator to make action uniform and certain.

When the American Waltham company championed these ideas for bicycle bearings four years ago they were hardly accepted

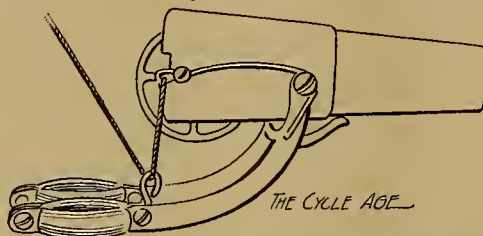


as axiomatic truth by the trade at large, but the separator idea has grown popular by degrees in the interim. Several other bearings have been placed in the market in which separators were used and finally this year it has been placed before the public as an indispensable refinement advocated by companies which are no wise suspected of favoring "freak" ideas. The makers of the Waltham Comet who have been abiding their time, naturally point to this course of events as a brilliant vindication of their steadfast adherence to the three-ball bearing and suggest to the trade at large that the incident should predispose anybody very favorably to look into the merits of the company's bicycle patterns in general and their Waltham Two-Speed Hub, which is described on another page, in particular. The plant and business of the American Waltham Mfg. Company has recently been purchased by the Stanton Mfg. Company with offices at 95 Milk street, Boston. The Stanton company is a corporation capitalized at one million dollars. Information in regard to its finances, management, &c., can be obtained through any of the mercantile agencies. The company protects the Two-Speed gear as well as the Waltham Comet bicycle with a full year's guarantee. The following from the company's catalogue indicates its general policy: "There is only one grade and one price in the Waltham Comet bicycle. Taking no part in the frantic scramble to cheapen the cost of production, paying no attention to the thousand and one concerns advertising 'First class guaranteed bicycles,' at prices lower than the actual cost of first class equipments alone, we have not for a moment lost sight of the fact that the manufacture of a first class bicycle imperatively requires not only first class material, but the very best mechanical skill possible for money to command. Examine the Comet critically as you may, you will find that the foregoing policy has been followed to the letter. Throughout the

whole bicycle not a single stamping is used, all connections are of the very best drop forged steel, the cups and cones of the best tool steel in the market, the tubing of the highest grade possible to obtain, and the finish second to none in the world. We make no cheap wheels."

## BELL'S BICYCLE CANNON.

The alarm shown in the illustration herewith has been lately brought out by the Bell Novelty Co. of Warren, R. I. Its appearance is similar to that of a field cannon, and because of this and the distinctive

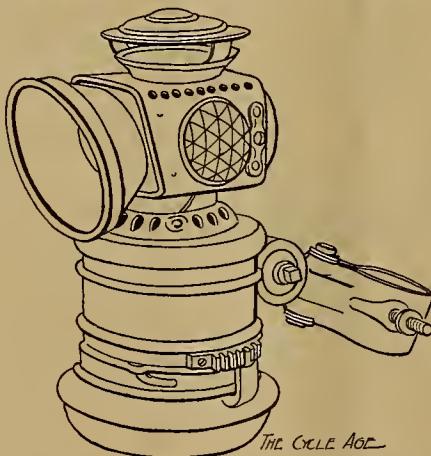


alarm sounded, it is termed a bicycle cannon by its makers and given the patriotic title Dewey's Mascot. The alarm is supported by a pair of arms the rear ends of which attach to the front fork sides underneath the crown. It is operated by a cord running to the handle bar. The weight is but five ounces and the company guarantees that it will attract attention where a bell of the ordinary ring would fail.

## BRIDGEPORT BRASS CO.'S SPECIALTIES.

The Bridgeport Brass Co. of Bridgeport, Conn., is winning trade on all three of its specialties, the Search-Light gas lamp, the wishbone lamp bracket and the Bridgeport bicycle lamp. The second named has been previously described and has already become a familiar article in sundries stores. The important feature of the pump is the non-collapsible expansion ring in the plunger which keeps the latter at all times in air tight contact with the inner wall of the pump cylinder. Its utility should be readily recognized by all who have experienced trouble in maintaining foot pumps in proper air forcing condition.

In the Search-Light gas lamp the water reservoir is below the carbide chamber, the water being fed upward through a wick. The flow of water and consequently the height of the flame is under perfect control, neither being affected by the vibration of the lamp. If through carelessness the wick is turned up too high and more than the correct amount of gas generated a safety tube conveys the excess gas to the flame where it is consumed. No bad odor or increase of gas pressure is caused. The locking device attaching the carbide holder and water tank to the lamp body enables the lamp to be separated without difficulty. The interior of the combustion chamber, on account of the ease with which the chamber can be taken from the lamp can at any time be cleaned in a few seconds. No special cartridges or mixtures of carbide are re-



quired, ordinary lamp carbide being used. This is put into the lamp in a piece of muslin and when the carbide has been exhausted the entire charge is removed intact. The cloth may be shaken out and used repeatedly.

## INCREASE OF CAPITAL STOCK.

The Beebe Mfg. Co. of Racine, Wis. has increased its capital stock to \$150,000 which is an advance of \$100,000 over the original capitalization. The added amount of stock

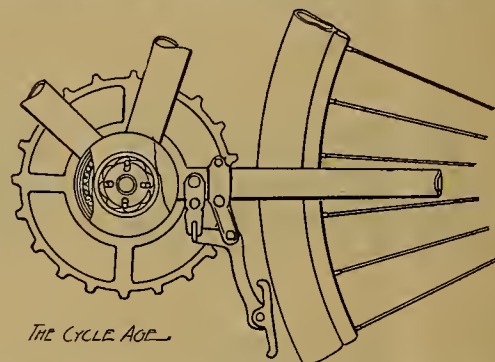
has been taken by W. T. Lewis and C. D. Sinclair, respectively president and vice-president of the Mitchell & Lewis Co. of Racine. Bright trade outlook and need for augmented facilities prompted the increase.

## EFFICIENT CYCLE POLICE.

Few cycle clubs there are which present a finer appearance on a run or know how to handle bicycles with more ease and ability than the bicycle police squad of Greater New York. This is partly due to the fact that the men are all of about one height, well built, and well drilled in the art of riding through city streets. With the incorporation of the city of Greater New York the range of the cycle police department was greatly augmented in the boroughs outside of Manhattan and it is expected that the efficiency of this department during the coming season will eclipse all former records. During 1898, in the borough of Manhattan alone, the cycle corps made 2,018 arrests, aided and assisted 349 persons, stopped 77 runaways, and caught 99 scorchers. The value of the cycle police is well shown by the small number of the last named offenders in '98 as compared with the 1,127 captured in 1897. The members of the cycle squad have for several seasons been riding Wolff-American bicycles and will continue to use the same make this season.

## DOREMUS BRAKE AND COASTER.

The mechanism of the Doremus coaster and brake manufactured by the Doremus Brake & Coaster Co., 409 Fifth avenue, New York city, consists of a simple locking device on the crank axle so constructed that a slight back pressure on the pedals actuates the brake, pressing the spoon against the tire of the rear wheel. The brake can be operated suddenly, as in cases of sudden danger, or can be applied lightly and gradually. Forward pedaling instantly releases the brake mechanism. The rider



can coast at will without removing his feet from the pedals. The mechanism works on ball bearings and does not bind or catch after the brake has been applied but instantly responds to forward pedaling when it is desired to discontinue the retarding effect of the brake spoon against the tire. The parts are so made that they can be applied to any bicycle by the ordinary repairer. The entire mechanism being at the hanger, should the driving chain break or jump from the sprockets, the rider can still apply the brake and maintain control of his machine.

## "ECONOMICAL" BRAZING FURNACE.

The Economical Brazing Furnace Co., 9 South Halsted street, Chicago, have, after much experimenting, perfected a furnace for immersion brazing and are now ready to install furnaces in bicycle factories. Much care has been taken to rid the furnace of objectionable minor features and the company guarantees it to give perfect satisfaction both from a standpoint of class of work produced and from one of economical working results. Strong points claimed for this furnace are long service of crucibles, saving in brass and spelter, securely brazed joints, non-injury to tubing and small amount of scale and superfluous spelter left on parts after dipping. An expert will be sent to any factory to install furnaces, put them in working order and instruct employes in all details regarding the operation and general management of the brazing plant.

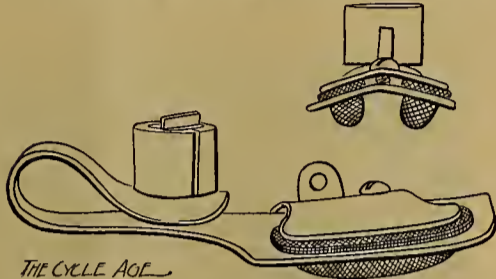
## UNIQUE RACYLE ADVERTISING.

The Miami Cycle Mfg. Co. of Middletown, O. has long been credited with marked originality in its advertising methods. The latest of the firm's distinctive advertising productions is a circular being sent to agents and displaying in a most graphical manner the virtues of the Racycle crank

hanger. The folder contains but little reading matter but the construction of the hanger is shown in pictorial representation stronger than words. The folder when unopened shows on its back an exterior view of the hanger. By turning back the two flaps of the back cover a partial sectional view of the inner construction of the bracket is displayed and by opening out the two inner flaps a complete sectional view is presented.

**FORSYTH DETACHABLE BRAKE.**

The latest pattern of brake spoon used with the Forsyth detachable hand brake, manufactured by the Forsyth Mfg. Co. of Buffalo, N. Y., is shown in the accompanying illustration. A solid molded rubber pad projects through a long opening in each side



of the spoon, the pair being held in place by a flat plate removably attached to the back of the spoon. The pads are so shaped that they catch ahold of the tire at the most effective braking points. The Forsyth brake combines the usual hand lever, the necessary adjusting plunger rod and a brake shoe which springs back from the tire by its own constant upward spring tendency after the hand lever has been released. The brake shoe is attached to the fork crown of the bicycle by means of an expansion plug which is pressed up into the lower open end of the fork stem. The spoon is connected to the plug by a taper bolt so that by turning up the nut the plug is expanded and becomes securely attached to the fork stem. Where there is no opening into the fork stem from below an ordinary machine screw is sometimes used for attaching the spoon to the crown. The operating lever attaches to the handle bar by means of a two part clamp which may be readily removed from the bars without disturbing the grips. When a large enough order is placed the company will form spoon and attaching parts to fit perfectly the style of forks for which the brakes ordered are intended.

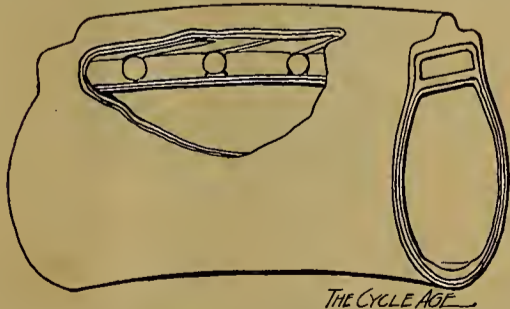
**STALL INSTITUTES NEW METHODS.**

The Middletown Bell Co. of Middletown, Conn., under the management of President W. W. Stall, has inaugurated a plan of campaign which enables it to compete very successfully in the trade. Originally the factory was fitted for manufacturing thirty-six styles and sizes of bells, but under the present regime this line has been reduced to only one style and two sizes. By this method the goods can be turned out in great quantities and at comparatively less cost. Included in the plan is the scheme of making the goods of highest possible grade and selling them at a minimum price.

Mr. Stall is well known as the originator and manufacturer of "Boston Laminated" wood rims, and has made a reputation for his goods which stands premier the world over. The results of the Middletown Bell Co.'s new methods under his management will be watched with interest.

**NON-SLIPPING DREADNOUGHT TIRES.**

One of the strong advantages claimed for the Dreadnought tire by the Dreadnought Tire Co., 253 Broadway, New York city, in



addition to its puncture resisting qualities is that on account of the bead running around the center of the tread, side slip possibilities are reduced to a minimum. In making a turn the bead and one edge of the flat tread touch the ground, giving two points of contact. The company has received many valuable testimonials from users of the tire who are satisfied that the flexible wood band in the tread is a sure preventive of punctures and that it does not lessen the speed of the tire. Attention

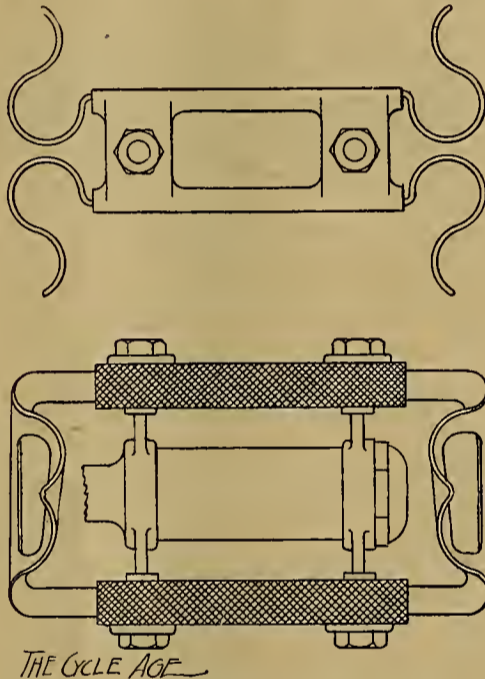
is called to the fact that the Dreadnought tire does not absorb obstacles at its point of contact with the ground as does the ordinary tire, but yields at its tread over an extended surface thus producing a comfortable and lively cushion effect.

**FIRE STIMULATES ENTERPRISE.**

As an example of enterprise unaffected by disaster, such as total destruction of manufacturing property, the energy displayed by the Kelly Handle Bar Co. of Cleveland since the burning of its plant March 24 is quite meritorious. The company's factory was completely ruined on a Friday morning and on the following Monday the die and tool makers of the concern were busily at work making the necessary tools to manufacture Kelly handle bars. Inside of a week the company expects to be able to fill orders. The Kells Saddle Co., which is controlled by the same parties and which also suffered an equal loss with the Kelly company, will be able to bring out Models 60 and 70 of its Kells saddle at about the same time that the first lot of Kelly bars are completed. No pains are being wasted by either concern to care for patrons and the halt in deliveries will be but a brief one.

**COMBINED PEDAL AND TOE CLIP.**

A patent was allowed last week on the pedal construction invented by Eugene Baker of Chicago and assigned to H. W. Gilbert, also of Chicago, which is shown in the drawing herewith. The invention is an improvement on an earlier design by the patentee. It combines toe clips with the pedal frame, the clip being of that type which grasp the soles of the shoe at the sides. Shelves are formed on the outer sides



of the frame arms and on these rest the extensions from the spring clamps which form at once the ends of the pedal and the clips for catching the sole of the rider's shoe. The pedal side plates have flanges along their sides which give the plates a channel shape and furnish foot rests. That the foot may not slip from the flanges they are roughened or corrugated. The nuts on the ends of the frame arms serve the dual purpose of securing the side plates to the frame and of tightening the spring clamps in the position to which they are adjusted to suit the width of the shoe.

**STEELECH BALL-BEARING SADDLE.**

The Steelech Ball-Bearing Bicycle Saddle Co., 449 West Boulevard, New York city, is producing a saddle made from steel which is a new departure in anatomical saddles. It is the invention of G. A. Leech, a physician, and is formed with a hollowed out top to fit what the inventor terms the "ball bearing seat" of the rider. It is claimed that in whatever position the rider may turn, the conformation of the saddle follows the conformation of the body. The back of the saddle is turned upward to prevent sliding back and the pommel is curved upward to prevent forward slipping. Each side of the saddle is turned down, forming a wing against which a leverage may be obtained in back pedaling. The light tempered steel forming the saddle top will be enameled in any color desired by the purchaser.

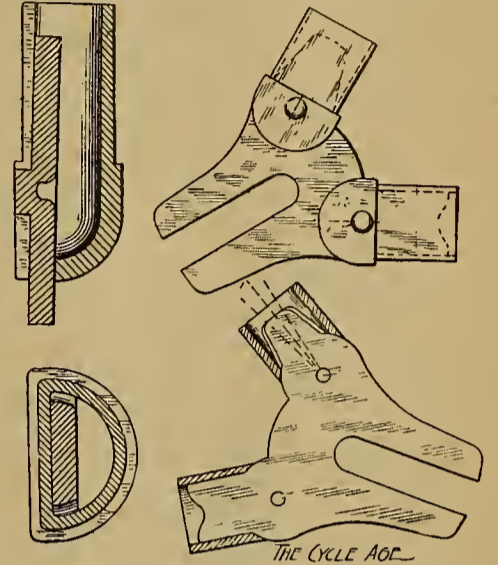
**NEW BRUNSWICK RARITAN TIRE.**

The new Raritan tire made by the New Brunswick Rubber Co. of New Brunswick, N. J., is proving a great success. It seems to fit the present condition of the tire trade excellently. People want a durable, service-

able tire at a reasonable price, and it is to supply this want that the Raritan tire is made. Its price is certainly a fair one, and it is built for plenty of hard use.

**FEATHERSTONE REAR FORK END.**

The accompanying illustration shows the construction of a rear fork end fitting recently patented by Anthony Jerome and assigned to A. Featherstone & Co., both of Chicago. The fitting comprises three pieces of metal, a flat fork to receive the rear wheel axle and two thimbles slipping over



projections from the fork, the thimbles being D shaped to take D rear forks and stays. Round studs from the flat plate engage holes in the thimbles and hold the latter in position. One of the thimbles has a slight swinging play, the inclosed projection from the plate being tapered. This allows the fitting to be used with any height frame, the angle being within certain limits universal.

**VIM TIRES AT REDUCED PRICES.**

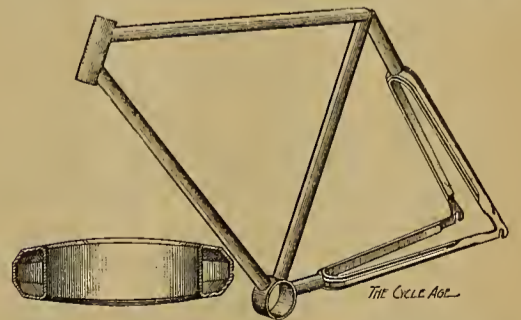
The Boston Woven Hose & Rubber Co. of Boston, Mass., is selling off its entire stock of Vim tires manufactured before January 1, 1899, at reduced figures, and is thus offering some excellent bargains to those desiring first-class tires at moderate prices. All Vim tires of the new pattern and with the new marking on them have been made this year and are sold direct to the retail dealer. The policy of the last few years of carrying in stock a large number of sizes and styles of tires has been abandoned by the company, which is now making only the Vim road tire and the Cactus pattern, which two styles are carried in stock in 1 1/2, 1 3/8 and 1 3/4-inch sizes for 28-inch wheels. Other sizes will, however, be made to order.

**SELECTING EASTERN QUARTERS.**

Gerhard Aussem, who for the past three years has acted in the capacity of shipping clerk for A. D. Meiselbach, will take charge of the New York office and wareroom and have supervision over the eastern and foreign business of the firm. Mr. Meiselbach is now in New York selecting quarters for a general eastern and foreign office. Commodious show rooms will be a feature of the eastern branch and Mr. Meiselbach proposes to keep from 1,000 to 1,500 machines continually in stock in his warerooms in the east.

**PATENT ON MANSON FRAME DESIGN.**

Louis H. Manson of Chicago has secured letters patent on the three-crown frame



design here shown, which covers, in addition to the three-crown feature of construction, the use of forksides of "irregular octagonal form in cross-section, the inside face of each fork arm being considerably broader than any of the other faces of the fork sides."

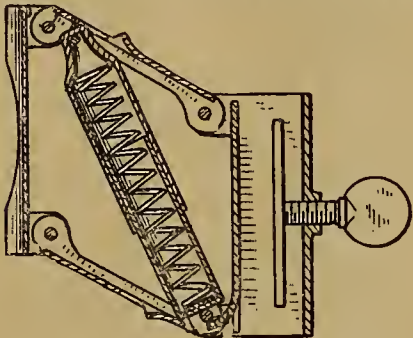
**PATRIOTIC VIKING CATALOGUE.**

The Viking Mfg. Co. of Toledo has displayed more than common originality in the design and composition of the Viking bicy-

cle catalogue and has also aimed at the patriotic pride and spirit of the catalogue's readers by using the bottom portions of the pages of the brochure to give a complete synopsis of the recent Spanish-American war. This synopsis is well compiled and includes handsome illustrations of the most prominent men and events of the campaign. The lithographed cover shows representatives from the recently acquired possessions of the United States formed in a procession and mounted on Viking bicycles, and on the back cover are depicted as persons in shadowy outline the various states and countries that are willing and waiting to join the country in all parts of whose domain the Viking bicycle is well known. The catalogue contains full page illustrations of each of the company's models.

#### NON-BREAKING SPRING FOR LAMPS.

Letters patent have just been granted to John Kirschbaum of Waterbury, Conn., assignor to the Novelty Mfg. Co. of the same



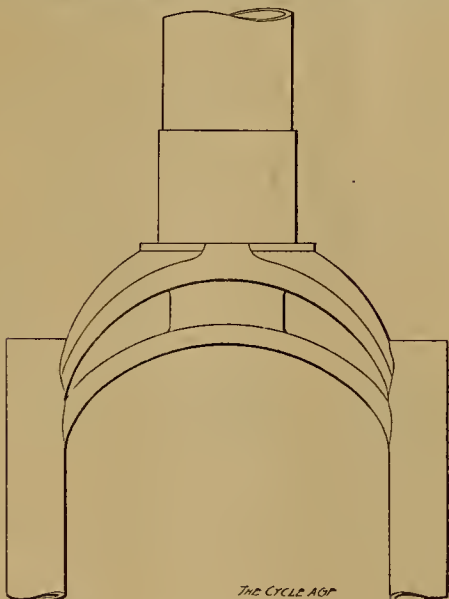
place, on the spring device for bicycle lamps illustrated in the accompanying drawing. The object of the inventor is to furnish a spring support for lamps which shall be simple and inexpensive to produce, will permit ample but steady movement of the lamp without sudden jolts, and which shall be so constructed as to be practically unbreakable in ordinary use. The device consists of two small telescoping tubes enclosing a coiled compression spring. This is attached by any suitable means within the usual bracket, reaching diagonally from the upper outer angle of the parallelogram to the lower inner end as shown. Thus the weight of the lamp acts directly on the spring to compress it, so that the leverage on the coils and consequent danger of breakage is done away with.

#### MOTOR CARRIAGE EXPERIMENTING.

The Erie Cycle & Motor Carriage Co. of Anderson, Ind., is making arrangements for exhaustive experiments during the coming summer with its gasoline motor for carriages and wagons. That ready money with which to carry out these experiments may be obtained, the company is selling out at extremely low prices 600 bicycles of its latest pattern, the lot being the remaining stock of ready made-up machines. Over 3,000 bicycles of the same model have been made and sold and all are substantial road machines, fully guaranteed, with the exception of the tires, for one year.

#### IVER JOHNSON FORK CROWN PATENTED.

Design patent has been granted to Nils Berglund, assignor to Mary E. Johnson, of Fitchburg, Mass., executrix of Iver Johnson,



deceased, on the fork crown which is now a recognized feature of the best product of the Iver Johnson's Arms & Cycle Works of Fitchburg, Mass. The essential feature claimed consists of two vertical parallel

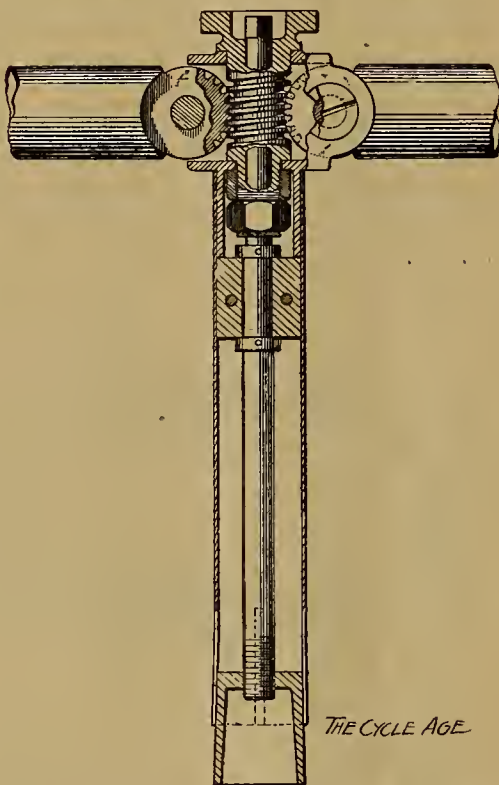
slides, oval in cross section, connected near their ends by two arched members of approximately the same curvature, with the upper ends of said straight sides projecting above the upper curved member, so as to form horizontal shoulders, together forming a double-arch crown with the ends of each of the arched members merging into the vertical sides.

#### READILY SEPARATED PEDAL.

The Perpetual pedal, manufactured by Edmonds & Metzger, 253 South Canal street, Chicago, is gaining friends rapidly on account of the ease with which it may be taken apart for inspection, cleaning, oiling or similar purposes. By unscrewing the barrel from the frame the outer end cone is exposed and may be removed without displacing the balls or affecting the adjustment of the bearings. The pin need not be taken from the crank. When the pedal is reassembled the bearing parts will have their same relative relation to each other as formerly and the adjustment will be perfect, providing it was correct in the first place. Oil retaining grooves are provided at the bearings that the pedal need be oiled but once throughout an entire riding season. The company states that the design of its pedals is not their only strong advantage, but that extreme care has been exerted in the making of the parts, especially in the hardening of the ball races.

#### SANGER HANDLE BAR PATENTED.

Letters patent were allowed last week on claims for an adjustable handle bar with expander locking device advanced by G. A. Rosenbauer and J. P. Schowalter, assignors to the Sanger Handle Bar & Plating Co. of



Milwaukee. The ends of the bar are raised and lowered by the operation of a central vertical worm screw meshing with the toothed extremities of the bar sections. When the worm screw is turned by a wrench applied to its hexagonal upper end the handle bar grips are altered in their position equally and in unison. The expander rod extends down through a central hole bored in the worm screw and is prevented from moving longitudinally in the stem by a collar and a pair of locking rings. In this way the expander may be loosened without it being necessary to tap the plug loose from the end of the stem after the rod has been unscrewed, as the rod in turning forces the plug free from the stem. The worm screw is maintained in place in the stem head by a threaded ring or collar resting against a shoulder in the head and kept from turning by a locking nut.

#### AMERICAN TRANSFERS ABROAD

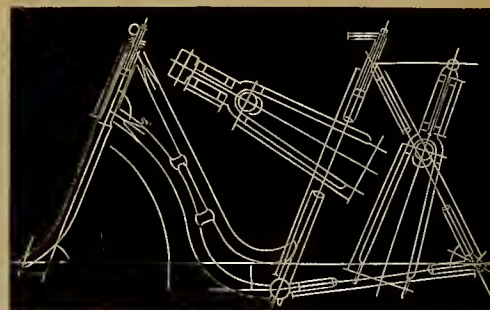
The Decalcomania transfer ornaments made by the Meyercoord Co. of Chicago have not only attained widespread popularity in this country and proven to users that transfers do not have to be of European manufacture to possess merit, but they are now being placed in the European market in direct competition with the home made transfers of Germany. An idea of the success which will doubtless be met there can be gleaned from the following letter recently written to the Meyercoord Co. by the firm of Zeitschrift Gut Werkseug of an interior German city:

"We confirm our last and have received in the meantime your designs of transfers,

and must confess that they are really very beautiful and that it will pay to look into that business. If you can send us a lot of samples of these designs to forward to the bicycle concerns we are sure to do a good business, because the transfers they sell over here are not at all like yours and we feel that the highly finished, elegant work of yours will surely get us customers."

#### STRAUSS CYCLE FRAME FOR WOMEN.

The accompanying illustration shows the lines of a woman's frame recently produced by Matthew Strauss, 334 Genesee street, Buffalo, N. Y. It is styled the Model Venus and affords not only a graceful appearance but ample mounting and dismounting room and will accommodate long skirts as well as short riding habits. Particulars regarding the frame and the fittings from which it is built are given in the new catalogue of the firm. This is now being distributed to deal-



ers and repair men and is a more than commonly complete materials and sundries list.

#### FITTINGS FOR SOUTHERN BUYERS.

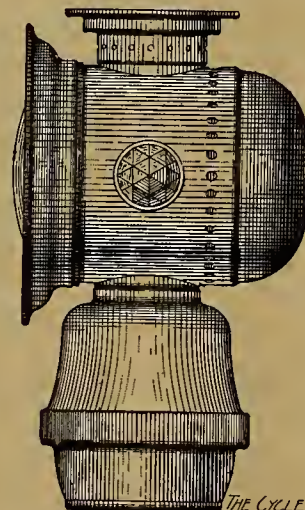
Henry Keidel & Co. of Baltimore, Md., have issued an exhaustive catalogue showing a large line of sundries, fittings, accessories and shop tools of all description. The firm does a good business among southern dealers, repairers, and builders and aims to keep in stock materials to meet all demands. It acts as southern sales agent for the following manufacturing concerns: Eagle Bicycle Mfg. Co., Morgan & Wright, N. H. Hill Brass Co., 20th Century Mfg. Co., Judson L. Thompson Co., Manhattan Brass Co., National Cement & Rubber Co., New Brunswick Rubber Co., Girard Wrench Mfg. Co. and the Fay Mfg. Co.

#### RUSHING WORK ON MACHINE TOOLS.

The Grant Machine Tool Works of Cleveland has commenced to run its factory twenty-two hours a day, that it may keep up with its orders for the modern machine tools manufactured. The company has recently issued a new catalogue containing illustrations and descriptions of its milling machines, semi-radial drills, hand lathes, special piston ring and cylinder head lathes, etc. New tools added to the firm's line are a 42-inch boring mill, 16-inch taper turning lathe and a special automatic worm gear cutter. The catalogue is neatly printed and intelligently compiled.

#### HAVELL LAMP DESIGNS PATENTED.

Two lamp design patents were last week allowed to George Havell of Newark, N. J., assignor to the Havell Mfg. Co., of the same place, on the designs herewith shown. The principal feature of the first design is a bell shaped fuel reservoir provided with a milled edge and a cup shaped bottom, the latter

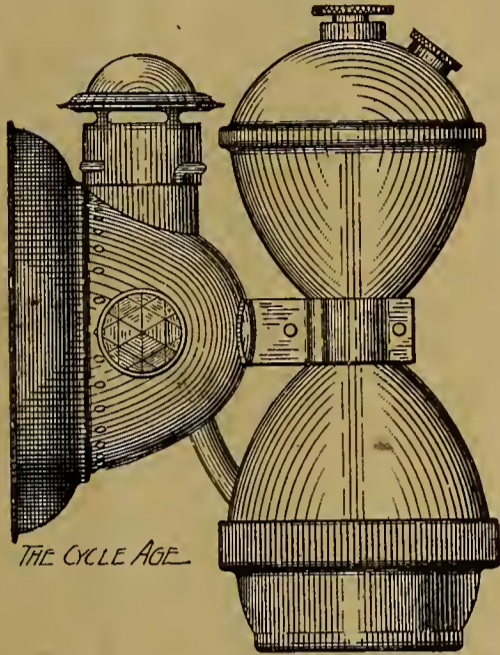


having a convex side united to a horizontal cylindrical lamp body, one end of which is closed by a globular shell of slightly reduced diameter and the other end of which terminates in a flanged reflector surrounding the lens. At the top of the lamp body and in the same axial line with the fuel



chamber is a chimney. This design is suitable for either an oil or a gas lamp.

The second design comprises a lamp-body of hour-glass shape, the adjoining sections of which are substantially parabolic in cross-section and connected by a reduced neck, across which extends a support for a reflector, also parabolic in cross-section, which terminates in an outwardly spreading convex flange. Rising centrally from the upper part of the reflector is a cylindrical chimney surmounted by a dome-shaped cap. The upper part of the lamp-body terminates in a spherical dome surmounted by a cylindrical boss which supports an adjusting-screw. The bottom of the lamp body ends



in a cup having a bulging or convex face and somewhat smaller in diameter than the milled edge of the lower section of the body. A tube connects the lower portion of the lamp body with the reflector and about midway on the latter is a circular socket for a colored sidelight lens, as shown. This design is intended for an acetylene gas lamp and is now being offered as such in the market.

#### FOURTEEN MODELS OF ANDRAES.

The Andrae line as shown in the latest catalogue of the Julius Andrae & Sons Co. of Milwaukee is in keeping with the firm's customary policy of furnishing models for everyone and of filling as near as possible the needs of all of the various classes of bicycle riders. The single machine patterns range in price from \$30 to \$60. The company draws attention with pride to the design of its tandems which in general frame lines have remained unchanged for several years and which are today representative of one of the most popular styles of tandem construction throughout the country. Not only is the list of models a large one, but the range in options is quite liberal and indicative of the generous intention of the firm to attract patronage by giving its customers what is called for. The catalogue is complete, but concise and free from weak attempts at polished advertising talk, everything concerning the line being stated in a straightforward, businesslike manner. The chainless pattern shown is fitted with the Sager gear.

#### HAND AND FOOT ROLLER BRAKE.

The Davis roller brake manufactured by the Davis Mfg. Co. of Indianapolis has proven so successful a trade winner in both the foot and hand operated models that the company continues the manufacture of both patterns. The braking operation is the same in both, the roller in each instance being secured beneath a metal hood, against which it binds when the brake is applied. Both brakes attach to the front fork sides directly below the crown and the foot brake is provided with knurled extensions easily reached by the foot or feet of the rider.

#### ELGIN CO. TO PUSH PRODUCTION.

The Elgin Cycle Co. of Elgin, Ills., has decided to largely increase its bicycle business and with this end in view will, this spring, erect another large factory building 250x40 feet and three stories high to be used exclusively for this branch of business.

The company proposes to engage in the manufacture of bicycles on an extensive scale, and the new building, equipped with everything modern in the way of machinery, will afford the best of facilities. A large force of workmen will be employed.

Attention is called to an advertisement in the small advertisement columns of a gentleman who offers his services in connection

with the Paris exhibition. American houses without the necessary connection in Paris may address the advertiser with confidence in his ability to afford them adequate representation.

Catalogues of sundries are desired by the New York Cycle Agency, 15 Forbes street, Bombay, India.

#### A REPAIRMAN'S COMPLAINT

Wholesale Supply House Accused of Irregular Practices in Shipping Goods Ordered.

To the Editor:—Bicycle repairmen and makers should keep a sharp lookout for a certain wholesale cycle material house which advertises sundries, frame parts, etc., at a reasonable figure. This firm received a good share of my trade last year until they fleeced me out of about \$10, when I abandoned dealing with them. Every order they sent out would be short some articles valued for a few cents. When cautioned, they positively declared that the order was filled to the letter, when it was not.

The last order I sent them was in May and amounted to about \$15. The order called for one set of frame parts and other articles. In a few days a letter came stating the frame parts had been shipped and that the balance of goods were delayed as supply was exhausted; that they were daily awaiting shipment from the factories, and that same would reach me in a day or so. Two days after receiving their letter the box containing the frame parts, or rather a part of them, came, and upon opening the box I found the seat post mast tubing missing; and they had sent 7/8-inch forksides instead of one inch, and a nine-inch one-piece head for a 22-inch frame. The balance of the goods I never received, yet they declared firmly that same had been shipped. Though I made strenuous efforts to bring them to time, I never received the goods; neither did I receive my money.

A brother repairman in Lima, Ohio, was fleeced out of \$6.85 last year by this same dealer. This same firm is now again fresh in business for the season of 1899. They send out circulars monthly and I am in receipt of one, and on the first page of their bulletin are a few introductory remarks saying they wish to inform the general trade that their articles are up to date in both quality and quantity, and that they are ready to serve old customers, confessing in addition that though they made mistakes last year and regret it, yet they are ever ready to adjust all negligence, etc.

I have visited several repair shops throughout Ohio and have heard many complaints against these people.

Belle Center, O.

J. J. SHOULTS.

#### Blind to English Defects.

The English cycling press is as a rule very fond of pointing out alleged faults of American bicycles and the "decrease in the export of American machines to Australia." English writers never, however, point out the faults of English machines which certainly exist. Two of the highest grade English makes imported into Australia have nearly killed dozens of their riders through the breaking of the forks, while another English machine has a weakness for snapping right across the middle of the frame. The writer has seen at least half a dozen bicycles of this make break down in this manner. American machines are used very extensively throughout Australia and it is very seldom that the frames break in any way, although they are several pounds lighter than the English makes. Even the agents for the latter acknowledge that the frames of American makes are strong and reliable. The rough Australian roads soon find out the weak spots in a bicycle. Several of the English manufacturers are

now reinforcing the forks of their machines, while the Rover Cycle Company is making the crown solid to get over the difficulty.

#### How Choate Assists At Legislation.

Minneapolis, March 27.—The joke of the season in local cycling circles is on A. B. Choate, and to a misunderstanding of his motives is due the defeat of the Kline bill. This bill provided that the chairman of the board of supervisors of road districts might purchase road making machinery in certain cases instead of applying the cash at his disposal to work on the highways of his district.

Of course every member of the L. A. W. knows that Mr. Choate is a crank on matters pertaining to good roads. He is a member of the highway committee of that organization and has occupied that position for several years. Although he has always been advocating good roads this was his first experience at attempting to influence legislation. He left his law office in Minneapolis last Wednesday to put in a few licks for the proposed measure. The country solons listened to his arguments, looked him over, and decided that he must be a road machinery agent, one of the sort that has been described as going about the country ensnaring the poor farmers by inducing them to buy a lot of bogus machinery. This mistaken estimate of Mr. Choate caused the defeat of the bill.

#### Another Classic.

Room for the Easter bonnet editor of the Peoria Journal while he does stunts in praise of the improved bicycle!

The large sprockets will be the popular thing, and will be from 26 to 28 inches. Both of the front sprockets will be the average. If larger than the above number of inches they are apt to be sprung out of true proportion.

Some neither can for wits nor critics pass, as heavy mules are neither horse nor ass.

## MISCELLANEOUS.

Advertisements under this head 5 cents per word first insertion; 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders or stamps received.

### WANTED.

**WANTED**—Good, live man to sell Rusch bicycle saddles on commission to jobbers and manufacturers only. N. SCHRODER, 91 and 93 Thompson st., New York City.

**INDIA, BURMA, AND THE EAST**—Henderson & Co., Rangoon, English Watchmakers, Opticians, Cycle Engineers, Agents and Repairers, are prepared to correspond with responsible manufacturers and agents in novelties pertaining to any of the branches of trade above enumerated. Samples (where possible) and prices to be submitted. Splendid area for trade. Highest London and American references. Address HENDERSON & Co., 63 Phayre st., Rangoon, Burma, India. 12

**WANTED**—Bicycle repairer; must be first-class. Address, giving experience and wages wanted, B. care Cycle Age.

**SIDE LINE**—Salesmen in the bicycle and hardware trades wanted to sell standard bicycle sundry on commission. Quick seller and liberal commission. Samples carried in vest pocket. B. H. DIVINE, Utica, New York.

### FOR SALE.

**VULCANIZER**—New, quick, sure; mends four tires at one time; valve attachment; oil or gas burner. Shipped with material for 100 repairs on receipt of \$3.00. ALEXANDER & Co. 34th st. and 4th ave., Brooklyn, N. Y.

**FULL DIRECTIONS** for making plugging and patching cement from old tires. Mailed on receipt of 50c. ALEXANDER & Co. 34th st. and 4th ave., Brooklyn, N. Y.

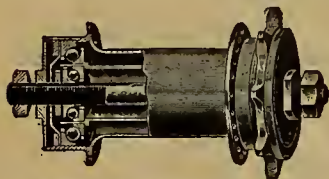
**FOR SALE**—White hot blast brazer, Goodrich steam vulcanizer, Barnes combined circular saw. TWIN CITY CYCLE Co., La Salle, Ill.

**TO EXHIBITORS AT PARIS, 1900**  
 A gentleman who is thoroughly conversant with the European trade will undertake the entire management of cycle exhibits of American houses at the Paris exhibition. He can attend to all matters in connection with an exhibit, such as securing space, receiving and clearing samples through customs, fitting up stands, circulars in French and German, in fact anything which may be needed will receive best attention. If two or three firms or perhaps four or five, if of a kindred nature, want to go in together, will take them on and thus make it much cheaper for them. Will make a price of \$1000 for each firm for three or more firms, and will attend to all matters which may arise from start to finish. Will hire an assistant out of this and get the samples insured at my expense, but each exhibitor must pay the cost of freight to Paris (there will be no duty to be paid if you know how to make a proper declaration), the cost of setting up the samples, but the cost of fitting up the space will be divided pro rata among the firms showing. Refer, by permission, to the Cycle Age Co. Address GIB, care of Cycle Age.

**AUTOMATIC BICYCLE PUMPS** (Penny-in-the-slot)  
 —DO A CASH BUSINESS—  
 Thoroughly tested —Testimonials— Guaranteed Sold outright at moderate price. Exclusive territory assigned when quantity purchased. Write today and secure choice points. R. L. PEGRAM, Western Agent, care Cycle Age.

**FOR SALE**—500 Remington Hangers at a bargain; propositions considered for one or all. H. GEER, 906 Pine St., St. Louis, Mo.

**J. P. THOMAS**  
**Revolving Hubs and Hangers**

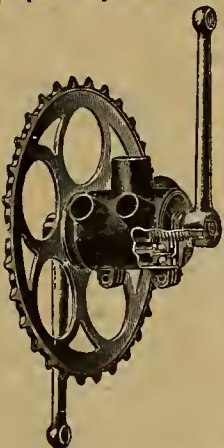


**DOUBLE BALL BEARINGS** with Inner Sleeves increased the Speed 40 per cent.

Patented in U. S. Dec. 28, 1897.

A bicycle fitted with J. P. Thomas revolving hubs and hanger will travel 40 per cent faster than any other wheel on the market, or is the fastest wheel in the world. Compare the construction of our hubs and hangers with others.

Sold in sets: front, rear hubs and crank hanger.



**J. P. THOMAS & CO.**  
 439-443 31st. St. CHICAGO, ILL. Pat. in U. S. Dec. 28, 1897.

**FLUXINE**  
 BRAZING COMPOUND  
 MAKES  
**STRONG JOINTS**

WRITE YOUR JOBBER, OR

**KREMBS & CO., CHICAGO**

**Stripped Bicycles**

WITH NAME PLATES AND FULLY GUARANTEED.

Equipments at cost if ordered with bicycles. Write for descriptive price lists.

**WELLINGTON WHEEL WORKS,**  
 35 RANDOLPH ST., CHICAGO

**ADLAKE BICYCLES**  
 THE WHEELS OF HIGH DEGREE.  
 THE ADAMS & WESTLAKE CO. MAKERS. CHICAGO.

**A NEW PROPOSITION:**



**Wheels Built to Order \$12**

upwards. FROM HIGH GRADE MATERIAL and fittings of your own selection.

**SEND FOR CATALOGUE** of the Famous **TEMPLE 3 CROWN** Frames

and all standard makes of bicycle parts and fittings. Make your Selection. We build the bicycle accordingly. **LOWEST PRICES GUARANTEED.**

**WRITE TO-DAY**

and send for Catalogue of "**MAGIC**" **\$2.00 GAS LAMP—BEST MADE.**

**Graphophones and Cameras.**

**RALPH TEMPLE CO.**  
 81 Lake Street, CHICAGO.

- Rims
- Spokes
- Hubs
- Hangers
- Handle Bars
- Grips
- Cyclometers
- Enamels
- Cements
- Saddles
- Pedals
- Chains
- Tires
- Rear Stays
- Rear Forks
- Frame Sets
- Etc., Etc.

To Repair }  
 To Make } With  
 To Equip }

For Material and Sundries, write us. Special prices. . . . .

**Chicago Tube Co.**

217 Washington St.  
 CHICAGO

As Good As Any Better Than Many  
**TRILBY**

**TIRES \$2.50 per Pair**

If you want the BEST it is

**FOOTE SINGLE TUBE**

PRICE

Trade, \$5.00 List, \$10.00

Smooth or Corrugated Tread. : : : Order a Sample Pair.

**D. E. FOOTE CO.**  
 270 Euclid Avenue, CLEVELAND, OHIO.  
 TERMS CASH ONLY.

A  
 PYRAMID  
 OF  
 EXCELLENCE



Capacity, 20,000 Watch Us Grow

HONEST CONSTRUCTION  
 POPULAR PRICES  
 WANTED—A FEW MORE AGENTS

**The Bean-Chamberlin Mfg. Co.**  
 HUDSON, MICH.

BRANCHES—San Jose, Cal.; Rochester, N. Y.

**Liquid Brazing Crucibles**

All sizes and shapes as required to fit any make of furnace, made by the original makers of brazing crucibles and the largest and oldest manufacturers of plumbago or graphite crucibles in the world.

**JOSEPH DIXON CRUCIBLE CO.,**  
 Jersey City, . . . . New Jersey.

**Bicyclists, Attention**



Don't suffer the nuisance of a leaking, spurt-ing oiler. The "**PERFECT**" **POCKET OILER** does not leak. It regulates the flow of oil to a drop. It's a beauty and lasts forever. Endorsed by Pope Mfg. Co., and many others. Don't be deceived by a cheap substitute. For sale by all dealers or by mail 25 cts.

**Cushman & Denison, 159 9th Ave., New York**  
 Mention The Cycle Age

1899 MODEL

**WATERS WHITE SCORCHER**

Fitted with Our One Piece Hanger made under Fauber licenses. **Retail Price, \$22.00**  
 Send for net price and catalogue.

**F. S. WATERS CO., 155 W. Washington St., Chicago**

# THE CYCLE AGE

VOL. XXII—No. 24.

CHICAGO, APRIL 13, 1899.

NEW SERIES No. 73.

## TRADE 100 PER CENT BETTER

### Philadelphia Dealers Pleased With March Business—Allowances on Second Hand Machines Reduced.

Philadelphia, April 10.—“Last month was the liveliest March in our entire business experience,” said a member of a local firm of retailers to a Cycle Age man last week. “It beat March of last year by slightly more than 100 per cent; and what makes us especially satisfied with the situation is the fact that the proportion of money paid in on our machines sold is three times what it was at this time a year ago. This can be explained in great measure by the low price at which first-class bicycles, and all others, in fact, are selling. When high-grade machines sold for \$75 few of our customers—not even excepting the wealthy ones—failed to take advantage of the time clause and pay in installments, large or small as the notion struck them. Now, with the ruling price of \$50, the rider who trades in his last year’s mount has such a small difference to pay that upwards of 60 per cent of our sales have been cash transactions.”

This optimistic view of the situation is shared in by every local retailer who has been interviewed. In one or two instances it was found that orders were so plentiful that some embarrassment had been experienced in filling them within a reasonable time. Furthermore, dealers generally seem to be of the opinion that this healthy boom bears all the earmarks of lasting well into the summer season.

#### Best Second Hand Machines Bring \$15.

There seems to be a great diversity of opinion among local dealers as to the allowances to be made this year for second-hand machines in exchange. In 1898 money was so scarce that many dealers, in order to effect sales, were forced to allow much more for second-hand bicycles than good business policy would seem to warrant. This year few of last year’s models bring more than \$15 when exchanged for new mounts, and in these few cases the machines and tires are in exceptionally good condition. In outright sales of second-hand mounts to dealers the average price is about \$10.

One dealer reported that a week ago thirty-two second-hand machines taken in exchange for new ones, and which had cost him an average of about \$12 apiece, had been disposed of in bulk, without repairs of any kind, for an average of about \$8.50 each. “On the face of it,” said he, “this would look like poor business; but I have figured it out that to put them into fit condition to retail at, say, an average of \$20 each, would have cost me very nearly as much, after adding cost of material and workmen’s wages, as I would get for them.”

The majority of local dealers seem to be satisfied with the net result of their second-hand exchange business last year, and, with the proportionately much lower prices given this year, look for even bet-

ter results during the present season. With a straight \$50 rate on new mounts the rider who is allowed more than \$15 on his old one must turn in a machine in extraordinarily fine condition. The dealer seems to be sure of his position, and will do business on his own terms or let the prospective customer go, perhaps only to return when he finds that he can do no better elsewhere.

#### Parts Makers Give Options.

It now appears that the financiers who are endeavoring to effect a consolidation of bicycle makers are intent also upon purchasing or controlling some of the large parts manufacturing plants, as well as the establishments producing tires, and other necessary articles of bicycle equipment. As the days go by the enormity of the undertaking is becoming more and more apparent to Mr. Spalding, and not unnaturally he has summoned to his aid conspicuous people in various branches of the cycle manufacturing industry who have made it plain that the letters first sent out soliciting options did not reach more than a small fraction of the people who would make desirable allies. The number of concerns which these expert counselors have succeeded in persuading to give options on their plants has augmented the importance of the whole project.

There are fourteen sets of accountants and appraisers at work in various parts of the country making estimates on different plants, and their reports must all be in by April 17.

#### Crowded With Sold Machines.

Cleveland, April 10.—Never in the history of the business have the stores in this city presented the appearance that they do at the present time. Nearly every establishment has long rows of machines marked “Sold,” but no deliveries are being made. One concern has nearly 125 machines on its floor waiting for the purchasers to take them out, while another has nearly 75. With new stock coming in every day and second-hand machines being traded in, floor space is at a premium in every establishment in town and one or two of them have even secured outside stock rooms. A glance over the machines sold in the various stores shows that high prices are ruling.

## CYCLE COMBINE CAN DO GOOD

### Western Dealers Hope it Will Force Down Transportation Rates—Trade Conditions in Utah.

Salt Lake City, April 8.—The continued bad weather which ushered in the spring has had a most depressing effect upon trade in the western states and although some sales are being made the business cannot be said to be satisfactory. Two weeks ago the outlook for a large business was most promising, but if the rain and snow continue for two weeks longer it will bring the season to that point where the weather becomes hot and sultry and cycling is robbed of its keenest delights.

In sections of the country where graded, hard roads are common and shady lanes and byways abound, wheeling is a pleasure the year around, but in the west the unsheltered dusty roads do not furnish an enticing prospect for the cyclist.

#### Heavy Burden of Freight and Express.

The dealers are still patiently suffering under the burden of exorbitant transportation charges. The movement to concentrate shipments and direct them via fast freight lines does not solve the problem for the dealers in this section, for they are between the devil and the deep sea. Crated bicycles from Chicago cost singly \$3.80 by freight and by some process of figuring, unexplainable, two machines cost about \$3 each. The average cost of a bicycle from Chicago to Salt Lake or Ogden or to Butte, Mont., by express is from \$4 to \$4.25. On shipment of eight machines by express from Chicago, received by a Salt Lake dealer last week, the charges were \$32. If the bicycle combine proves a reality and desires to do something for the agent it will see that this extortionate charge is abolished. Just why a carefully crated bicycle should be classed as “double first” is beyond the ken of the average person. There can be offered no excuse for risk of damage by the transportation companies for there are fewer claims for damages on bicycles in transit than on furniture, which takes a much lower rate. When bicycles listed at \$150 the charges were not so onerous, but on bicycles listing at \$40 almost 40 per cent of the dealer’s profit goes to the express companies.

#### Repairers Working in Unison.

The repairers of Salt Lake are trying to adopt a uniform system of charges for all repair work and a schedule embracing almost every sort of repair has been adopted. While there has been no effort made to enforce any fine or punishment for violation of or departure from this schedule it is believed that it will be, as a rule, lived up to. At any rate, it eliminates the annoyance of wondering what the “other fellows” are doing.

As a whole, the charges for all classes of repairs have been slightly advanced and dealers have agreed to hold to these

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prices "as long as the rest do." Already some of the unprincipled little fellows have taken advantage of this schedule to underbid the legitimate repairers, but the evils of price cutting have been so self evident that the majority of the dealers feel inclined to live up to the new rates notwithstanding.

One noticeable feature of the new schedule is the advance in the price of repairs on single tube and on laced double-tube and tires to 50 cents. The uniform rate on all puncture repairs has heretofore been 25 cents, but this rate now applies to clincher and detachable tires only.

As soon as the new schedule of prices has been given a good trial it is proposed to make it more binding and repairers who continue to violate their agreement will be summarily dealt with. Jobbers will be requested to refuse to sell to them and makers of bicycles represented here will be asked to refuse to sell them supplies or parts at any price.

#### Decline in Renting.

A noteworthy feature of the trade this year is the small number of dealers who are renting bicycles. Rentals have been cut to so low a price that dealers feel that there is no money in the business and have, as a rule, discontinued the practice of renting altogether. Probably another reason for this is that because of the low price of new and second-hand bicycles, many former patrons of the renting agencies now feel that it is cheaper to buy than to rent.

#### SPRING DAYS BOOM TRADE

**Snow Melts Suddenly and Riders Swarm to Dealers and Repairmen—Everybody Cheerful.**

Minneapolis, April 10.—The bicycle business in this city is booming at present, and the dealers say they have never experienced anything like it. Last week opened very dull, the snow still lying on the ground in drifts, but in the middle of the week the cool spell came to an end and the snow disappeared like magic. Inquiries at the bicycle stores increased in direct ratio as the snow melted and now trade is rushing.

The riding season is fully a month behind that of last year, but still every dealer states that the interest is going to be greater. The sale of bicycles is not by any means confined to the cheaper grades; in fact, people appear to have learned that the best is most serviceable in bicycles as in everything else. No one in the trade is as rushed as the repairer. Any number of machines are coming in that need attention. It is noticeable that a great many of these are not brought in by the original owners, which is taken to indicate that during the winter private "swapping" has been going on. The estimated number of riders in Minneapolis last year was 35,000. It is anticipated that this number will be increased to fully 50,000 this year, and some hopeful spirits have said it will be nearer 70,000.

#### Will Fight Wood Rim Decision.

Milwaukee, April 10.—Under a decision recently rendered in the United States court in this city, anyone may make wood rims. The Indiana Novelty company, however, is not inclined to give up so easily and the decision will be tested in the United States court of appeals. The Indiana company has sued the Crocker Chair company of Sheboygan and the F. W. Smith company.

The wheelmen of Johannesburg, Transvaal, are taxed \$2.50 annually for each machine owned. The revenue thus derived is to be applied to the construction of roadways for cyclists.

## AUCTIONS THE MAIN FEATURE

### AUSTRALIAN AGENTS WORRIED

**Clearing English Stock at Sacrifice—Complain of Canadian Competition—Fork Breakages Common.**

Sydney, March 10.—Adelaide seems to be the only one of the Australian capitals in which cycle auctions can be held with successful financial results. On January 25 Alford & Company, auctioneers of that city, acting under instructions from the Austral Cycle Agency, sold sixty machines, a few second-hand bicycles being among the number. Of course, the prices realized were much lower than the retail prices, but nevertheless a profit was realized on the sale. The machines were all English of the best make and comprised the following: Raleighs, Humbers, Singers model de luxe and Coventry Cross. They were of 1898 production. The lowest price realized for any one machine was \$35 and the highest price \$81. The model de luxe ladies' machines sold for \$70 to \$81, and the Humber drop frame from \$59 to \$67.40. The Coventry Cross was knocked down at from \$47.40 to \$56.20. The sale was well attended.

#### Unprofitable Auctions at Melbourne.

The Austral Cycle Agency has also been holding frequent sales in Melbourne of late. It is said that it has hardly cleared enough out of the sales to pay the expense in connection therewith. This firm, which has every prominent racing man in Australia mounted on its machine, the Swift, has instructed the racing men to return the machines at once.

A Canadian company which is doing well in the country districts of New South Wales and Victoria allows its agents 25 per cent. on sales and gives them a machine to ride free. Country agents who held agencies for English bicycles are relinquishing them and handling the product of this American concern, as it pays them a great deal better to do so. The big agents for English machines are complaining bitterly. They cannot allow their country agents such a large percentage and think that 15 per cent., as allowed by them, is a very fair commission.

#### Home-Assembled Machines Defective.

A few riders of colonial machines built up of English parts have met with accidents lately in Melbourne, due to faulty construction and workmanship. The trouble in every instance was due to the fact that no reinforcements had been used to strengthen the front forks for two or three inches below where they were brazed in the crown pieces, the consequence being that the forks were not strong enough to bear the continual jarring and eventually snapped off close to the crown, fortunately without serious results. Such gross carelessness will speedily sound the death knell of the colonial machine. In the majority of cases the omission of proper reinforcements is simply courting disaster, and as the cost is small and the weight not worth considering there can be no excuse for not using them.

There can be no doubt that the machines built in the colonies will find a good home market if proper workmanship is put into them; but let the public get the impression that the assembled machine is faultily put together, and what now promises to become a thriving industry will quickly die a natural death.

#### Should Reinforce Fork Blades.

It would be advisable for all the American manufacturers to reinforce the forks of their machines. The writer, however, is not aware of a single instance in

which the forks, or in fact any part of the frame, of an American machine has broken down. Last year's product of a Canadian factory was very faultily constructed and earned a bad reputation in Sydney for going to pieces, yet the agents in all their advertisements always stated that their bicycles "never require repairs." The latest output of this factory, however, is a great improvement over last year's and is taking on very well.

#### American Product Sold As English.

Bennett & Wood, Limited, of Sydney, handle a machine called the Speedwell. They have it in several grades from \$67.40 up to \$110, and each grade is made for them by a different manufacturing company abroad. The lowest grade is built by the New Hudson Company, of England, while the highest grade was, until a month or so ago, manufactured by an American house and was in reality one of the latter's own patterns sold as a Speedwell. It is now said that Bennett & Wood have taken the manufacturing of the Speedwell out of the hands of the American firm and entrusted it to the Rover Cycle Co. of Coventry, England. An amusing part of the whole affair is the fact that they have been selling the high grade Speedwell as an English machine when it is in reality an American.

Bennett & Wood announce having sold 115 machines in January in New South Wales. This would be exceptionally brisk business for any other N. S. W. firm, but as it costs this firm a great deal to run its big establishment, the month of January was not so profitable as it would seem.

The traveler for an American machine visited several firms in Sydney a month or so ago to endeavor to fix up the agency for it in Sydney. Bennett & Wood assert that the machine was offered to them landed here in Sydney complete for \$20 a machine. They refused the offer, however.

#### Too Many Irons in the Fire.

Frank Grimley of Sydney advertises in an English cycling paper for the exclusive agency in Australia and New Zealand of cycles, accessories and materials, or to push their sale on manufacturers' account or to purchase outright. Grimley is at the present time stacked to the roof with bicycles of American makes and with accessories. February 10 he disposed of fifteen machines at auction, very poor prices being realized. He now evidently wants the agency for English goods as well as American.

A fair number of juvenile cycles are to be seen, more of American make than English. If an attractive pattern for juvenile riders could be put on the Australian market at, say \$30, it should take immensely.

When Sutton & Company of Melbourne first accepted the agency for the Mascotte they sold it for over \$100. Now they are disposing of it for \$62.40.

#### No Market for Motor Vehicles.

The Australian Cycle & Motor Company, Limited, is believed to be losing a lot of money and are not expected to last much longer. They closed their Sydney branch some time ago. They are doing very little business in Melbourne and it is expected that they will close down very soon. This is an English firm and the shareholders are all English. They handle the Humber and other English makes.

There is not a motor car in the whole of Australia, although there may possibly be about thirty motor triplets. The bulk of the motor triplets are Gladiators, and heavy, ungainly things they are. If motor cars and triplets are to be sent to Australia for sale, mechanics who can repair them when anything goes wrong will also need to be sent.

**FREEZE OUT IRRESPONSIBLES**

**STRINGENT MEASURES ADOPTED**

**Organized Repairmen Threaten to Boycott Dealers Selling Parts at Discount to Non-Members.**

Milwaukee, Wis., April 10.—If repairmen throughout the country were to follow in the footsteps of the lately organized Milwaukee Repairmen's Association the mushroom and irresponsible repairmen would be crushed out of existence and there would not be the least difficulty in maintaining prices. Every wholesale dealer in Milwaukee and every dealer in parts in the vicinity has entered into an agreement not to sell parts at wholesale prices to any person who is not a member of the association or who represents a member. A list of the members is to be furnished each dealer with the result that every repairman in the city will have to come into the association or else buy all his parts out of town.

**Severe Penalties for Cutting Prices.**

The dealers have been given to understand that a violation of the agreement by selling to outsiders will mean the loss of trade and a boycott. Having fixed the dealers in this way the association has provided a penalty of \$25 for violations of the rules and failure to observe and keep up to the price list. Failure to pay the fine means a forfeiture of membership and the benefits that go with it. After the payment of the fine if the unfortunate member does not break the rules for the rest of the season he stands to have \$20 refunded at the end of the season. It will cost \$5 to become a member of the association which now embraces ninety per cent of the repairmen in the city.

**Official Repair Charge List.**

The following price list has been adopted:

Putting new one-piece hanger in old wheel and enameling .....	\$12.00
Cutting down frame, flush joint, and enameling ..	6.00
Cutting down frame, lap joint and enameling ..	5.00
New rear fork or stay, each .....	2.00
New tube in frame, each joint .....	1.25
Changing and brazing on new sprocket ..	2.50
Brazing in new crankshaft .....	2.00
Brazing broken tube .....	1.50 to 2.50
Truing up frame .....	.75 to 1.50
Repairing handle bar post .....	.40
Repairing broken fork .....	1.00
Repairing broken fork tips .....	.50
Truing front fork .....	.50

**Nickel Plating.**

Crank set for one or 2-piece .....	.75
Cranks, old style, per pair .....	.50
Sprocket, front ..	.40
Sprocket, rear ..	.15
Pedals, per pair .....	.60
Hubs, per pair .....	.75
Fork .....	.50
Seat post .....	.25
Handle bar .....	.50 to .75

**Enameling.**

Frame and fork, dark ..	2.50
Frame and fork, light ..	3.50
Fork only, dark .....	.50
Fork only, light .....	.60
Rims, with frame .....	.50

**New Parts to Order.**

New front fork, brazed ..	\$ 2.50
New front fork, seamless ..	3.00
Seat post to order .....	1.00
Tool steel cup or cone for hanger ..	1.00
Tool steel cup or cone for hanger, pair ..	1.50
Tool steel cup or cone for hub, single ..	.75
Tool steel cup or cone for hub, double ..	1.25
Rear axle .....	.50
Front axle .....	.40
Pedal pin, special .....	.75
Pedal pin, regular .....	.50

**Tire Repairs.**

Mending puncture in double tube tire ..	.35 to .40
Mending puncture in single tube tire ..	.25 to .40
Vulcanizing and patch .....	.75
New tube in single tube tire .....	1.50
New stem, single tube tire .....	.50
New valve and stem, double tube tire ..	.50
Cementing on tires with hard cement ..	.25

Cementing on tires with liquid cement ..	.15
Patching clincher tire .....	.25
Valve cap .....	.05

**Miscellaneous.**

Plain handle bar .....	1.50
Adjustable bar .....	2.00
Grips put on, pair .....	.25 to .50
Cranks, three-piece .....	.75
Colter pin .....	.15
Putting one link in chain .....	.15
Each additional link .....	.10
Cleaning and oiling chain .....	.15
Cleaning all bearings .....	1.00
Putting on plain rim .....	1.50
Truing wheels .....	.25 to .50
Putting in one spoke .....	.15
Putting in spoke, sprocket side .....	.25
Each additional spoke .....	.05
New set spokes, labor included .....	2.50
Balls, 3-16 and under, per doz .....	.10
Balls, over 3-16, per doz .....	.25
Cementing on grips .....	.10
One-piece hanger, complete .....	5.50
Straightening cranks .....	.25
Time on all work, per hour .....	.40

**DETAILS KEPT SECRET**

**No Definite Information Substantiates Rumors of Canadian Combine—Weather Delays Trade.**

Montreal, April 10.—The talk about a Canadian bicycle combine still continues and rumors are rife. The companies supposed to be in the deal, were noncommittal when approached.

From Hamilton, Ont., comes a story of another trust, in which are interested two of Hamilton's most prominent men, William Hendrie and Senator Sanford. Other names mentioned are W. D. Matthews and Senator Drummond of this city.

The weather in this part of the country is practically a month behind time, and the actual opening of the wheeling season is some distance off yet. Despite the inclement weather the trade is quite active and shipments of wheels ordered during the unusual boom during the fine weather of February have been received from the factories and are ready for immediate delivery.

It cannot be said that the chainless has reached any very noticeable stage in the bicycle business locally, as yet, although it has many admirers and the few dealers handling it state it is meeting with a fair success, but the chainless is an unknown quantity in Canada.

If it proves a success this season in the United States a demand may be looked for next year, a demand which will exist principally among the wealthier people, unless prices are reduced.

**Strike in India Tire Plant.**

The employes of the tire department of the India Rubber Company of Akron, O., struck last week because of a reduction of wages paid to the girls. The reduction amounted to about 45 cents a day and the girls went out in a body and a general strike ensued. The men's wages were evidently reduced also as they claim the amount paid them for making tires was cut from 23 cents to 18 cents, and that they cannot make living wages at that price. A complete tie-up is threatened. The rubber workers are well organized and determined. The company officials say they will not restore the wages. All those who joined in the strike have been discharged.

**Outing Manufacturing Co. Successors.**

The Hay & Willits Manufacturing Company of Indianapolis, Ind., has been succeeded by the Outing Manufacturing Company of which George H. Evans is proprietor. Since the failure of the old company the creditors' claims were bought up by Mrs. Margaret C. Evans, a mortgage creditor. Merchandise obligations contracted to date are to be paid by the old company.

In many streets of Vienna wheelmen are not allowed to ride.

**JOBBER COMPLAIN OF CHECKS**

**OBJECT TO PAYING EXCHANGE**

**Ask Dealers to Purchase Drafts Instead But One Suggests That Banks Are Blamable.**

An association of jobbers located in Iowa and Nebraska, with headquarters at Dubuque, has issued the following circular upon the question of making remittances by check:

As an illustration of the increased expense attending the use of personal checks, over bank drafts, a public list of rates of exchange issued by a certain bank is cited: Charges for drafts to regular customers, 5 cents each; charges for remitting for personal check, 25 cents per \$100, or fraction of \$100.

A customer of this bank can buy a draft for \$110 at a cost of 5 cents for exchange. If he should send his creditor his check on this same bank, it would cost 50 cents, besides loss of interest for about ten days, postage, stationery and labor, which would add about 15 cents more. Every cent of this expense is forced upon the creditor contrary to the contract and is an invasion of his rights. Banks of the class mentioned have been known to advise their customers to forward their checks instead of buying drafts, and to refuse to purchase goods of any house that objects. The reason is obvious. Fortunately for the good of the business community such banks are comparatively few in number and have but little if any influence.

**Collection Bills Are Large.**

Some banks remit for checks drawn upon them and make a nominal charge, while others make no charge. Checks in process of collection often pass through two or three banks, so that when the creditor balances his account with his banker at the end of the month, he finds a bill against him for collection of such checks which often is appalling. Let the merchant in imagination put himself in the jobber's place for a moment and see how he will like it. If a merchant should sell an article for \$5, and the customer should offer \$4.90 in payment, the remaining 10 cents would be demanded or the sale rescinded. Let the merchant apply this to his transactions with the jobber and the moral is apparent.

Every check must bear a 2-cent revenue stamp. Nine out of every 2-cent stamps on an average can be saved by making a list of drafts wanted and drawing one check for the entire sum. The exchange charge by the bank, if any at all, will in the majority of cases not be more than the revenue stamps saved and nine out of every ten entries in his bank account will be avoided. If the merchant will pursue this method he will avoid injustice to the jobber with but little if any expense to himself, and will improve his standing an hundred fold. A merchant may believe that his check is acceptable and that the jobber does not object, but down deep in that jobber's heart is a feeling of resentment that bodes no good to the perpetrator of the injustice.

**Why Personal Checks Are Used.**

Upon receiving a copy of the foregoing circular, Dross, hardware dealer in Warsaw, Ill., addressed a reply, in which the dealer's side of the controversy was presented as follows:

We have received your circular relating to the use of personal checks in payment of invoices, and as we are one of the offenders we should like to say a few words in our own defense.

We hardly think that we or other dealers would want to do an injustice to the jobber, and the only thing, in our opinion, that causes a dealer to pay for his goods in personal checks is that his bank charges him 20 cents on \$100 or fraction thereof for every draft, and if a dealer has ten or a dozen bills to pay every week and it costs him \$2 to buy the drafts he will have a strong inclination to send his personal check, if he thinks it is good.

The use of checks may be wrong, but it is our opinion that the best way to remedy the evil would be for the jobbers to give their association a list of those who send them checks and then let your bureau use its best endeavors to induce the bankers to quit charging so much for drafts. Then you will find most dealers will send drafts.

**Tube Making Concern in Trouble.**

A petition in involuntary bankruptcy has been filed against the Mannesmann Cycle Tube Works, which has headquarters in Adams, Mass. It is stated that the company owes more than \$414,000.

# THE BEST KNOWN WHEEL!



**CRESCENT  
BICYCLES**

ADULTS' CHAIN MODELS, \$35

BEVEL-GEAR  
CHAINLESS MODELS, \$60

Catalogue No. 2—Free

No matter where you travel, you will find **CRESCENT BICYCLES** already there and their reputation unshaken. The familiar name plate can be seen in parks, on country roads, or city pavements. Young and old ride them, and their popularity increases with the multitude of riders. ❁ ❁

...CHICAGO—**WESTERN WHEEL WORKS**—NEW YORK

NEW TESTIMONIALS EACH WEEK.

## MILWAUKEE TIRES

—PUNCTURE PROOF—

Pneumatic



Single Tube



Resilient



Easy Riding

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PRESENTING TESTIMONIALS.

MILWAUKEE, WIS., December 1, 1898.  
Gentlemen: I cannot praise your tire enough for the benefit I have received from them. I have ridden a pair of them for two years without a puncture or a bit of trouble, and I have caught people trying to stick hat pins in them when they heard that they were puncture-proof, but they failed to even make an impression on them.  
I cannot tell you how much trouble they have saved me on long-distance riding. No cyclist need have fear of a puncture if his wheel is fitted with your tires. I have been with cyclists when their tires have punctured far away from home, but I have had no such trouble with mine. Why is it? I ride the Milwaukee Patent Puncture-Proof Tire.

(Signed), Yours truly, JAMES J. FLANIGAN.

RHINELANDER, WIS., December 10, 1898.  
MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., Milwaukee, Wis.  
Gentlemen: It gives me great pleasure to say a word for the Milwaukee Patent Puncture-Proof Tire. I purchased them eight months ago and have never had a minute's trouble with them. Have tried all kinds of so-called "Puncture-Proof Tires" without success until I purchased the "Milwaukee," which I believe to be the only Puncture-Proof Tire.

(Signed), J. W. ATKINSON.

Representatives Wanted. Write for Prices and other Information.

**MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.**

# THE CYCLE AGE

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

Published every Thursday at 324 Dearborn Street, Chicago.  
Eastern Offices, American Tract Building, New York City.

Subscription price in the United States, Canada and Mexico, \$2.00 per year; in foreign countries \$6.00 per year.

ALL remittances should be made to THE CYCLE AGE COMPANY.

## AGENTS' PREMATURE ANXIETY

That "coming events cast their shadow before them" has been verified in the bicycle trade in the form of slow orders from bicycle dealers whenever in the past the business horizon has seemed clouded with the portents of great events of which it seemed difficult to predict whether the effect would stimulate or clog the trade. Such was the case before the last presidential election when the depression was general. When the war rumors commenced to circulate last year the shadow was again visible and this time with more distinct reference to the bicycle business.

The dullness which prevails at the present time may be ascribed to the weather, but this explanation is hardly sufficient. There are many indications that the projected combination of bicycle and parts manufacturers also has a good deal to do with it. The agent asks himself how it will affect him and the uncertainty of the answer stays his hand even against his will and against the clear perception that the combination will not increase nor diminish the public's buying capacity in his own or any other locality. This last mentioned point should undoubtedly steel the agent against unprofitable anxiety for the present and dispose him to go in vigorously for all the profits that are visible in the retail situation today whether the combination materializes or not.

But it is truly said that it is the shadow which the coming events cast before them. The light is rarely anticipated, and were the projected large deal eventually to turn the agents' lots into a blissful state of unbroken financial prosperity, the effect of the present uncertainty would yet remain one of disquietude and hesitation, such as may be overcome only by a firm resolution not to allow it to interfere with the daily pursuit of trade.

An example of the thoughts which are agitating the minds of the retail trade is presented in the following letter addressed to A. G. Spalding by Poag & White at Rock Hill, N. C.:

Will you kindly answer, if possible, the following questions?

If the proposed bicycle combination is successfully organized, how do you think it will affect us, who are exclusive bicycle agents? Will we have a good show for the agency of the combination's goods and how will agents be appointed? From what we read of this proposed bicycle combination, we think it means everything to us or nothing at all; that is, if we can get the agency of the wheels that they manufacture, it means our salvation, otherwise our ruin.

Any information that you may see fit to give us will be greatly appreciated.

Mr. Spalding has given this letter, and his reply to the same, publicity by forwarding copies of both to the cycle trade journals. His estimate of the situation will be read with interest by most cycle dealers, although it is inherent in the nature of things that eventually the retail sale of bicycles will be shaped by larger forces than any one man's opinion. Mr. Spalding is, however, as close as possible to the sources of present intentions and what he says to exclusive and desirable bicycle agents is doubtless entitled to a great deal of consideration by all who count themselves in this class. He writes as follows:

Replying to yours of the 4th inst., relative to the proposed bicycle combination and the effect it will have on exclusive bicycle agents, I hasten to assure you that you need give yourself no uneasiness, for your interest and that of all legitimate bicycle agents and dealers will be fully and better served by the proposed combination than it can possibly be under the present system of conducting the bicycle business.

While it is impossible for any one at this time to speak authoritatively as to just what will be the policy of the new company, yet it is my personal opinion that warehouses will be es-

tablished in the leading cities from which agents and dealers can draw their supplies, and as this company will probably not engage in the retailing of bicycles but as far as possible will confine itself to the manufacturing of them and will depend upon the regular established agents to distribute the goods to the consumer, it is fair to presume that it will be the policy of the new company to cultivate the pleasantest possible business relations with all desirable bicycle agents and dealers and in sufficient numbers to cover the ground thoroughly. Fixed retail prices will be made and strictly maintained and liberal and uniform discounts will be made to agents and dealers. The present established brands and individuality of each wheel will no doubt be continued and agents and dealers will have a larger line to select from all of which will result to their advantage, tend to perpetuate their business and make it more stable and profitable, and at the same time more satisfactory to the riding public.

From the experience of the past, it is fair to assume that the agency system will be continued something on its present lines, though no doubt certain factories will continue to make wheels especially for the jobbing trade same as they are now doing.

In a general way I feel safe in saying that the agents, dealers and jobbers will have little cause to complain when the policy of the new company is definitely announced, and it is my opinion that every interest in the bicycle trade will be improved under the new condition of affairs that this combination will create. It is quite apparent to nearly everybody connected with the bicycle trade, whether as manufacturers, agents, dealers or jobbers, that something must be done to place this great industry on a more stable and better business basis, and I am very certain that this proposed consolidation will have that effect.

Don't be alarmed at any of the alleged interviews and unfounded rumors that are floating around the press as to the future policy of this new company. They are all merely guess-work, without authority, and generally misrepresentations as to the actual facts. This combination will in no way affect this season's trade and each concern will conduct its own business for the balance of the year in its own way. The bicycle agents and trade generally will be fully advised of the future policy of the new company in ample time to prepare for next season's trade.

## ACCEPTING MACHINES IN TRADE

The custom of making arbitrary cash allowances for second-hand bicycles, same to apply upon the prices of new machines, was unbusinesslike in its conception and, as commonly practised, damaging in its tendencies and results. Yet few will deny that the handling of such stocks is a legitimate—even inevitable and inseparable—part of retail cycle merchandizing for the reason that the preferences of large numbers of people begin only where the purchasing capacities of multitudes of others leave off. Such being the case, the one great class of buyers mentioned almost mechanically supplements the other and together they by degrees sweep clear the floor of the ably managed salesroom. These are well-grounded and doubtless permanent conditions of business quite beyond the abilities either of manufacturers or dealers to control or appreciably alter.

The chief necessity is to guard against loss at all points in handling second-hand stock, since the unnatural attempt to stifle the exchange penchant would be certain, in a vast majority of cases, to prove abortive or destructive. This necessity is being widely and boldly met by large numbers of dealers in their determinations—as regularly chronicled by the correspondence of the Cycle Age—to force allowances on worn bicycles down to a conservative minimum.

Sales of old machines might be effected whenever possible by the cycle agent as a simple matter of accommodation to a valued patron. The responsibility however ought to remain exclusively with the owner until the cash for the same is fully paid. In the meantime he should pay for his new mount without reference to the older one, and as the proceeds of the latter are received by him, they should be handed over in full, unless other agreement has been made. The buyer should plainly understand that such procedure on the part of the agent is purely voluntary and in evidence of good will.

The Buffalo retailers who have adopted this plan, as mentioned by the correspondent of the Cycle Age in the issue of March 16, have theoretical and practical right on their side, and the combination is as good in trade as in morals. When the retailer is divorced from the necessity of humbly serving the purchaser, at whatever inconvenience or hazard to himself, yet putting forth every reasonable effort to cooperate with him, the trading-in evil should pass permanently away from cycle merchandising.

## BRAZING BY IMMERSION

### Two-Part Fire Box With Side and End Feeds—Racks for Rapid Handling of Frames

Oblong trough-shaped crucibles are generally supported in the middle by buttress-like projections from the side walls of the furnace. The central portion of the fire box is thus undivided except along the sides, the coals comprising practically one fire underneath the crucible. The Hoffman Bicycle Co., however, has departed from this plan. Its furnace was originally installed by a fur-

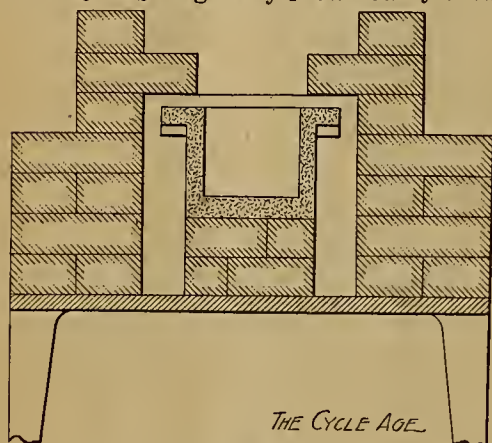


Fig. 1.

nace builder and afterward rebuilt to conform to the ideas of the men in charge of the plant. The crucible support in the rebuilt furnace is shown in Fig. 1, and is exactly the reverse of the previously mentioned plan.

Underneath the narrow bottom portion of the crucible is laid a short wall of fire brick which divides the fire box in two in the middle for a distance approximately equal to the width of the crucible. Along the side walls there is free passage room for heat and flame, which may thus rise unbroken along the sides of the crucible. In the place of cover tiles the Hoffman furnace is provided with a series of bricks, the under sides of which are but an inch above the upper edges of the crucible. The side walls, too, are but an inch away from the outer edges of the side flanges of the crucible. This close arrangement of parts is for the purpose of forcing the flames across

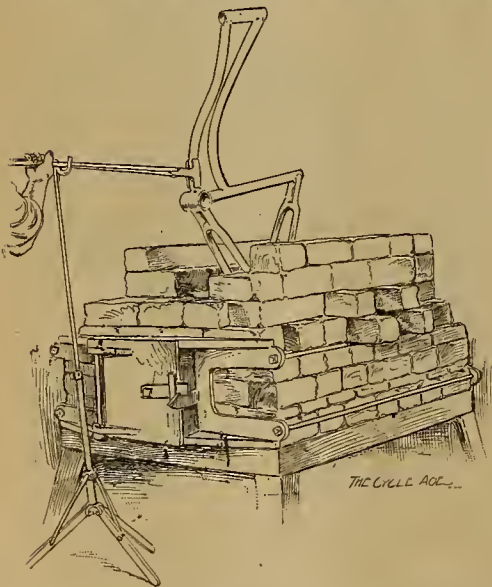


Fig. 2.

the crucible before any of their efficiency has been lost because of circulation through comparatively open passages.

#### Coal Feeds in Furnace Sides.

The fire being in two parts the coal must be fed through doors in both ends of the furnace, and to supplement this means of reaching the fire two loose

bricks have been left near the top of each side wall of the furnace. These bricks may be removed at will, and through the openings thus afforded coal in small quantities may be dropped into the fire from time to time without cooling off the furnace to the degree caused by opening wide the end doors. These loose projecting bricks may be seen in the exterior view of the furnace in Fig. 2.

#### Adjustable Rest for Tongs.

As no immersion brazing operator will care to stand up to a furnace and dip frames for ten hours without some aid in supporting the frames while certain joints are being held in the brass, rests of different sorts have been devised upon which the tongs may be placed after the joint has been lowered into the molten spelter. But as a frame being brazed at the crank hanger must be held by the workman's tongs in a much different manner than when the head is being dipped, no one rest will be satisfactory in all cases. The Hoffman company has devised the rest shown in Fig. 2, that the operator may be afforded an adjustable support for his tongs. The rest is quite similar to the ordinary music rack, with spreading legs and telescopic standard which allow a wide range of height

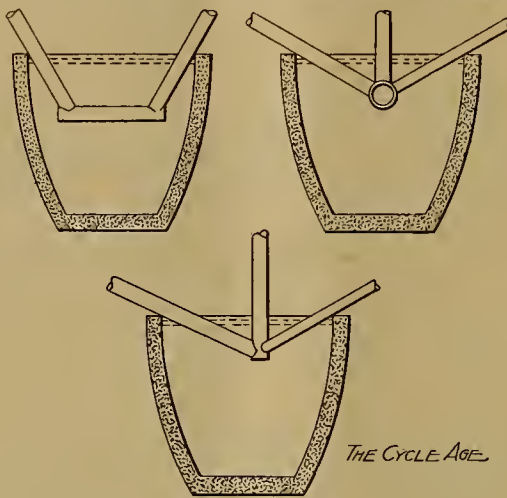


Fig. 3.

adjustment, the only practical difference being that it is much heavier and more stable. At the top of the standard is a hook into which the tongs may be dropped. The rest is adjusted to a height convenient for dipping a certain frame joint, and after a specified lot of such joints has been brazed the rack is changed to suit the requirements when brazing some other joint in the same lot of frames. In this way the operator is saved much physical exertion and can handle his work rapidly.

#### Round Crucible a Universal Support.

Brazers using round crucibles instead of the usual oblong pattern have found that rests of any kind are unnecessary in brazing the three most important corners of a frame—the head, the hanger and the seat cluster. If the crucible be not too large the frame can in each of these instances be lowered into the crucible till it is supported by the edges of the crucible itself. Dipping in this fashion is illustrated in Fig. 3, which shows the average depth to which joints will be immersed when the frame is supported by the crucible walls. One operator of such a crucible does not even employ a pair of tongs in handling the frames. He picks up a frame and grad-

ually lowers the joint to be brazed into the spelter till the frame tubes touch the crucible wall. He then leaves the frame in place till the immersion period is ended, when he lifts it out, sets it aside and repeats the operation with another frame. He finds no difficulty in keeping at the work throughout a full day's time.

#### Frame Rack and Boy Helper Save Time.

In the Hoffman factory fifteen frames are handled at a time—that is, the fifteen frames are dipped at some one particular corner in succession, then the round repeated at some other corner, and so on till the lot is completely brazed. That the operator may work rapidly, a boy is employed as a helper whose duty it is to handle the frames before and after the dipper has had them. A rack made in the fash-

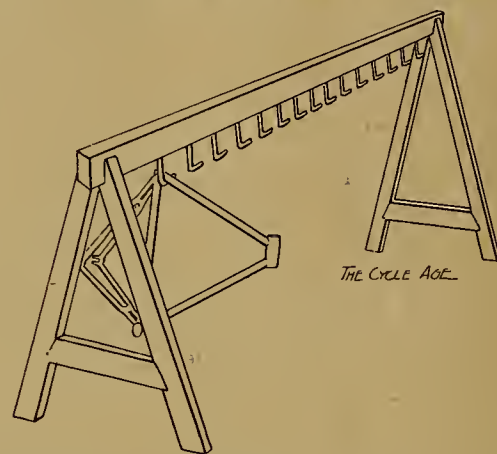


Fig. 4.

ion illustrated in Fig. 4 is placed near the furnace and back of the operator. At the right of the operator is a sort of rack comprising one horizontal and one vertical board. The manner in which a frame is set upon this rack is seen in Fig. 5. At the beginning of the work the large rack contains its fifteen frames hung upon the L hooks. The boy takes the first frame from the rack and places it on the side rack, where it will be in a position from which the dipper may take it up conveniently with his tongs. As soon as the operator has picked up the frame the boy places another in position for him. After the first frame has been dipped the workman hangs it on a hook suspended from the ceiling and at a little to the right of the furnace. The helper removes the frame from this hook, places it on the large rack and with a metal brush brushes off as much as pos-

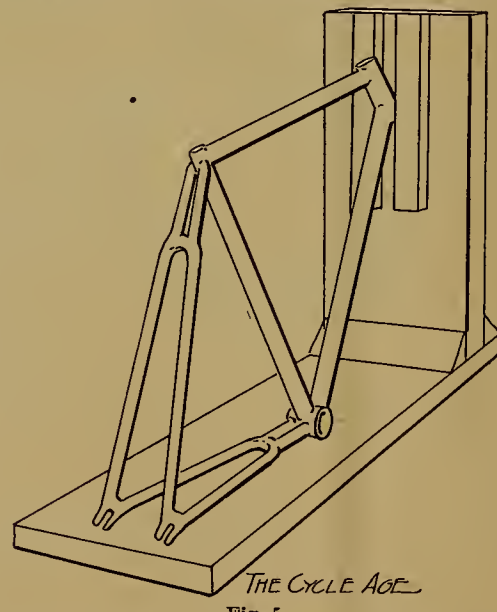


Fig. 5.

sible the superfluous spelter. The operator has in the meantime taken the second frame from the side rack, so that the boy now has to put another there, and thus the operation is repeated till each of the fifteen frames has been brazed at all corners.

The reason for handling fifteen frames in this manner instead of a greater or



less number gauged by circumstances is that in this factory a peculiar method of dipping is practiced. Being willing to sacrifice speed to good results, and believing that the frames should not be passed through flames, the furnace is heated up to brazing temperature and the blast then shut off. It has been found by experiment that the latent heat of the spelter after the shutting off of the blast is sufficient to maintain a brazing temperature while fifteen joints are being dipped. So fifteen frames are dipped at, say, the crank hanger, and then the blast turned on and operations suspended till the original heat is again attained, when fifteen steering heads, seat clusters or rear ends, as the case may be, are dipped. Much time is lost by this successive reheating, but while the frames are actually being dipped the work proceeds with but little if any waste of time. Were the same method of handling employed in a factory the management of which had no objection to dipping the frames steadily without shutting off the draft, at least 120 frames might be dipped in a ten-hour day, for in the Hoffman shop, where but four hours of time is actually employed in dipping, 48 frames are brazed per day in one crucible.

**Cleveland Adopts Repair Schedule.**

Cleveland, April 10.—The committee appointed by the local cycle board of trade to draw up a list of repair prices made its report at a recent meeting and the following list, which will be printed on cards in large type and posted in plain sight in all board of trade stores and repair shops, has been accepted:

New top tube put in.....	\$4.00
New lower tube put in.....	4.00
New top and bottom tube put in.....	6.00
One rear fork side put in.....	3.75
Two rear fork sides put in.....	5.25
Assembling and knocking down, extra.....	1.50
One new front fork side.....	2.00
Two new front fork sides.....	3.50
New stem.....	2.00
New crown.....	2.50
New tip and enamelling (each).....	1.00
Cutting down frame, material and enamelling complete.....	7.00
New rim put in.....	1.50
Respoiking one wheel.....	2.00
One new spoke.....	.25
Additional spokes.....	.10
Truing wheels, no new material furnished, per hour.....	.50
New dress guard.....	1.75
New chain guard.....	1.75
Lacing guards, two sides (cotton).....	.75
Lacing guards, two sides (mohair).....	1.06
Lacing chain guard.....	.50
Cleaning machine complete.....	1.50
New cork grips, one.....	.25
New cork grips, two.....	.40
New chain link.....	.25
Repairing one ordinary puncture, single tube tire.....	.25
Vulcanizing one puncture, single tube tire.....	.50
Vulcanizing two places when tire is off.....	.75
New valve stem put in.....	.50
Cementing on tire, extra.....	.25
Repairing ordinary puncture, detachable tires.....	.25
Repairing each additional puncture, detachable tires.....	.15
Repairing ordinary puncture, double tube tire.....	.50
Each additional puncture, when inner tube is out.....	.15

**Special Insurance for Cyclists.**

An insurance company was formed some time ago in Paris for the especial purpose of issuing accident policies to bicyclists, motocyclists and persons riding in private motor vehicles. The company has a capital of \$200,000. It is becoming well known in Europe and is securing much business. In case of accident to a wheelman who holds a policy the company repairs all damages to his machine besides paying a daily indemnity of sixty cents to \$2.40 if he is injured so as to incapacitate him from work. In case of death his family receives \$1,000 to \$4,000 or more according to the premium paid. If the cyclist knocks down and injures a

child or other person the company will take up the case and pay the required indemnity. Similar provisions are made for motocyclists and automobilists.

**BLESSING IN DISGUISE**

**Dealers Will Make License Decision an Excuse for Refusing Old Machines in Trade.**

Washington, April 10.—“Trading in” will not figure so prominently in local bicycle transactions this season as heretofore, owing to the recent decision of the court of appeals to the effect that dealers must take out an annual license of \$40 if they buy or sell second-hand machines. Many dealers will not take out a license and they can consistently refuse to accept old machines in trade knowing that many of their competitors will take the same stand.

Local bicycle dealers who added side lines to their regular business last fall have been in most instances eminently successful. Cash registers, phonographs and cameras proved to be the best paying side lines. One dealer who added cash registers late in the fall has been successful beyond his most sanguine expectations, having built up a trade that is bringing him in considerable revenue. No sooner did he begin to make headway than a rival concern started to break up his business by throwing every obstacle in his way, but he persevered and by courteous treatment and good business tactics managed to swing trade his way. Today his business is in a flourishing condition and gives promise of immediate expansion, notwithstanding the fact that his competitor is putting forth every effort to drive him out of the business by means of slanderous reports.

The trade is subscribing liberally to the fund to build a cycle path to Baltimore and is bringing all its influence to bear on the project to the end that local wheelmen may have a cycle path that will be second to none in the country.

**Satisfied With Installment Plan.**

The installment plan of selling machines seems satisfactory in Minneapolis and few losses occur. A fair amount is asked down and the balance runs from three to five and six months. On \$25 bicycles from \$10 to \$12.50 down and \$5 to \$7.50 per month is asked. A few dealers add \$2.50 to the price on lease. On \$50 models from \$15 to \$20 down and from \$7 to \$12.50 per month are the usual terms. One firm adds \$3.50 to the price on time, but does not always get it.

A furniture company, which does the largest installment business in the city, states that it has no trouble on the small installments asked and does not add any interest on leases. It has been selling this way for three years and expects to continue this year, so the plan must be satisfactory.

Trade is very late there on account of the late spring, but when it opens it will come with a rush and will soon be over with.

Models retailing at \$25 to \$35 and \$40 will be the sellers in the northwest. Carload lots have been received by two leading retail concerns, in order to save freight and get the best price.

Considerable interest is being taken in chainless models, but it is not expected that a great deal of business will be done in them in 1899.

**Price Cutting in Winona.**

The Gate City Plating & Cycle Co. of Winona, Minn., feels aggrieved over a statement that appeared in the local press a short time ago intimating that it had started the rate war among the cycle dealers. According to the statement of the

manager, the company installed an extensive plant for the purpose of enameling frames by the dip process and made the price \$1. It seems that other dealers regarded the announcement as an invitation to open a rate war and a general tumble in prices has followed so that work that formerly cost from \$3 to \$5 can now be secured for a third of that expense.

**Exports for One Week.**

Exports of bicycles and cycle materials from the port of New York for the week ending April 4 are recorded as follows:

	Bicycles.	Materials.
Germany ..	\$35,131	\$ 3,896
England ..	25,857	3,477
France ..	11,349	3,767
Denmark ..	5,496	2,953
Argentine ..	4,818	136
Belgium ..	2,202	1,926
Italy ..	1,153	.....
Brazil ..	1,108	.....
Cuba ..	875	117
British West Indies ..	828	160
British Guiana ..	807	160
Japan ..	611	294
British East Indies ..	633	42
Mexico ..	615	96
Sweden ..	448	36
Dutch Guiana ..	430	.....
China ..	393	55
Canada ..	304	159
Finland ..	250	.....
Central America ..	155	68
Russia ..	50	150
Norway ..	160	.....
U. S. of Colombia ..	148	.....
Portugal ..	140	.....
Azores ..	138	.....
British Honduras ..	.....	120
Peru ..	.....	107
Africa ..	100	.....
Venezuela ..	50	.....
Ireland ..	20	.....
Totals ..	\$94,274	\$19,656

**Exports for February.**

Exports of cycles and bicycle materials from the United States for February, 1899, in comparison with those for the same month in 1898 and 1897, are recorded as follows:

	1897	1898	1899
United Kingdom ..	\$228,651	\$210,661	\$ 49,832
France ..	17,452	71,168	48,833
Germany ..	76,354	184,048	102,107
Other Europe ..	75,364	143,770	172,854
British N. America..	73,136	44,395	53,719
Central America ..	5,014	328	240
Mexico ..	5,739	5,619	6,944
Santo Domingo ..	557	47	.....
Cuba ..	219	883	1,974
Porto Rico ..	33	14	266
Other West Indies....	12,353	5,145	3,933
Argentina ..	1,110	9,104	17,115
Brazil ..	1,986	13,107	3,749
Colombia ..	923	464	228
Other S. America..	10,800	4,604	1,644
China ..	655	3,364	2,260
East Indies (British)..	1,527	6,449	6,469
Japan ..	3,062	4,603	2,494
Australia ..	34,816	19,773	29,205
Asia and Oceanica ..	5,020	9,223	6,408
Africa ..	10,972	17,107	15,708
Other countries ..	.....	.....	2
Totals ..	\$565,743	\$754,476	\$530,537

**Cycle Imports Bother Canadians.**

Weeks before the current rumor concerning the consolidation of the Canadian bicycle makers gained headway, the Cycle Age fully aired the subject, pointing out that it was part of the alleged plan to shut out foreign machines. The following table shows the number of bicycles imported by Canada for the past three years, together with their valuation, a remarkable feature of the trade being the varying average value—\$32.28 in 1897 and \$21.45 last year:

Year.	No.	Value.
1896 ..	17,267	\$732,999
1897 ..	23,526	759,366
1898 ..	27,400	597,728

The railroad companies are in strong sympathy with the good roads movement in Illinois and Indiana, as their traffic is frequently reduced considerably when country roads are in bad condition for hauling.

## PLAIN TALK TO DEALERS

### Interdependence of Agents and Makers—Rules for Buying —Perils to be Avoided

To Agents—Let those of us who have in the past harbored the delusion that the interests of the maker and dealer are opposed to each other, and that the first thing for the retailer to do was to make sure that he was getting the better of the maker, promptly unload this false notion. The dealer's permanent prosperity cannot be built on a foundation of the maker's adversity. Nor can the maker build up and increase his business permanently at the expense of the retailer. These interests are mutual in the highest degree; when one is prosperous each benefits by the prosperity of the other and thereby adds to his own prosperity.

#### Mutual Interests.

The maker and the dealer working hand and hand along business lines can accomplish in a short time all that is needed to place the trade on a proper basis. Either one working alone, and opposed or hindered by the other, can accomplish little or nothing. So let us cultivate friendship and good understanding with the right class of manufacturers, and thereby discourage the other manufacturers whose policies and methods are opposed to our interests.

Next, let us always bear in mind the matter of quality when we are considering the question of price. Let us strike the true balance between them and not let either end of the question have sole sway over our thoughts. These questions of quality and price are two subjects least understood in their true relation to each other of any in the cycle trade. Of course, other things being equal, price will always determine a deal. But, on the other hand, price being equal, look carefully to quality.

#### Six Points of Quality.

What is quality? From the dealer's standpoint it is a combination of all the things which should be present to constitute a distinctive whole.

First of all, look to the material of which the bicycle is made. Don't accept low-priced material when paying a price which should include high priced material only.

Second, look to the mechanical finish and exactness of the various parts, and remember that as a rule a bicycle built in its entirety in one factory is much better than one built of parts collected from different makers and not primarily designed for and in relation to each other.

Third, look to the superficial finish, the enamel and nickel; and in combination with this look to the general design. These last two points come most directly under the notice of the public, and are the ones you must depend upon to produce that all important "first impression" which, if favorable, operates to render sales easy, but which if unfavorable is a sure wet blanket on all your persuasive arguments. A machine which will cause the customer to smile when given his first view of it is half sold on the spot.

Fourth, consider the responsibility of the maker. Can he be depended upon in all matters, and will he be able to take prompt and proper care of your orders during the rush season?

Fifth, consider whether the machine has a reputation and is vigorously advertised by its maker. Don't waste valuable time trying to sell your customer something nobody has ever heard of before, and regarding which he can have no preconceived liking or respect.

Sixth, look up the record of the machine. Has it ever been offered through department stores, auction houses, or curbstome agents? Has the price ever been broken in mid-season? Can you take it up and push it vigorously, feeling assured of a clear field and proper protection?

#### Judging by the Record.

These six points all have a bearing on the question of quality as viewed from the standpoint of a retailer, and none of them can be overlooked with safety, for each has a vital bearing on the business to be done. At times it has been, and it still often is, a difficult matter for a dealer to determine, in face of the claims and assertions made by salesmen, what is the proper price to buy at, and when and what to buy. It is often difficult to know when you have found the right thing. Remember, however, that talk is cheap, and that "claims" prove nothing. Look behind the talk and see where it comes from. Look up the records of those who would do business with you. The great majority of cycle makers have now been before the trade a sufficient time to have left a distinct trail by which their course and policy may be judged.

Sell the best and most substantial medium grade machines you can find, when your customer will not or cannot afford the best, telling him he is getting good value for his investment; but don't make the fatal mistake of telling him he is getting a machine "just as good" as he could get for more money. When you choose your medium priced line look for substantial and durable construction rather than faddy catchpenny features of design. Under no circumstances sell a "snide" machine. Let your short-sighted and consequently short-lived competitor have that trade all to himself and get all the satisfaction from it that he is able.

#### Trouble Breeders.

A three dollar per week boy cannot run your business nor mine; nor can he do a man's work in a bicycle factory. These "just as good" machines are every one made by child labor and by slop shop methods, and they invariably show their pedigree by their performance. They make trouble, and nothing but trouble, during the whole period of their usually very brief career.

RETAILER.

### REPAIR PRICE SCHEDULES

Evils Caused by Existins Irregularities Can be Overcome by Wide Adoption of Uniform Scale.

(Reprinted from The Cycle Age.)

On another page there is presented a list of the repair prices in various towns.

In looking over the list it is at once apparent that great irregularities in prices prevail; that the same piece of work is estimated as being worth very much more in one town than in another. In several instances some towns in which greatly varying prices are charged, are so close together on the map that it must happen frequently that cyclists from one of the towns visit the other town and have occasion to become acquainted with the variation in charges.

The moral effect of this condition is, of course, to prime the public thoroughly with the idea that all repair prices are arbitrary and extravagant, and thereby bring about a general suspiciousness and

ultimately force prices all over to the lowest notch. When that point has been reached the ambition to do good work, on the part of the repairman, must gradually vanish and give way to a desire to do as little as is absolutely required for obtaining the depressed price which the customer grudgingly pays.

If a somewhat uniform scale of prices could be adhered to the downward tendency which has already gone too far, might perhaps be arrested and a higher standard of workmanship would eventually follow.

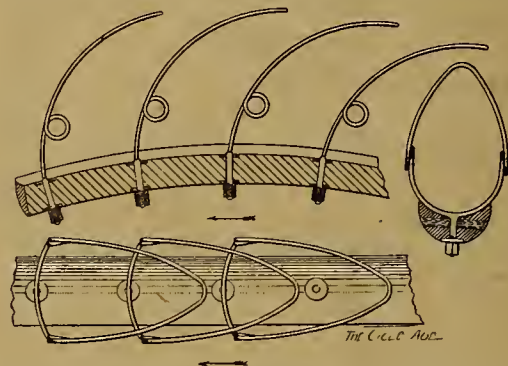
The experience with uniform price schedules has, however, not been altogether successful except in places far removed from the centers of the bicycle and parts-making industries, and before any attempt is made to reach a general and fair estimate of what each of the most common repair jobs is worth, the cause of previous failures should be looked into.

A repair price schedule should be flexible enough to suit existing conditions, and it should not be plainly inimical to the interests of the public who are expected to pay the charges.

Better results may be expected from a schedule which gives maximum prices for the information and protection of the public while leaving the repairman all the latitude which he may desire for showing special favors to customers by lower quotations when circumstances warrant them.

#### A Curio in Spring Tires.

Johnannes Avertician Calantaricuts of Scarborough, England, doctor of medicine, proposes the construction of a resilient tire for bicycles which is shown in the illustration, and has secured U. S.



patent for it. The stem which pierces the wheel rim is square to prevent the spring from rotating. The doctor considers it an important advantage that each of the springs, if injured, may be readily removed and replaced with a fresh one, thus keeping the tire continually in good working order. Supposing a good sized stone should become wedged in the crotch of a spring while the rider goes at a good speed, it seems not impossible that the spring might act as a sling shot and throw the stone with considerable force against the back or head of the rider. In this way the tire might bring business to the doctor.

#### Second-Hand Trade a Specialty.

"Bob" Garden, bicycle dealer in Philadelphia, is interested in a new concern, the Yankee Cycle company, with headquarters on South Ninth street, which makes a feature of the sale of second-hand bicycles of undoubted pedigree. Garden has adopted as the slogan of the new firm the following characteristic phrase: "A good second-hand bicycle is better than a poor new one"—and the amount of business being transacted by the new concern would seem to indicate that he is not alone in this belief.

The Italian Touring Club now has 16,000 members and \$8,000 in the treasury.

THESE ARE THE ONLY TOOLS YOU'LL NEED.



TRADE MARK



THESE ARE THE ONLY TOOLS YOU'LL NEED.



THESE ARE THE ONLY TOOLS YOU'LL NEED.



TRADE MARK



THESE ARE THE ONLY TOOLS YOU'LL NEED.

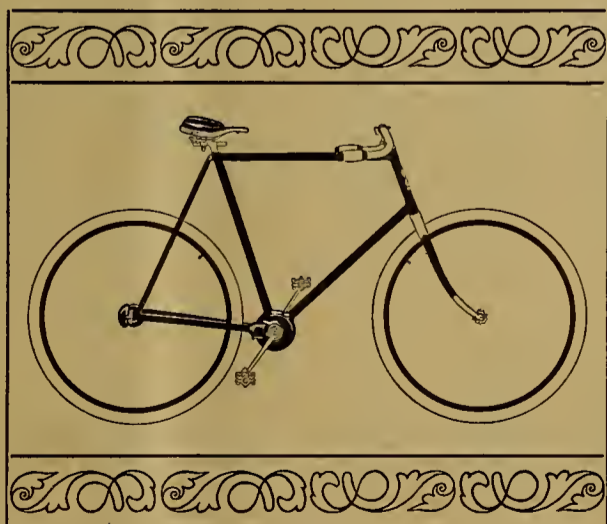
# Spring is Here

Get ready for the rush. We can make prompt deliveries NOW!

**The American Dunlop Tire Company**  
Belleville, N. J. 134 Lake St., Chicago, Ill.

# THE STERLING

## "BUILT LIKE A WATCH"



THE CHAINLESS TYPE HAS COME TO STAY.

Chainless construction has long passed the experimental period, and is now an accomplished success, and a very powerful factor in the bicycle market. The demand for Chainless models exceeds the most sanguine expectations of the manufacturers, proving beyond question that their popularity is established.

IT PARTICULARLY APPEALS TO BUSINESS AND PROFESSIONAL MEN

because of its smooth and noiseless riding qualities; its freedom from the dirty, noisy chain; its adaptability for muddy streets and wet weather; and the small amount of care, cleaning, lubrication and adjustment required.

The live agent with a first-class Chainless in his line of wheels, is placed head and shoulders above his less fortunate competitors.

THE STERLING CHAINLESS is the ONLY ONE with INTERCHANGEABLE rear bevels, giving the owner two widely different gears at pleasure.

Our catalog will explain the details of construction, and we will gladly talk agency to you if you are interested.

### STERLING CYCLE WORKS

### KENOSHA, WIS.

## IRREGULAR REPAIR PRICES.

	PENNSYLVANIA.					OHIO.				
	Allentown. (Pop. 25,250)	Austin, (Pop. 1,600)	Clearfield, (Pop. 2,250)	Lock H'v'n, (Pop. 7,360)	Edinboro, (Pop. 1,100)	Cleveland, (Pop. 261,350)	Steubenville, (Pop. 13,400)	Alliance, (Pop. 7,600)	Salem, (Pop. 7,320)	Arcanum, (Pop. 1,150)
<b>Frame Repairs.</b>										
Replacing top tube .....	3.50	1.50	2.50	.....	3.00	2.00	1.50	2.50	2.00	2.50
“ lower tube .....	3.50	1.50	2.50	.....	3.00	2.25	1.50	3.00	2.00	2.50
“ top and bottom tubes.....	6.00	3.00	4.50	.....	4.00	3.00	3.00	5.00	3.00	4.50
“ one rear fork side.....	2.00	1.50	2.00	.....	2.00	2.00	1.50	2.00	2.50	2.00
“ two rear fork sides.....	3.50	2.75	3.50	.....	3.00	3.00	2.50	3.00	4.00	3.50
“ seat post mast .....	3.50	.....	3.00	.....	3.50	1.50	2.50	3.00	3.00	3.00
“ head .....	2.00	.....	2.00	.....	3.00 up	1.00	1.50	2.00	2.00	2.50
“ head frame connection .....	2.00	.....	1.75	.....	1.50 up	1.50	1.00	1.00	1.50	2.00
“ seat post connection .....	1.50	.....	2.50	.....	2.00	1.50	2.50	1.50	2.00	2.50
“ crank hanger bracket .....	4.00	.....	.....	.....	3.50	4.00	2.50	3.00	2.00 up	4.50
“ one rear fork end.....	1.50	.....	1.00	.....	1.25	1.00	.75	1.00	1.50	1.50
“ two rear fork ends.....	2.50	.....	1.50	.....	2.00	1.75	1.50	1.50	2.50	2.50
Repairing unbrazed joint .....	1.00	.....	.75	.....	1.50	.75	.75	1.00	.50 up	.75
Lining up frames .....	1.00-3.00	.....	.50-2.00	.....	.75 up	1.00	1.00	1.50	.50 up	.75-2.00
Splicing tube .....	1.00-3.00	.....	1.00	.....	1.50 up	1.00	1.00	1.00	.75 up	1.00
Repairing dents, each .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Rims and Spokes.</b>										
Wood rim, common, 1½ to 1¾ inches..	1.75	1.50	1.50-2.00	1.50	2.00	1.50	1.50	2.00	2.00	1.25
“ extra quality .....	2.25	2.00	2.00-3.00	2.00	2.50	1.75-2.00	1.75	2.50	2.25	1.50
“ racing or tandem .....	2.50	2.25	2.00-3.00	2.00	3.00	2.25	1.75	2.50	2.50	2.00
“ detachable tires .....	2.50	2.25	2.00-3.00	2.25	3.00	2.50	2.00	2.50	2.50	1.75
Metal rim .....	2.00	.....	.....	2.00	.....	2.25	2.00	2.50	.....	.....
Truing wheels, each .....	.50	.25	.25-1.00	.....	.25 up	.50	.35	.25 up	.25 up	.25
Wood rim and spokes.....	3.00	3.00	2.00-3.50	2.25	3.50	2.50	2.00	3.00	3.25	2.00
Respoking without rim .....	2.50	1.50	1.00-1.75	1.75	2.00	2.00	1.50	2.50	2.00	1.50
One spoke .....	.25	.10-.15	.25-.40	.20	.25	.15	.15	.25	.25	.15
Two spokes .....	.40	.25	.35-.50	.40	.40	.25	.25	.35	.40	.25
Each additional spoke .....	.10	.10	.05-.10	.10	.10	.10	.10	.10	.10	.10
<b>Chain and Mud Guards.</b>										
Silk lacing on mud or chain guard.....	.50	.35-.50	.50-1.50	.....	.40	.30	.50	1.00	.60	.75
“ on both guards .....	1.00	.50-1.00	.85-2.00	.....	.75	.75	.75	1.50	1.00	1.00
Wood mud guard on ladies' bicycle...	1.25	1.50	.50-1.25	.75	.75	1.00	.50	1.50	1.50	1.25
“ chain guard on ladies' bicycle...	1.25	1.00	.40-1.00	.75	.75	1.00	.65	1.00	1.50	1.00
<b>Nickel Plating.</b>										
Frame and forks .....	6.00	.....	5.00-8.00	.....	.....	10.00	5.00	.....	.....	.....
Handle bar .....	.75	.....	.50-.75	.....	.....	1.00	.75	.....	.75	.....
Large sprocket .....	.65	.....	.25-.75	.....	.....	.75	.40	.....	.40	.....
Medium sprocket .....	.60	.....	.25-.60	.....	.....	.50	.40	.....	.30	.....
Small sprocket .....	.30	.....	.25-.50	.....	.....	.20	.25	.....	.20	.....
Fork crown and tips.....	1.25	.....	.50-1.00	.....	.....	.50	.50	.....	.50	.....
“ only .....	.60	.....	.40-.75	.....	.....	.35	.40	.....	.30	.....
Spider crank .....	.35	.....	.25-.50	.....	.....	.35	.30	.....	.25	.....
Pedal .....	.40-.75	.....	.40-.75	.....	.....	.30	.25	.....	.25	.....
Hub .....	.30	.....	.25-.50	.....	.....	.30	.25	.....	.25	.....
Crank .....	.25	.....	.15-.25	.....	.....	.25	.20	.....	.25	.....
Seat post .....	.35	.....	.15-.25	.....	.....	.25	.20	.....	.25	.....
Small parts and fittings, each.....	.05-.10	.....	.....	.....	.....	.10	.05	.....	.05	.....
<b>Enameling.</b>										
Frame and forks, any dark color .....	2.50	2.50	2.50	1.50	3.50	2.50	3.00	4.00	2.50	3.00
“ “ any light color .....	3.00	3.00	2.50-4.00	2.00	4.00	3.00	4.00	4.00	3.00	4.00
“ “ white .....	4.00	3.50	2.50-4.00	2.50	5.00	4.00	5.00	5.00	3.50	6.50
Front forks.....	1.00	.....	.50-.75	.50	.50	.75	1.00	.75	.50	.75
Striping frame, plain, extra .....	.75	.....	.50	.50	1.00	.25	.75	.50	.50	.50
“ and decorating, extra .....	1.50	.....	.75-1.50	.75	1.50	.50	1.50	1.00	1.00	.....
Enameling rims, each .....	.65	.....	.25	.40	.50	.25	.50	.75	.25	.50
“ two rims .....	1.00	.....	.50	.75	.75	.50	1.00	1.25	.50	1.00
Air drying frame and fork.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Tire Repairs.</b>										
Punctures, single tube tires, each.....	.15	.25	.25-.50	.25	.25	.25	.25	.25	.25	.25
“ double tube tires, each.....	.25	.35	.35-.75	.50	.25	.40	.25	.50	.25	.35
Vulcanizing, small patches .....	.35	.50	.50-.75	.75	.50	.50	.50	.....	.50	.50
“ large patches .....	.50-1.00	.75	.75-1.50	1.00	.75 up	.75	.75-1.00	.....	.75	.75
Cementing on tires, each.....	.15	.25	.25-.50	.15	.25	.25	.10	.25	.10 up	.25
New valve.....	.15	.25	.25-.50	.15	.25	.25	.25	.25	.25	.25
“ and stem .....	.25	.50	.35-.75	.40	.40	.50	.35	.75	.50	.35
“ stem .....	.15	.25	.35-.75	.25	.25	.40	.25	.50	.25	.25
<b>General Repairs.</b>										
Front axles, each .....	.50	.50	.25-.50	.50	.75	.50	.25	.50	.50	.30
“ wheel cones, each .....	.40-.75	.75	.35-.75	.....	.50 up	.50-.75	.50-1.25	.75	.25	.40
“ wheel cups .....	.40-.75	.75	.25-.75	.....	.50 up	.50-1.00	.50-1.25	.50	.50 up	.35-.75
Front or rear wheel nuts, each.....	.10	.10	.05-.15	.10	.10	.10	.15	.10	.10	.10
Rear axles, each .....	.50	.75	.25-.75	.65	.75 up	.50	.25	.50	.75	.40
“ wheel cones .....	.40-.75	.75	.35-1.00	.....	.75 up	.50-1.00	.50-1.25	.75	.75 up	.50
“ wheel cups .....	.40-.75	.75	.25-.75	.....	.50 up	.50-1.00	.50-1.25	.75	1.00 up	.50-1.00
Crank hanger cones .....	.60-1.00	1.00	.50-1.00	.....	.75 up	.75	.75-2.00	1.00	.75 up	.50-1.00
“ cups .....	.60-1.00	1.00	.40-1.00	.....	.75 up	.50-1.00	.50-1.50	1.00	1.75 up	.50-1.25
“ axles .....	1.25	1.50	1.00 up	.....	1.50 up	1.25-2.00	1.00-2.00	1.50	1.75 up	.75-3.25
Straightening crank .....	.25-.50	.25	.10-.25	.25	.25 up	.25	.15-.25	.25	.25	.25
Straightening pedal pin .....	.25	.25	.15-.25	.25	.10	.25	.25	.25	.25 up	.25
Cleaning bicycle inside and out.....	1.50	1.00	1.50-2.50	.75	.75 up	1.50	2.00	2.00	1.00	.75
Cleaning bearings .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cleaning crank hanger .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pedal rubbers, set .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cementing grips .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Handle bar expander .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Front Fork Repairs.</b>										
Lining up forks .....	.25-.75	.35-.50	.25-1.00	.....	.50	.50	.50	.50	.50	.75
One new side .....	.75	1.50	1.00-2.00	.....	1.50	1.00	.25	1.50	1.50	1.00
Two new sides .....	1.50	2.75	1.50-2.50	.....	2.50	1.50	1.25	2.00	2.25	1.75
New stem .....	1.50	.....	1.50-2.50	.....	2.00	1.00	1.00	1.50	1.50	1.25
New arched crown .....	1.50	.....	2.00-3.00	.....	2.00	2.00	1.25	2.00	2.50	1.75
One fork end tip .....	.60	.....	.50-.75	.75	1.00	.75	.50	1.00	.75	.85
Two fork end tips .....	1.00	.....	.75-1.50	1.25	1.50	1.25	1.00	1.75	1.25	1.50
Complete forks, arched crown .....	4.50	.....	4.00-6.00	.....	4.00	3.00	3.00	3.00	6.00	4.00
<b>Sprocket and Crank Repairs.</b>										
Making rear sprocket, 7-8-9-10 teeth	1.25	1.00-1.25	1.00-2.50	.....	1.00-1.50	1.00	2.50	2.00	1.00 up	1.50
New front sprocket .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Truing front sprocket .....	.25-.75	.....	.25-.75	.25	.25 up	.25	.25-.75	1.00 up	.15 up	.25
Crank .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crank pin .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<b>Chain Repairs.</b>										
Putting in one link .....	.10	.15	.25-.50	.20	.25	.25	.25	.25	.15	.25
Cleaning and lubricating .....	.50	.25	.25-.50	.15	.25	.25	.50	.25	.25	.25
Taking out one link .....	.10	.10	.25-.50	.15	.10	.10	.15	.25	.15	.10

# IRREGULAR REPAIR PRICES.

	INDIANA.					WISCONSIN.				
	LaFayette, (Pop. 16,250)	Frankfort, (Pop. 6,000)	Pe'rysv'le, (Pop. 507)	H'ntngt'n, (Pop. 7,400)	South Bend, (Pop. 22,000)	Marinette, (Pop. 15,300)	Green Bay, (Pop. 18,300)	J'h'n'sn C'k, (Pop. 247)	Horicon, (Pop. 1,500)	Stevens Pt., (Pop. 9,000)
<b>Frame Repairs.</b>										
Replacing top tube	5.00	1.75	2.50	2.25	2.50	3.00	1.00	....	2.50	2.50
" lower tube	5.00	2.00	3.00	2.25	2.50	3.00	1.00	....	2.75	2.50
" top and bottom tubes	6.50	3.50	4.50	4.00	4.50	5.00	1.50	....	4.00	4.00
" one rear fork side	4.00	2.75	1.00	2.25	1.50	2.50	.75	....	2.00	2.50
" two rear fork sides	4.75	5.00	1.75	4.00	3.00	4.00	1.25	....	3.50	4.00
" seat post mast	3.00	2.00	3.50	3.50	3.00	3.50	1.50	....	3.50	3.00
" head	5.00	2.25	2.00	2.00	....	2.25	....	....	....	2.50
" head frame connection	3.00	1.75	2.00	1.75	....	2.00	1.00	....	1.75	1.50
" seat post connection	3.00	2.00	3.00	2.75	....	2.50	.75	....	2.50	1.50
" crank hanger bracket	5.50	3.50	3.00	5.00	....	4.50	1.50	....	4.00	2.50
" one rear fork end	3.00	1.50	1.00	1.75	....	2.00	.75	....	1.50	1.50
" two rear fork ends	3.50	2.75	1.75	2.50	....	3.00	1.25	....	2.75	2.50
Repairing unbrazed joint	1.00	1.50	.50	.75	....	1.00	1.25	....	1.00	1.00
Lining up frames	.50 up	1.00-2.00	.75	.75	....	2.00	1.25	....	1.00-2.00	1.50
Splicing tube	....	1.00-2.50	1.25	1.25	....	3.00	....	....	1.50	1.50
Repairing dents, each	....	....	....	....	....	....	....	....	....	....
<b>Rims and Spokes.</b>										
Wood rim, common, 1 1/2 to 1 3/4 inches..	2.50	1.25	2.00	1.25	1.00	2.00	1.75	2.00	1.50	1.75
" " extra quality	2.75	2.00	2.25	2.00	1.50	2.50	2.50	....	2.00	2.00
" " racing or tandem	3.00	2.00	2.00	2.00	....	2.75	2.50	....	2.50	2.25
" " detachable tires	2.75	2.50	2.25	2.50	1.25	3.25	1.75	....	2.75	2.25
Metal rim	3.00	2.00	2.00	....	....	4.00	2.00	....	....	....
Truing wheels, each	.25 up	.25	.25	.25	.25	.50	.25	.50	.50-1.00	.25-.50
Wood rim and spokes	2.75	2.50	2.75	....	4.00	2.50	3.00	3.00	2.75	2.25
Respoking without rim	2.50	1.50-2.00	1.75	....	....	2.00	2.00	2.00	1.75	2.00
One spoke	.25	.15	.15	....	.15	.15	.25	.25	.20	.15
Two spokes	.45	.25	.25	....	.30	.25	.15	.35	.30-.70	.25
Each additional spoke	.15	.10	.05	....	....	.10	.05-.10	.05	.10	.05
<b>Chain and Mud Guards.</b>										
Silk lacing on mud or chain guard	.50	.50	.40	....	.35	1.00	.75	....	.75	.25
" " on both guards	.75	.90	.75	.50-.75	.50	1.75	1.50	....	1.25	.50
Wood mud guard on ladies' bicycle	1.25	1.25	.75	.50	.75	.75	1.50-2.00	....	1.00	.75
" chain guard on ladies' bicycle	1.25	1.25	.60	.50	.75	.75	1.50-2.00	....	1.00	.75
<b>Nickel Plating.</b>										
Frame and forks	....	15.00	....	....	10.00	10.00	....	....	....	....
Handle bar	....	.75	....	....	.60	.75	.75	....	....	....
Large sprocket	1.50	.75	....	....	.60	.50	.75	....	....	....
Medium sprocket	1.40	.50	....	....	.50	.35	.50	....	....	....
Small sprocket	1.35	.25	....	....	.40	.25	.50	....	....	....
Fork crown and tips	1.00	1.00	....	....	.60	.75	1.25	....	....	....
" " only	.75	.50	....	....	.35	.50	.75	....	....	....
Spider crank	.50	.40	....	....	.30	.25	.75	....	....	....
Pedal	....	.50	....	....	.60	.50	....	....	....	....
Hub	....	.50	....	....	.70	.35	....	....	....	....
Crank	.50	.25	....	....	.20	.25	....	....	....	....
Seat post	.50	.25	....	....	.20	.25	....	....	....	....
Small parts and fittings, each	.10	.10-.25	....	....	.05	.15	....	....	....	....
<b>Enameling.</b>										
Frame and forks, any dark color	3.00	2.00	3.00	3.00	3.00	2.50	3.00	....	3.00	2.00
" " any light color	3.25	3.00	3.00	....	3.00	3.00	4.00	....	3.50	3.00
" " white	5.00	3.00	5.00	....	3.50	4.00	5.00	....	5.00	3.50
Front forks	.75	.50	1.00	1.00	....	.75	1.00	....	1.25	.75
Striping frame, plain, extra	.50	.50	.75	....	....	.50	1.00	....	....	1.00
" and decorating, extra	1.00	1.00	1.50	1.00	.50	1.25	1.00	....	....	1.50
Enameling rims, each	.50	.25	.25	.50	.50	.50	1.00	....	.75	.25
" two rims	1.00	.50	.50	1.00	.75	.75	1.50	....	1.25	.50
Air drying frame and fork	....	....	....	....	....	....	....	....	....	....
<b>Tire Repairs.</b>										
Punctures, single tube tires, each	.25 up	.25	.25	.25	.25	.25	.25-.50	.50	.30	.25
" double tube tires, each	.50	.25	.15	.35	.25	.50	.35	.50	.40	.35
Vulcanizing, small patches	.50	.35	....	....	.50	.50	.50-.75	.75	.50	.60
" large patches	.75 up	.50	....	.50	.75	1.00	.75	1.00	.75	.75
Cementing on tires, each	.25	.25	.15	.15	.15	.10	.15	.25	.25	.25
New valve	.25	.20	.25	.25	.10	.25	.50	.50	.25	.40
" and stem	.50	.35	.35	.50	.50	.35	.50	.50	.35	.50
" stem	.35	.25-.35	.25	.25	.15	.25	.50	.25	.25	.40
<b>General Repairs.</b>										
Front axles, each	.50	.40	.30	.25	.50	.50	1.00	.50	.25-.75	.35
" wheel cones, each	.50 up	.50-.75	.50	.50	1.00	.75-1.50	.25-.50	.50	....	.50-.75
" wheel cups	.50 up	.50-.75	.40	.50	1.00	.75-1.50	.25-.50	.50 up	....	.25-.75
Front or rear wheel nuts, each	.10	.10	.10	.10	.10	.10	.10-.25	.10	.10	.10
Rear axles, each	.50 up	.40	.30	.35	.50	.75	1.50-2.00	.50	.35-.75	.35
" wheel cones	.50 up	.50-1.00	.60	.50-1.25	1.00	1.00-1.50	.25-.50	.50	....	.50-.75
" wheel cups	.50 up	.50-1.00	.40	.50-1.25	1.00	1.00-1.50	.25-.50	.50 up	....	.25-.75
Crank hanger cones	.75 up	.50-1.00	.75	1.00-1.50	1.00	1.00-2.00	.50-.75	.75 up	....	.75 up
" cups	.60 up	.75-1.00	.50	1.00-1.50	1.00	1.00-2.00	.50-.75	.75 up	....	.50 up
" axles	1.75 up	1.50-2.50	1.25	1.75-3.50	1.50	2.00-4.00	1.50-2.00	1.25 up	....	1.00 up
Straightening crank	.25 up	.10-.25	.20	.50	.25	.25	.25-.50	.25	.25	.25
Straightening pedal pin	.25 up	.10-.25	.20	.25	.25	.35	.25-.50	.25	.25	.25
Cleaning bicycle inside and out	1.00	1.00	.75	1.00	1.25	1.00	1.50-2.50	1.50	1.75	1.50
Cleaning bearings	....	....	....	....	....	....	....	....	....	....
Cleaning crank hanger	....	....	....	....	....	....	....	....	....	....
Pedal rubbers, set	....	....	....	....	....	....	....	....	....	....
Cementing grips	....	....	....	....	....	....	....	....	....	....
Handle bar expander	....	....	....	....	....	....	....	....	....	....
<b>Front Fork Repairs.</b>										
Lining up forks	.50	.25-.50	.25	.50	.50	1.00	.25-.50	....	.50-1.00	.50
One new side	1.50	1.75	1.00	1.25	1.25	1.75	.75-1.00	....	1.75	1.00
Two new sides	2.00	2.50	1.75	2.25	2.00	3.00	1.25-1.50	....	3.00	1.50
New stem	1.50	2.00	1.25	1.25	1.00	1.50	1.00	....	1.50	1.00
New arched crown	2.50	2.50	2.00	2.50	.75	2.50	1.00	....	.50	2.00
One fork end tip	1.25	.75	.40	.75	.75	1.00	.75	....	.75	.75
Two fork end tips	1.75	1.25	.60	....	1.25	1.50	1.25	....	.75-1.00	1.25
Complete forks, arched crown	3.00 up	5.00	5.00	....	3.00	4.00	2.00-3.00	....	5.00	3.50
<b>Sprocket and Crank Repairs.</b>										
Making rear sprocket, 7-8-9-10 teeth	1.50 up	1.25	....	1.25	1.00-1.50	.75-1.50	1.00-2.00	....	....	1.00
New front sprocket	....	....	....	....	....	....	....	....	....	....
Truing front sprocket	.25 up	.25-.35	.25	.50	.25	1.00	.25-.50	....	.25	.25
Crank	....	....	....	....	....	....	....	....	....	....
Crank pin	....	....	....	....	....	....	....	....	....	....
<b>Chain Repairs.</b>										
Putting in one link	.25	.15	.25	.25	.15	.25	.25	.25	.25	.25
Cleaning and lubricating	.25	.25	.25	....	....	.35	.25	.50	.75	.25
Taking out one link	.25	.10	.10	....	.10	.25	.25	.25	.20	.25

## COMMERCE IN FOREIGN MARKETS

### Drop Frames for Korea

Few of the natives in Korea use bicycles, but the habit is growing. Most of the bicycles in use there are purchased in the United States, Japan or Shanghai. The majority are American, however, and most of the standard makes are represented. What is most required to increase sales is repair shops. At present every rider must be a mechanic and carry his own reserve parts.

Catalogues and prices should be in English, the prevailing commercial language. Small dealers pay cash on receipt of goods. Ladies' cycles will sell best, as both men and women wear long coats or skirts, which must be girded up for riding a diamond frame—a mode which natives do not like. All American missionaries ride. Korea has a silver standard and as bills of exchange are paid at the rate of coinage when due, provision must be made against falling prices.

The inhabitants have no idea of technique or the mechanical superiorities of the different makes and such explanations are of no use whatever. Therefore catalogues and correspondence must be in plain, matter-of-fact terms. Steel rims are in favor, but wood rims will do, the climate being good. Display rooms in the large towns are necessary; also the strictest adherence to the wishes of agents, as it takes a long time to communicate with manufacturers.

### Low Priced Machines for India

The best way for a manufacturer to sell bicycles in India is to send a representative with samples to arrange agencies. Sending out catalogues, however attractive they may be, is a waste of money unless followed up with personal solicitation and samples. The outlook in Bombay for the bicycle business is very encouraging. It is the exception now to find any European of either sex who does not ride.

But it is to the natives one must look for a really large demand, and it has been astonishing to note how rapidly the number of native riders has increased during the past four years. At first English cycles monopolized the market, but during the past two years several American makes have been introduced, and, in spite of their cost, are making headway. There is some demand for the highest priced cycles, but if American manufacturers would export bicycles that are "just as good" at a more moderate price they would get much better results in that country. The people in India want low prices and cannot be convinced that the \$75 bicycle is worth \$25 more than the \$50 machine.

The principal ports of entry in India are Calcutta, Bombay and Madras. Agencies have been established in all the larger interior cities also. There is no particular time of the year for soliciting the wholesale trade, but, as the dull season in the trade is during the monsoon, that perhaps would be the best time for beginning new arrangements in order to be ready for the increased demand in cold weather. The best cycling season is from November 1 to April 1, although the majority of the people ride all the year around. The cheapest way of shipping is by the direct line of steamers from New York to Bombay and Calcutta—Bucknall's line.

Wood rims are not highly regarded in India. Japanned steel rims give the best

satisfaction. English tire valves last much longer than the American ones. The climate is very hard on rubber and its life is much shorter than in temperate climates. Metal mud guards are preferred on front and back wheels. Gear cases also are much used. English shippers usually give 30 to 60 days to reliable parties. Not much business is effected on the usual New York terms, cash f. o. b.

### Persia an Unpromising Field

There is little encouragement to hope that the bicycle will in the near future become a popular means of locomotion for the Persians. There are only about 20 machines in the whole country, and these with one exception are the property of Europeans who have taken them into the country for their own pleasure or convenience. So far, the natives have not been captivated by them, and look upon the horse and mule as more dignified in appearance and more comfortable in use. The Persians are very conservative in their habits of thought and life, and are slow to adopt innovations aimed at established though antiquated customs. It is not to be understood that the bicycle will not become a favorite method of traveling and possibly of pleasure to the people of Persia, but so far it has not secured many adherents. The roads are generally rough and the streets uneven and narrow and unsuited for cycling.

Most of the bicycles in use are of English make, possibly one or two German. There is no retail trade. Catalogues should be printed in English or French. A Persian never buys for cash if he can get credit, even though it may be to his advantage to do so and he has the money in his pocket.

At the present time there are really no pastimes or sports indulged in in Persia. The ancient games which bred and incurred the old Persians to fatigue, hardship and war have disappeared, and lust, effeminacy and dissipation have taken their place. If an exhibition of bicycles could be made in one of the principal stores, it might have some effect and induce those who could afford it to buy.

### Trade Conditions in Germany

The German cycle manufacturers will be represented at the special cycle show to be held at the Paris exhibition in 1900. This exhibition will be held at Vincennes, for the reason that insufficient space was allotted at the world's show. The German manufacturers will erect a special pavilion 270 by 135 feet. Only 32 exhibitors will be allowed to take part. The price for space per square foot will be nearly \$10.

The Adler Cycle Works, Frankfurt on the Main, had a remarkably good season last year in spite of all competition. The net surplus for the year was \$245,750, while the cost of carrying on the business was \$300,000. The company pays on the original shares 20 per cent, and the new shares 10 per cent dividend; \$8,750 go to the special reserve, and \$37,500 to the dividend reserve.

The chamber of commerce in Cologne, in its annual report for 1898 states that the German cycle industry suffered last year mainly from the unfavorable weather during the best part of the season, and from foreign competition, especially

American. Business did not satisfy expectations, although there was no falling off in demand, but a large increase in import and over-production, which forced a reduction in prices hardly in accordance with the cost of production. There is a desire, especially among new firms, to force the sale by the establishment of branches, giving goods in consignment, etc., which will not give the desired benefit. Cases of bankruptcy and insolvency are frequent, and it will take some time before the business will regain its position. The quoted sale prices are calculated without due regard to the cost of production. The prices of the material are very low at present, but products are sold far under the cost of making, as for example tubes, steel balls, etc.

The best field for the products of the German cycle industry was, until lately, the home country, and even last year the belief was maintained that Germany could not produce sufficient for its own wants. The export of cycles is, at present, about a tenth of the total production, but the necessity of looking out for other markets increases every day, and German competition must look to the export trade for its salvation. The products of most concerns have decreased during the last few months, owing to the large stock held, and new factories are very few. But, as soon as good weather sets in, it is believed that the surplus stock will be sold, when a better state of affairs will reign.

### The Chinese Riding Bicycles

The Chinese residents of Calcutta—and there is a large number of them—have taken to cycling with a will, and their progress in learning to ride is very marked. The ordinary Hindu and Mohammedan cyclist is quite satisfied to start his wheeling career with an old crock painted in imitation of the rainbow; but such is not the case with John Chinaman. He prefers a new machine, and he not infrequently makes his purchase at a European shop, selecting a high class machine, but he invariably demands a two years' guarantee. There is every indication that Calcutta will have a Chinese cycling club before long. Such a club is being organized in Rangoon.

German cycle exports in 1898 show a great increase over the previous year, the number of bicycles exported in 1898 being 40,752 against 27,201 in 1897. The values were 15,000,000 marks and 10,000,000 marks respectively. These figures do not include what was exported in "parts." Austria was the largest buyer. Sweden, however, towards the end of the year, was largely increasing her purchases.

In St. Petersburg bicycles of American manufacture largely predominate, while in Moscow most of the machines used come from England.

France last year exported motor vehicles to the aggregate weight of 350,000 pounds, and imported similar vehicles to the weight of 79,000.

A petition urging the Russian government to impose the same duty on frames and parts as on complete bicycles is being circulated and signed by Russian manufacturers.

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## Comfort

**T**HE comfort of a saddle depends largely upon intelligent construction in the earlier stages of the work. It is easy to make something and call it a saddle, but is it just as necessary to have a thorough *practical* knowledge of what constitutes a perfect saddle, before one can be made, as it is to have a thorough knowledge of cutting before a good and well fitting suit of clothes can be made. The lack of such knowledge results in botch-work, and we see lots of it, both in clothes and in saddles.

Neither of them will ever command the respectful consideration of those who know (and their name is legion) what constitutes good work, and the makers of them are soon relegated to oblivion.

It is the strongest and most convincing evidence of the perfection in *style, durability, and comfort* of the saddles produced by this company, that their goods command the admiration of more than eighty per cent. of the riders of this country and a very large proportion of those of other countries. Write us for information and catalogues. We shall be happy to furnish either or both.



**American  
Saddle Company**

608-613 American Trust Bldg.

Cleveland, Ohio

## SUBJECTS OF GENERAL INTEREST

### Remarkable Scientific Camera

A new camera, probably the finest ever built, is being constructed in Chicago for the Smithsonian Institution, at Washington. The specifications required that the instrument should be capable of making a successful exposure in one six-hundredth of a second. It is hoped that this speed will be increased so that a good negative may be obtained by an exposure of only a thousandth of a second.

The principal purpose for which this camera was designed is to serve the photographing of aerodromes, with which Prof. Langley, secretary of the Smithsonian Institution, is conducting elaborate scientific experiments in an attempt at the solution of the problem of aerial flight. The instrument is provided with a delicate measuring apparatus, by which the precise angle at which the camera is tilted at the moment of exposure is known to the operator and is also photographed on the plate. This device will enable scientists to determine, under given conditions, the exact location and elevation of the object photographed.

### The New Order of Industrial Affairs

Have the monopolies come to stay? This very important question, says the Journal of Commerce, may be best answered by fairly considering what are the dangers that confront the trusts. Their controlling aim is to defeat competition, not to regulate or moderate it; that is insufficient for the accomplishment of their purposes; but to absolutely extinguish it. Partial or qualified competition in industry is an impossibility; there must be either pure monopoly or full and free competition. If the former cannot be maintained, then the trust principle fails and must be abandoned.

A very large majority of the monopolies have incorporated into their financial structure an element of fatal weakness. In most cases the plant of the several properties consolidated has been egregiously overvalued. Effete, superseded and practically worthless appliances of production have been taken at preposterous valuations; and the deceptive figment of "good will" has been credited with ridiculous values. The result is that, with respect at least to the more recent creations, the capitalization is double that for which a plant of equal productive capacity and including the most recent improvements could be provided. The folly of this fictitious capitalization is inconceivable of the men of sober business methods who have committed themselves to it. It seems incredible that they should have undertaken such schemes in the hope of making them permanent investments; and, if they are to be credited with any definite practical purpose, it must be assumed that at least the more sagacious of them are seeking an opportunity for unloading their interests upon uninitiated investors. About that, however, they are likely to find less certainty than they may have calculated upon.

The recklessness of this procedure is more conspicuous, however, when the magnitude of the task undertaken is considered. The thing attempted is the overthrow of the natural law of competition; the revolution of past methods of industrialism; the dispersal of the numerous and wealthy forces of middlemen; the defeat of the competition between monopoly prices at home and prices fixed by free competition abroad; the conquest of obstacles arising from an

attitude of distrust on the part of the financial community; and the surmounting of whatever hostility may arise from political parties, from the courts, and from the state and federal legislatures. At all these points, strong probabilities of stout resistance face the trusts.

At the moment, we see no symptom of the great reaction against this artificial reshaping of industrialism which must ultimately challenge it. But it has already evoked a profound national apprehension, not only for the institutions themselves but also for the large interests bound up in their fate. That feeling must haunt their progress at every step. But, after a brief interval of specious results and flattering dividends and tactful manipulations of prices, natural remedial forces will make their appearance in the situation.

The funds accruing from the \$16,000,000,000 of annual earnings, which are thus being shut off from employment in the industries and can find no other adequate employment, will make their force felt. The owners of that wealth will find a situation surrounding them in which industrial plant is doubly capitalized, in which prices are artificially sustained, in which large foreign markets are accessible to us, while wages are relatively low; the glut of idle capital will be forcing them to seek employment for their funds; and they will find it the most profitable investment to construct factories upon an ample scale, with the newest equipments, and at half the cost at which the monopolies have capitalized inferior plants.

Among the ranks of these new investors are likely to be found no inconsiderable proportion of middlemen who have been displaced by the trusts and whose experience and trade connections will qualify them for entering upon industrial enterprises. Another contingent may be found to consist of producers of raw material, who have become weary of subjection to the monopolies and are quite ready to broaden the markets for their products and introduce competition into them.

### Extent of the British Empire

The British empire is now a territory of 11,500,000 square miles, or 13,000,000 if we include Egypt and the Soudan; and in this territory there is a population of about 407,000,000, or over 420,000,000 if Egypt and the Soudan are included—a population about one-fourth of the whole population of the earth. Of this population about 50,000,000 are of English speech and race, the ruling race—in the United Kingdom, in British North America and in Australasia; and the remaining 350,000,000 to 370,000,000 are the various subject races, for the most part in India and Africa, the proportion of the governing to the subject races being thus about one-eighth.

The increase in area and population in this empire, excluding Egypt and the Soudan, amounts since 1771 to 2,854,000 square miles of area, or more than one-fourth of the whole, and to 125,000,000 of population, which is also more than one-fourth of the whole. The increase of the ruling race included in this population amounts to about 12,500,000, or about one-fourth of the number in 1897; and the increase in subject races is 112,000,000 or nearly one-third the number in 1897. This increase is largely due to annexation. The existing revenue of the different parts of this empire added together amounts to

\$1,288,265,000, and the imports and exports to \$6,875,000,000. The increase since 1871 is \$570,715,000 for revenue, or more than 40 per cent. of the present total, while the increase of imports and exports is \$2,140,000,000, or about one-third of the present total.

### The World's Two Nickel Deposits

There are but two large deposits of nickel known in the world at the present time. One of these is in Ontario, and the other is in the French colony of New Caledonia, lying in the South Pacific ocean, 7,000 miles from the United States. The mines in New Caledonia produce each year a quantity about equal to that produced in Canada, and are the only possible competitors of the Canadian ore and as the latter has superseded the French product in the free markets of the world, there is no doubt that it has the preference over its rival. But there is some reason to believe that an agreement has been reached between those now in control of the two great fields by which they divide the market.

In the United States there is no danger of any rivalry as producers, for the deposits are insignificant and unimportant. So far the Canadian working classes have been but little benefited by the development of this natural bounty. But if a refining industry is established in Ontario it would doubtless lead to the development of the smelting of other ores, and thus a new factor would be introduced among the industrial interests of the United States.

### Novelties for the Paris Exposition

If the management of the Paris Exposition fulfills its promises, no small number of technical marvels will be revealed to the public in 1900. First of all there will be the much heralded telectroscope, an instrument which is said to have solved the problem of electrical vision. The telectroscope will, however, find a rival in the telautograph, which provides a means of receiving messages sent from one station to another, in exactly the same form in which they were transmitted.

The idea of the telautograph is old; but the inventor is said to have devised an apparatus which is entirely different from its predecessors. He claims to have solved the problem by using selenium—a metal which is unique in possessing the property of conducting electricity with a resistance which varies with the intensity of the light that falls upon it. The varying illumination is produced by treating the written telegram in a peculiar manner, and the variations in resistance effected by the selenium are communicated to a conductor to produce an increase and decrease in the intensity of the current passing therethrough. An imperfect model is said to be in tolerably successful operation, and to be able to transmit in one hour 144 telegrams, each four inches by two inches, upon which space any number of words or characters can be inscribed.

An agreement extending time of payment of notes until the makers can make payments from the proceeds of goods, to be sold as fast as possible in the regular course of business, is void for uncertainty as to time of payment.



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GENERAL SALES OFFICES

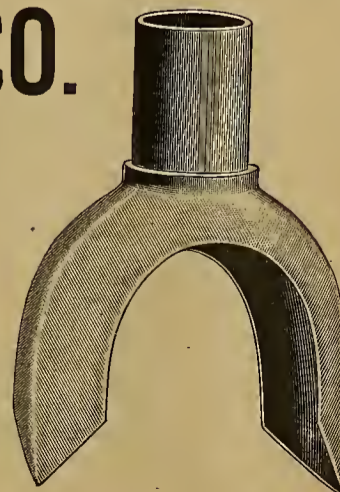
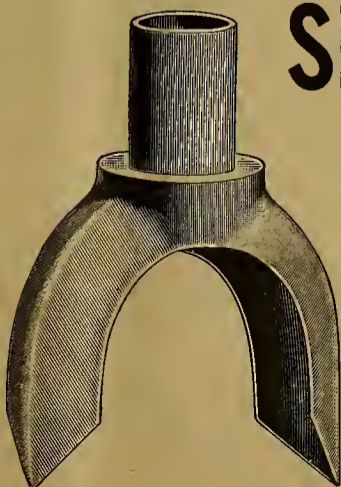
CLEVELAND, OHIO, U. S. A.

BRANCH OFFICES

No. 144 Chambers Street,  
NEW YORK, N. Y.

No. 135 Lake Street,  
CHICAGO, ILL.

No. 29 Constitution Hill, BIRMINGHAM, ENG.



## BLASTING WITH WET SAND

### Air Pressure Displaced By Steam—Sand Leaves Blast in Solid Stream—Inexpensive Operation

Confined to a closed room, with head and face tightly wrapped with numerous cloth, glass and metal coverings, with not a breath of fresh air from morning till noon or from noon till night and compelled to stand for hours by the side of a dry, quickly scattering storm of fine sand, the lot of the sand blaster has commonly been far from pleasant. The utility of the sand blast has never been questioned. The inconvenience caused by the discharge of dry sand has been the chief source of the criticism raised concerning the blast as a means for removing flux scale from frames after brazing and before filing. Wet sand is surely a remedy for this inconvenience. Though blasting with wet sand has been a subject for talk among shop men, it is not widely known that the possibility of successfully using wet sand for this purpose has been brought to a practical point.

#### Wet Sand Blasts in Operation.

In the factory of the Fanning Cycle Mfg. Co., of Chicago, there are in opera-

shaft and driven by a light round belt. The sand is carried along by the screw at a speed which exactly supplies the blast pipe with the proper amount of sand. When the sand reaches the blast pipe it is not only wet, but meets with a condition much different from the usual heavy air pressure of the dry blast apparatus. Here steam under sixty pounds pressure discharged through a one-quarter-inch nozzle blows the wet sand in a solid stream through the stationary one-inch discharge blast pipe. The work to be blasted is held by the operator and moved through the blast.

#### Blast Used in Open Room.

The degree to which the blast holds together in a solid stream after leaving the nozzle is well shown in the illustration, the atmosphere in the room being as free from dust as though there were no sand blast in the building. In fact, so well is the blast controlled in the Fanning factory that the blasts are used in an open room, the floor space not occupied by the

probable that there are no dry sand blasts in operation using less than 10 horse-power of air. The steam used by the Fanning blasts amounts to so little that the owner of the steam plant from which it is supplied makes no charge. The working parts of the machines have been designed and constructed so that the sand shall not get into and injure the bearings, and those which have been in constant use since their installation nearly two years ago are still in first-class running order and have cost practically nothing for repairs. This form of blast is now on the market as a complete machine, it being manufactured by F. B. Redington & Co., of Chicago.

#### Emery Cloth Replaced By Blast.

Fanning frames are each subjected twice to the blast. After a frame has been brazed it is blasted to remove the flux and grit, so that the filer has nothing to take from the tubing and lugs but the superfluous spelter and projecting pin ends. One blast operator can easily put 150 frames per day through this operation, making the cost of the first blast very slight as compared with the amount saved in the filing bill. After filing the frames are reblasted, the usual strapping or polishing with emery cloth being thus abolished from the factory. The reblast takes more time than the first blast as the entire surface of each frame must be passed through the blast. However, one blaster is able to finish 100 frames per day.

After the reblast the frames are perfectly clean and free from scale, grit and file marks and covered with a thin coating of fine sand dust. This dust is readily removed by wiping the frames with a cloth saturated with gasoline or benzine, which not only removes the dust but cleans all grease from the tubing, leaving the frames in good condition for the application of the ground coat of enamel.

#### LONG FORKSIDES SHORTENED

Overproduction of Forks for Thirty Inch Wheels Gives One Maker Cue to Economy.

The visitor to a well known factory was looking interestedly at a workman operating a rotary tube cutter and two great piles of front forks. The workman was diligently adding to one pile from the other, the cutter being employed to lop off a liberal inch from the upper end of each fork side before it was transferred to the growing pile.

"You think that looks like we did not know our job?" said the accompanying superintendent interrogatively.

"Well, it does seem that there must have been a mistake, somewhere," was the rejoinder, "most factories get their forksides to the length that is wanted."

"But hardly at the price that we have paid for these. I guess we can afford to cut them about seventeen times and still make money on them. As it happens they fit in our crowns very nicely after they are cut, we can use them, but they were made for fellows who had figured on a large boom for thirty-inch wheels."

"I supposed that much."

"Yes, but we were not the fellows. You are quite right that there must have been a mistake somewhere, but it was not here. I got the tip from your paper, by the way, and when I saw that manufacturers were inclined to credit the thirty-inch idea with more strength than there naturally is in it, I watched my chances and bought pretty low. I tell you it is a mistake to try to rush the whole country into a craze for something like thirty-inch wheels, which may be all right as far as it goes, but has not enough back of it to carry trade with a rush. I will bet you there will be more thirty-inch wheels sold in 1900 than in 1899, although the craze is as flat as a pancake right now."

"Why, do you think they are preferable



WET SAND BLAST IN OPERATION IN FANNING FACTORY

tion daily throughout the building season three sand blasting machines using wet sand, and which to one familiar only with the dry sand blasting process would hardly seem to be sand blasts. The machines have been in use nearly two years and have proven so successful that every frame built in this factory passes in front of the blast nozzle before reaching the filer. The accompanying illustration shows one of these machines in operation and clearly pictures the general appearance and construction.

The sand used is a fine grade of beach sand and is well wet down before it is thrown into the hopper. In the head of the machine below the hopper is a horizontal worm screw about three inches in diameter and having a pitch of about one and one-half inches. This screw is slowly rotated by a pulley on the end of the

blasting plant being utilized by the frame filers. Though the operators use mouth and nose protectors, and sometimes eye shields, the head wrappings are not required to be so close fitting as those used by operators of dry sand blasts. In fact visitors to the shop have stood in as close proximity to the blast as do the operators, and have suffered no discomfort. The blast is directed into a round opening in the wall of the room, an exhaust for the steam and a trap for the bulk of the discharged sand being thus formed on the other side of the wall.

The use of steam in the place of air to supply the blast is not only advantageous in that it affords a clean blast by which men do not object to work, but also in that when used with machines of this description the amount of steam required amounts to but two horse-power. It is



**T**HE rider of a National is always proud of his machine.

It's handsome and well made.

Like a good horse well groomed it adds to its owner's pleasure in simply being "all right."

The real satisfaction in the purchase of a National comes when the buyer finds that his first expenditure is his last. No repair charges or delays later to reduce his cash or spoil his pleasure.

One season on a National and he says—

*A National Rider Never Changes His Mount.*  
Better join the procession.

**National Cycle Manufacturing Co.**  
BAY CITY, MICH.

# The \$50 Trade

Every wise dealer is after the \$50 trade. He realizes that it means more to him than the profit on the sales. When a wheel sells at \$50 it ought to be a pretty fine wheel. It ought to advertise the dealer who sold it—send more buyers to his store.

The surest way of getting the biggest share of the \$50 trade is to offer the best \$50 wheel—the wheel that is best from every point of view—beauty, design, finish, quality, workmanship

The surest way of selling such a bicycle is to sell the

# ANDRAE model 40


No other wheel can compare with it on any of the above mentioned points. No other wheel will sell so easy to the \$50 trade. No other wheel is worth \$50 while the Andrae sells at that price. Our catalogue illustrates and describes this model thoroughly. Also 14 other Andraes. Write for catalogue and we will send you our monthly paper, "the Andrae Agent," free.

Andrae  
Cycles  
Never  
Disappoint

**Julius Andrae & Sons Co.**  
Milwaukee, Wisconsin.

**IF!**

IT IS  
AS  
GOOD  
AS



"THE...."

**HOLLENBECK**

RAWHIDE SADDLE"

It costs more.

Mr. Dealer: All Jobbers supply them. If not, write us.

MAKERS  
**HOLLENBECK SADDLE COMPANY**  
SYRACUSE, N. Y.

# OLIVE POPULARITY

SPREADING



In every mail we receive advices of some prominent person being mounted on an Olive wheel.

The Captain of the Yale team has selected a '99 Olive for his mount this season. They all know a good thing when they see it.

The Olive is the popular wheel.

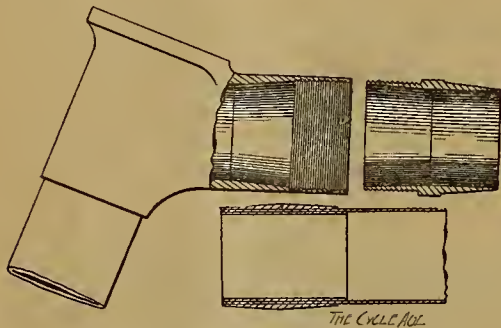
THE OLIVE WHEEL COMPANY - Syracuse, N. Y.

to the usual size, as a general feature of construction?"

"No, not necessarily, but they are good enough for some purposes. They look pretty well in twenty-six inch frames, and some tall riders will like them. They roll along pretty smooth, and people will by and by get used to seeing them. A few others may want them for front wheels. As a boom article they are a flat failure, but as a specialty they are apt to be called for, somewhat. They are a nuisance to the trade now, but if the great combine should come off, there will be room for specialties of that kind without saddling every bicycle maker with the necessity of guessing at his own expense on the extent of that kind of fool booms."

#### Rainforth Brazeless Joint.

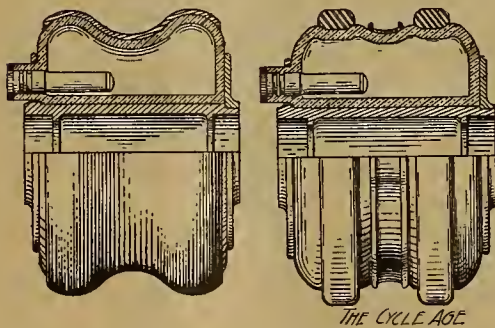
The accompanying illustration shows a brazeless joint which has been patented here by H. S. Rainforth of Lincoln, England. The double-cone collar on the tube is sweated on and for further security secured by pins or pegs—not shown in the drawing. The clamping ring is bored to



fit the tube accurately at one end and at the other end fits the outer cone surface of the collar interiorly while the screw threading corresponds to the screw-threaded main lug. When the joint is completed the angular projection on the clamping ring, which serves the purpose of laying hold of the ring with a wrench, is removed by filing or similar means, and the finished joint thus presents a smooth rounded surface.

#### Roller for Roller Skates.

The two patterns of rollers which are shown in the illustration have been patented by T. Rankin and J. J. Busenbenz for the Chicago Building and Mfg. Company. They have a double tread surface



separated by a depressed portion and are of the pneumatic variety. In the first pattern the desired shape of the tread is produced by confining the rubber air ring in a molded rawhide band. In the other pattern two rawhide or metal bands which form the tread are separated by a metal band of smaller diameter. The bands are secured in place by inflation or by cementing and inflation.

#### Annealing of Steel Castings.

E. D. Wassell of Pittsburg, Pa., has secured patent for a process of annealing open-hearth or Bessemer steel by surrounding it entirely with oxid of iron con-

taining about five per cent of lime. Any oxid of iron serves the purpose provided it is fusible between 800 and 1200 degrees Fahrenheit. The process is chiefly intended for annealing armor plates, but may also be used for small steel castings and has the peculiarity that it removes all rust from the work leaving it perfectly free from either oxid or sand. The annealing requires 24 hours, which is a saving of time over previous methods. The patent is No. 622,301.

#### MOTORCARS FOR MAIL SERVICE

Government of British India to Look Into Merits of American Vehicles—Experiment to be Tried.

Kirlokhar Bros. of Bombay, East India, write to the Cycle Age as follows:

To the Editor—As government have asked us if we could undertake to carry mail by motor cars over good roads about 100 miles long, by way of experiment, we request you to enlighten us upon this subject.

We give you the circumstances under which the motor carriages are to be worked:—The road is good and one hundred miles in length. There are many ups and downs, the steepest grade being 1 in 37 for three miles only. During wet season rains are heavy and continue for about 4 months. Very strong winds during monsoons. The maximum weight of mails is three hundred pounds plus the weight of a driver and servant. The vehicle should be very strong, reliable and simple in working and adjustment. It should at the same time be cheap. The tires should be very strong and to be had at any time. Speed 8 to 10 miles an hour.

Which make of American motor carriage will you therefore recommend. Which motive power will be cheap and effective? Kerosene oil or steam? Electricity and gasoline will not do at all. You need not trouble yourself with them. In short any information on the subject that will tend to prove our enterprise a success will be most thankfully received and appreciated.

#### Berlin Motor Carriage Show.

An international exposition of motor carriages will be held in Berlin, Germany, September 3 to 8. The exhibit will comprise, in six classes, motor carriages, freight wagons, motor cycles and trailers, motors and storage batteries, parts and wheels, and motor vehicle sundries. The total show space, including aisles, is 2,700 square meters.

The announcement of the exposition has been made so late that American exhibitors are practically excluded from obtaining good spaces, for it is stated that "intending exhibitors should announce their exhibits as soon as possible, but not later than April 15, either by letter or telegram addressed to the committee as follows: 'Internationale Motorwagen Ausstellung Berlin, 1899, Berlin, Universitat Strasse No. 1.' With the announcement should be remitted half of the rental for the desired space. Applications for space received after April 15 and not later than April 20 will be accorded their due share of whatever space may remain unclaimed on the 15th."

Neither prizes nor medals will be given, but a progressive series of tests, races, etc., is in contemplation, the programme for which will be announced by the committee of management at the opening of the exhibition.

#### Motor Cab Drivers Practising.

Parisians have been mildly surprised of late to see about fifteen electric cabs following one another through the streets of that city at a distance of about fifty meters. Many thought these were the first large installment of electric cabs to be used for public service and as they looked ungainly and somewhat disreputable these mistaken individuals were unduly disappointed. But it transpired that the motor vehicles were simply being used to initiate the drivers or chaffeurs into the intricacies of handling the vehicles in the crowded thoroughfares and were

only practice cabs, the new ones for the use of the public being yet in storage. The latter number 110 and are of four different styles—the landaulet or four-seated cab, open or closed; the ordinary cab for two; the open vis-a-vis and the "trois-quart." The regular fare will be the same as for horse drawn cabs with the exception of the landaulet, for which a charge of 40 cents per trip and 50 cents per hour will be made.

The 110 cabs are all ready for use with the exception of the accumulators, the makers of which have failed to deliver them within the contracted time. These cabs will travel thirty-seven miles at a speed of ten miles an hour without recharging.

The cab company's plant is located in a suburb of Paris and consists of an immense factory building, a power house with engines generating 500 horse-power and running day and night recharging accumulators, a warehouse or stable for 100 cabs, a recharging depot, repair shop and a training ground for drivers.

#### Speed Contest Over Hills.

The week of automobile racing at Nice, France, closed March 24 with a hill climbing contest over a ten-mile course. There were twenty-one starters in the motor vehicle class and eleven in the motorcycle class. The motor vehicle race was won by Lemaitre on the double seated wagon with which he won the mile contest a day or two before. His time over the hill course (24:23) was not only 2:19 better than that made by Giraud, the second contestant to finish, but was 7:27 better than the best previous time made by Michelin over the same course in a steam vehicle. The motorcycle contest was won by Gaetan de Meaulne in 26:47, with Beconnais second and Jacquelin third.

On March 27 Lemaitre made another speed trial alone over the hill course and lowered his previous time to 21:16, attaining an average speed of more than twenty-six miles an hour.

#### Mileage By Waverley Electric.

The Indianapolis Journal makes note of a new pattern of electric vehicles for merchandise delivery purposes of which two have been completed by the Indiana Bicycle Company. The remarkable feature resides in the battery which was tried on a trip through the most hilly and muddy streets of Indianapolis. A distance of 54 6-10 miles was covered before the battery required recharging, says the Journal, but omits to state anything about the load carried. In delivery wagons the load is, however, usually a small percentage of the total weight.

#### Lewis Motor Vehicle Co. Incorporates.

Articles of incorporation were filed at Trenton, N. J., last week, for the Lewis Motor Vehicle Company, with an authorized capital of \$5,000,000, one-half of which is to be preferred stock bearing 6 percent cumulative interest. The objects of the company are the producing of motive-power from compressed air and the operating of vehicles. The incorporators are: Thomas Synnot, Harry A. Berwind, E. T. Postlethwaite, Walter E. Graham, Charles Graham and Harrison Snyder.

Spa, the Belgium bathing resort, will be the center of an international motor vehicle meeting to be held from July 3 to 8. A convention of motor vehicle tourists will be held on July 3 and the next day a road race to Brussels will be run.

Already 116 exhibitors have applied for space in the automobile show to be held next June in Paris.

Agents, Attention, Please

FREE

With first order, electro-type of wheel as shown in this advertisement.....

LARGER DISCOUNTS  
GREATER VALUE  
Sold Through Agents Only

Read Specifications

# Vim Bicycles



VIM, MODEL "30," PRICE \$35.00. EIGHT OTHER MODELS. 30-INCH WHEELS SAME PRICE.

VIM, MODEL "30"—\$35.00 SPECIFICATIONS

**Frame**—Made of 1½-inch Shelby Seamless Tubing. One piece reinforced head. Choice of 21, 23 or 25-inch.  
**Joints**—All flushed, properly reinforced.  
**Fork Crown**—Vim arched, spear-head pattern. Nicked.  
**Crank-Axle**—Fauber one-piece.  
**Cranks**—Diamond pattern, 7-inch throw.  
**Drop**—2½ inches.  
**Sprockets**—Star pattern; front 18 to 30, rear 7 to 10.  
**Gear**—Choice of 68 to 120.  
**Wheel Base**—43¾ inches.  
**Tread**—4½ inches.  
**Wheels**—28-inch.  
**Spokes**—No 2 Excelsior. Swaged, tangent, 32 to front and 36 to rear wheel.  
**Rims**—No. 1. Maple, natural finish or mahogany.  
**Hubs**—Our own make, style "A"  
**Bearings**—All made of tool steel, ground, hardened and polished.  
**Tires**—Our own make; guaranteed for entire year; punctures repaired free.  
**Seat Post**—Flush L pattern, tubular, with tubular saddle bar; very latest.  
**Expanders**—In handle bar; one that will hold. Guaranteed.  
**Chain**—Baldwin, highest grade, 3-16-inch; B block detachable; polished.

**Chain Adjuster**—The neatest out. So arranged that by loosening the axle nut the wheel drops out of frame without disturbing either chain or bearing adjustment.  
**Handle Bars**—27-32-inch; choice of any style made by the Chicago Handle Bar Co.; steel up-turned, dropped, ram's horn, Schin-eeer pattern or steel adjustable, all of the most graceful designs. Octagon tube bars 50 cents additional.  
**Pedals**—Vim, with or without rubbers.  
**Saddle**—Gilliam No. 59, Brown racing pattern, as shown on Model "30," or Gilliam No. 46, Gordon pattern, shown on Model "C," with or without coil springs.  
**Enamel**—Choice of Black, Maroon or Green, delicately striped. We use only the best quality of enamel of highest lustre and durability, four coats; all bright parts heavily nicked.  
**Weight**—20 to 26 pounds, according to size of frame and sprockets used, regularly equipped with tool case, wrenches, oiler and repair kit.  
**Frames**—Our frames are made of the best seamless tubing the Shelby Steel Tube Co. can produce. Built on the most approved lines: short head; 2½ to 3 inches drop to the crank hanger; a strong and rigid frame, graceful in design. Every joint is a steel forging, machined. For strength and rigidity our frames are unsurpassed.

There are positively no stampings, castings or brazed tubes used in these Bicycles. Do not compare our prices with those of wheels so made. We challenge any manufacturer to produce a bicycle of same material and workmanship for less money.

Good Agents Wanted in Unoccupied Territory. We sell SUNORIES cheaper than any house in America. We issue a semi-monthly price list. Catalogue for the asking.....

VIM BICYCLE CO., Inc., CHICAGO, ILL.

# THE PASTIME AND SPORT

## "Turn-Down" Makes Trouble

Reports and inquiries received in Milwaukee during the past few days indicate a fear upon the part of eastern members of the L. A. W. that there will be a split among the pillars of the organization in the west because of what they are pleased to term alarming reports of apparent insubordination. It is true that the friends of President Keenan are incensed because most of the fat jobs went in a way that hadn't been calculated upon. Frank P. Van Valkenburgh, chief consul of the Wisconsin division, has resigned from the committee on rights and privileges, stating in a letter to Keenan that in their conversation at Providence he thought he made it plain that he wanted no national honors and that he is going to have "trouble enough at home" this year. In event of Milwaukee securing the 1900 meet he will have his hands full, he said, and the division needs as much of his time as he can possibly spare.

Frank enough upon the face of it, but there's a story lurking in the background. It was Mears who took hold of Keenan and last fall began to circulate through the country booming him. In the course of his travels he struck Milwaukee and incidentally Van Valkenburgh. The two are fast friends. Van nominated Keenan and Mears touted his campaign, so between them they believed Keenan was "cinched" and that Mears would be chairman of the racing board, etc. But everyone knows the rest and expects there will be nothing but criticism of Gerlach's course in certain quarters.

## The Amateur Rule

The present L. A. W. amateur rule is far more strict than any laid down for the competitors in other branches of sport. This results in an unjust discrimination against the cycling amateurs as compared with the others and works a most illogical disadvantage when the former come into competition with the latter.

There is an agreement among the L. A. W., the A. A. U. and the intercollegiate association for a reciprocal recognition of the amateur standing of the members of the three organizations. The rules and practice of the A. A. U. admit of an "athletic membership" with reduced or no fees, the maintenance of a training table, and the payment of entrance, training and traveling expenses. There is necessarily no open "athletic membership" among the collegians, but the other privileges in the payment of expenses prevail. The L. A. W. amateur rule permits the collegians to train without restriction in all cases and to travel to college meets at university expense, while it recognizes without question the A. A. U. amateurs. As a result we have the L. A. W. not only discriminating between the A. A. U. and the I. C. A. A. men, but granting both of them—the A. A. U. particularly in full—privileges not enjoyed by L. A. W. club or individual riders. Is it any wonder that the latter complain at this discrimination by the L. A. W. against its own riders?

The present rule is a temptation to evasion and the actual violation of the spirit if not the text of the present statute so far as it relates to club racing men is undeniably quite general. It is better that the situation be met and the temptation to underhand violation be removed by an open and above-board rule on the subject. If bicycle riders be called upon

to compete with the athletes of the athletic and intercollegiate associations they should certainly be given equal advantages of preparation and the same privileges in the expense line. Especially is it so when these privileges are reasonable and above all promote that club rivalry in competition which proved in the past such an efficient factor in increasing the interest in amateur racing.

To this end some radical changes from the present L. A. W. law on the subject may be expected in the N. C. A. racing rules.

It is proposed under the new rule to permit of the establishment of a racing membership upon due notice with training privileges and permission to pay entrance fees in club or team competitions; and the payment of traveling, hotel and entrance expenses of riders and teams competing in national and state championships without notice. A further provision restricts representatives of clubs to members of at least thirty days' standing and forbids a rider from representing another club until after a lapse of three months, unless the former club shall have disbanded or gone out of existence.

## How to Save the L. A. W.

A recent weekly L. A. W. membership report of Secretary Bassett showed a drop from the preceding week of 8,000 or thereabouts. The grand total was 65,000 as against 105,000 a little more than a year ago. This is "a condition, not a theory," to be faced by the League. In explanation of the more recent weekly drop quoted it is set forth that this is the membership expiration season and it is hopefully argued that the renewal season will more than fill the temporary gap. But the drop of 40,000 members remains to be explained and, what is more, remedied if the L. A. W. is not only to retain its prestige but its numerical strength and usefulness.

That the beginning of the falling off was coincident with the great racing quarrel that ushered in ex-President Potter's last term and that as the bitterness of the fight increased so was the speed of the falling off in membership accelerated are pointed to by the advocates of divorce of racing as the direct result of the troubles the control of racing has brought the League. Even now that the die of attempted continuance of race government has been cast, such opponents of race control and friends of the L. A. W. as Chief Consul Belding, of New York, openly express the hope that the "outlaws" will soon win, so that the League will be left to the uninterrupted pursuance of its more legitimate objects of good roads and the legal rights of wheelmen.

The L. A. W. owed the real reason of its existence to the battle for good roads. This has practically been won, or at least improved highways have been accepted as a principle in economy and legislation. The establishment of wheelmen's rights, that other cardinal tenet of the L. A. W., has been practically accomplished.

Cycling is older in England and in France than it is in this country, and has passed from fadism to seriousness as is has just done here. Abroad the Cyclists' Touring Club of England and the Touring Club of France have increased their membership and their spheres of usefulness. And how? By merely letting their endeavors run toward increasing the conveniences which

membership in them brings. Is it not, then, in this direction that the L. A. W. must look not only to retain but to increase its present prestige and membership?

President Keenan might well appoint a special committee to learn the pressing needs of wheelmen and provide the conveniences that will make L. A. W. membership of practical value beyond its present privileges and its actual and sentimental participation in the such continuation as may be necessary of the great battles for which it originally enlisted. This way of meeting new conditions cannot be urged too often and too strongly by those who would see the League prosper and grow. N.

## New Fields for "Pot Hunters"

"Pot hunting" professional riders contemplating trips abroad in search of more money and easier competitors than they think can be found at home would do well not to overlook the possibilities of South Africa in this line. "Plugger Bill" Martin, that crafty old roamer, is now in pursuit of the good things the "Rhodes Republic" is said to have on hand for the asking.

The population of Johannesburg and Cape Town is said to have a larger proportion of rich people than any other cities in the world, and they are reported to be lovers of good sport of any sort and willing to pay well for it—how well may be judged from the statement a recent arrival from Cape Town made to a Cycle Age man that the iron stand at the three-and-a-half-lap cement track at Cape Town cost \$80,000. The photograph he had to show of it certainly indicated a very handsome and extensive affair. At Johannesburg, there is also a fine modern cement track. If the purses they stand willing to put up be at all commensurate in value with the costliness of their racing furniture and the attendance warrants the construction of \$80,000 grand stands, it should be a Mecca or an El Dorado for the money chasers.

It might also pay some manufacturers or race showman to send down some pacing machines with a good follower or two, for all the paced records down there have been made behind a 140 lb. Humber quad sent there by the Dunlop people. The African mile paced record stands well up in the "one-forties," a figure cut en route in every middle distance race we run here.

## Gathering at Fountain Ferry.

During the present week the racing men are gathering at Louisville. Fountain Ferry Park track will be alive with racing men before the close of the present week, Bald, Cooper, Kiser, McFarland, Stevens, Gardiner, Fisher, Ziegler, Zimmerman, Gibson, Downing, Freeman, Cotter and many more being headed that way to join Kimble and other Louisville riders. Quarters for all have been engaged at Tony Landenwich's famous hostelry.

Toward the close of their Louisville training season along in the early weeks of May, the men will probably move in a body farther east. The season opens early this year in the east with the N. C. A. meets at Ambrose Park, May 20, and at Newark May 21, and following this is the great Jubilee handicap at Washington, May 24, succeeded by a meet at Baltimore the same evening. Washington will give another meet May 30

with Newark and Berkeley Oval as competitors on the same day. Immediately following this the riders start on their trip along the New York state circuit and the season will then be fairly on and busier than ever.

### GROGNA THE HERO

**Wins Handicap and Scratch Events at Paris Big Opening Fleet—Motocycle Race Draws.**

The first big meeting of the Paris racing season took place on the Parc des Princes track March 26. The attendance was excellent and the entry list large. There were 50 contestants in the handicap and forty-four in the scratch race. Grogna, the little Belgian, who owing to illness ran third to Banker and Tommaselli so often on the winter circuit, was the hero of the day. He won the 1,500-meter scratch race by six lengths from Louvet, second, and Bourotte, third, in 2:08 4-5. This was run after the American style with a single pacemaker starting about twenty yards ahead of the field. Grogna also won the 1,500-meter handicap from scratch in 2:25.

An almost unknown young rider caused much surprise by winning the twenty-kilometer scratch race by a big lead, defeating Bouhours.

Five men started in the twenty-kilometer race, each paced by an electric tandem. The race was very fast from the start and much excitement was aroused when on the third lap Digeon passed Bouhours and steadily increased his lead to the finish. He won in 23:19 3-5, with Bouhours second, Bauge third, Fossier fourth, and Collomb fifth.

There was a twenty-kilometer motorcycle race in which five men started and which was won by Baras in 21:57 3-5, with Vasseur second and Rigal third. It was the first time motorcycles had appeared in a race on a regular bicycle track and the event drew well. The first half of the race was a see-saw, but then Vasseur came up even with Baras and neither could pass the other until the former made a bad turn and lost headway and also the race. Beconnais' machine came to a sudden stop on the third lap and caused the rider to turn a somersault over the handlebars, but he was not injured.

### Suspended French Riders Explain.

The trouble between the French riders and the U. V. F. is quieting down. Jacquelin and Deschamps were both given hearings in which they explained their conduct in having ridden at Marseilles after having been suspended and expressed their regrets. Their terms of suspension were then reduced from three months to one month dating from March 30. It appears that both riders had made application for their riding licenses before leaving for Marseilles but that these were miscarried or wrongly directed and failed to reach the riders before they participated in the races. The suspension of the others who took part in the Marseilles races was reduced one-half.

### Disabled Cycles on Street Cars.

The Springfield (Mass.) Street Railway Company, replying to a petition of the Massasoit Cycle Club asking that disabled bicycles be brought into the city from suburban districts to save the owner a long walk or great inconvenience in getting his mount home by express or otherwise, stated that the charter it holds from the state will not allow it to carry freight; and that the state railroad commissioners must first determine whether bicycles are freight ere the railroad can decide what to do. A petition will there-

fore be formally presented to the state commissioners who will order a hearing to decide the question.

Representatives of the club will appear and show that there is a strong demand for such an arrangement to be made, whereby broken bicycles may be brought into the city from outlying districts, being attached to the rear of the cars, supported by the fenders, where they would discommode no one. It is not thought that there will be any remonstrance to the proposition.

### OPENING MEET IN ENGLAND

**Linton Defeats Chase in Ten-Mile Match With Motor Pacing—Chinn Wins Scratch Race.**

The outdoor racing season in England was opened March 31 with a race meet at Wood Green track organized by the Gamage Cycling Club of London. The most prominent English riders took part in the different events and the meet was well attended. The event of the day was the ten-mile paced match between Tom Linton and Arthur Chase, both paced by petroleum tandems. It was the first public appearance of these machines in London and they created great interest and curiosity. Linton was in splendid form and made one of his greatest races. He gained a lap on Chase and won, finishing in 18:53 2-5, with a fierce wind blowing.

There were fifteen starters in the ten-mile un paced scratch race, in which prizes were offered for every lap. The event was won by Chinn by five lengths in 24:11 1-5, with Gascogne second, Hovard third, Bocquillon fourth and Barden fifth.

The half-mile professional handicap was won by Gascogne from scratch by five lengths over Camp, who finished second from 30 yards. Bocquillon was third and Chinn fourth from scratch. Time, :58 1-5.

The tandem pursuit was won by Wheelock and Fulford in 3:46.

### Nossam Wins in Moscow.

On the first day of the two-days' meet given in Moscow, Russia, March 26, Nossam, the French rider, won the scratch race from the Russian champion, Vachkewitch. The amateur championship race was won by Soukhanoff and the twenty-five-versts paced race by A. Pogojeff. The second day Nossam again won the scratch race, while Wachkewitch defeated Hennisberg (Swiss) in a match race. A. Pogojeff won the professional championship of Moscow.

### Singrossi Wins in Turin.

The finale of the Prize of Turin race was run March 26. Singrossi, who had won his heat on the 23rd in good style, defeated Cornelli, Pasini and Dei in the final. The second scratch race was won by Ferrari, while in the tandem race Angrossi and Dei won.

### Registration to Begin May 1.

The registration of riders in the League of American Wheelmen will commence May 1. After that date all riders will have to be regularly registered with the racing board. The racing board is now taking action on the suggestion that riders in novice races only will not be required to register, and its action will in all probability be favorable to the suggestion. Amateurs who are members of the L. A. W. will have to pay but fifty cents.

The U. V. F. of France, corresponding to the L. A. W. here, has decided to accept as an affiliated organization the Racing Men's Syndicate of France, thus giv-

ing to members of the latter the same privileges as are enjoyed by members of the Union.

### NEWS IN BRIEF.

Angus McLeod has accepted a challenge to race Harley Davidson.

A twenty-four-hour un paced race will be run at Antwerp next June.

The celebrated Buffalo track in Paris, on which Zimmerman made his real debut in Europe is being demolished.

The sixteenth annual Irvington-Millburn road race will be run this year by the Associated Cycling Clubs of New Jersey.

Rigal, the French motocyclist, has established the Italian motorcycle record at 31 miles, 72 yards in the hour, made at Milan.

J. S. Johnson, who is training in Minneapolis, expects to start for California in a week or two, it is reported, to take on some races there.

Lucien Lesna established two African records at Algiers on March 5 covering fifty kilometers in 1:03:14 and riding 29 miles 914 yards in an hour, paced.

A cablegram announced Tuesday that Edna May of the Belle of New York company, now in London, has applied for a divorce from Fred Titus.

A new \$30,000 bicycle track is to be constructed in Nottingham by a strong club with \$50,000 capital. It is expected to make this the best track in England.

Stocks intends to come to America this year, not only to race during the International meet, but to make a business tour of the United States exhibiting his petroleum tricycle.

A meeting of the principal Danish cycling clubs was held recently in Copenhagen and resulted in the formation of the Union of Danish Cycling clubs, which will have charge of the annual international race meets in Denmark.

Amos G. Batchelder, chairman of the board of control of the National Cycling Association, is headed toward Chicago to take a hand in the fight for racing control in the west. He will confer with Greenburg and Root, the local N. C. A. officials, and will then proceed into Wisconsin.

Charles W. Miller sailed Tuesday for Europe, to be gone until September. His first race will be the 100-hour event scheduled to take place at Roubaix, France, starting May 8. Miller has not applied to the L. A. W. for reinstatement, and carries with him an N.C.A. registration card. Mrs. Miller will accompany her husband.

The Olympian Games Company of Buffalo has been organized and incorporated for \$10,000 and has leased Buffalo Athletic Field for a year to be run under N. C. A. control. Several sanctions which have been applied for under L. A. W. rules by some of the local clubs will at once be switched to the N. C. A. list, it is said, and Buffalo will assume a prominent position on the Grand and New York State circuits of that organization.

In a letter from San Jose Trainer Charles A. Ward states that he would like to hear from Tom Eck regarding that fifteen-mile match race between J. S. Johnson and Harry Gibson that was to take place May 30 at Chester Park. If Johnson does not want to take on the race Gibson is willing to race any of the middle distance men for fifteen miles. Ward would also like to match Otto Ziegler against any of the sprinters for mile heats, best two in three. Both riders are fast rounding into form. Gibson is getting large and strong and Ward says will make it warm for any of the middle distance men this season. Ward will leave the coast with Gibson and Ziegler April 15 for Chester Park.

More than usual interest has been excited through the announcement from Washington that a racing team will be organized and liberally supported by the proprietors of the Park Bicycle Club track in that city. The failure of the N. C. T. A. team of last year discouraged the track owners and it was generally thought that the co-operative team plan would never again be tried. J. D. Lasley, the track proprietor, evidently thinks differently. He has his eye on a number of prominent men whose residence will be Washington for the coming season. Of these Owen Kimble is practically decided upon. His probable team mates are unknown but it is stated that Fred Schade, Fred Sims, Will Sims and A. C. Moran, all of whom are from the ranks of the collegians, will be given an opportunity.

## REPAIRING GOLF CLUBS

### Easy Work That May be Made a Source of Profit—Gluing and Lashing—Putting on Heads

Golf is a comparatively new game in this country, its general introduction in America dating back not longer than ten years ago. But in this decade it has become very popular, especially among the wealthier class. Its especial attraction for "the swells" probably lies in the fact that the expenses involved in its pursuit give it an exclusive character that titillates the pride of its devotees. One item in the list of expenses which amounts to a considerable sum in the course of a season is the cost of having the split and broken clubs repaired. On the larger links the work of mending the clubs is generally undertaken by a professional on the grounds at prices gauged according to the "swellness" of the links and club members, but there are links in many small cities and towns where there are no special repairers. In such places there is opportunity for bicycle repairmen to secure this class of work at prices that will well repay the trouble of a special effort to obtain it. A dealer who carries golf goods as a side line and has a repair shop in connection with his store stands the best chance to secure all such work, but any dexterous repairman conveniently located and enjoying a certain amount of prestige may readily work up a good business in golf club repairing.

#### "Winding Under" Ends of Lashings.

Most of the accidents that happen to clubs, both wooden and iron, are of such nature as to be easily repaired if gone about in the right way and will require very few tools. The whole secret of the successful repairing of golf clubs lies in the knowledge and ability to make use of several little "tricks" in winding, gluing and fitting, writes Dudley Parker in Harper's Round Table. Perhaps the most important thing in club repairing to master is the lashing, such as is used in securing the heads of wooden clubs to the shafts.

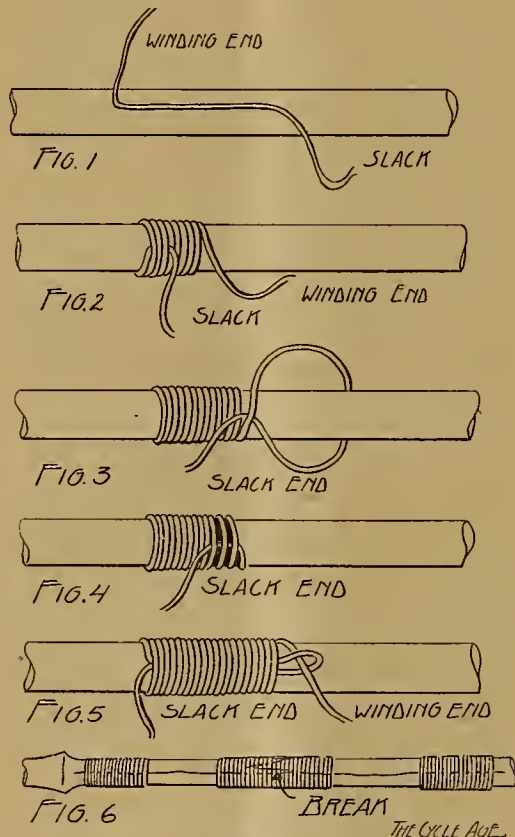
All the lashings used on the clubs, viz., bindings of grips, broken shafts, etc., are accomplished in the same manner. The lashing proper is simplicity itself—the mere winding of the cord around the shaft—and the only trick lies in securing the ends. This is accomplished by "winding under" the free ends. The free end, for a length of about an inch, is laid along the shaft, as in Fig. 1, and the cord wound closely over it for three or four turns, and then the remaining length of the free end may be turned up out of the way, as in Fig. 2, and the winding continued, as these few turns will be sufficient to hold. The free end is then seized and the loop pulled up tight. The winding will now be a simple matter, the only thing necessary being to see that the turns of the lashing lie smooth and close against each other. Securing the finishing end will be a little more difficult. This is wound under in the same manner as at the start. Make a large loop in the free end and lay the end along the shaft lengthwise toward the beginning of the lashing as shown in Fig. 3, and give the cord two or three turns over it. Then catch hold of the free end and pull the loop up snugly around the shaft against the lashing as in Fig. 4, cut off the free end and the job is completed. It is usual to "settle down" the turns of the cord by tapping it lightly with a hammer.

#### Starting With a Loop.

Another method of winding that is somewhat easier is to lay a loop of the

cord along the shaft and wind backward on it as in the first case. The loop should be long enough so that a small loop remains sticking out after the winding is finished, Fig. 5. The free winding end is then pushed through this loop and by pulling on the slack end of the loop at the starting point the free winding end is drawn down beneath the middle of the lashing, leaving a double loop there. The free ends are next cut off at either end of the winding and the job finished by settling with a hammer.

If when about to wrap a club the cord is pulled through a lump of shoemaker's wax and thickly coated with it and then closely wound on the club, the soft wax will fill in the crevices between the turns of the wrapping and thus render it air tight, thereby preventing it drying out and more than doubling its life. The same result is obtained in the stores by



varnishing the wrappings, but this does not make as secure or as lasting a job as wax. Another point to be kept in mind is, when wrapping a wooden club-head, always start the winding at the smaller end, as this will cause the turns to seat tightly up against each other.

#### Gluing Fractured Shafts.

An important thing in golf repairs is gluing, the success of which will depend upon using only a moderate amount of glue and getting the two parts firmly and closely pressed together. This is best accomplished through the agency of a vise, leaving the two parts to be joined under pressure in it overnight. Before applying the glue be sure to remove all the remains of previous gluings, or, in the case of a broken shaft, those little inequalities produced by the fracture that prevent the two pieces fitting snugly and firmly together. It should be remembered, however, that the best results are obtained by disturbing the broken surfaces of the ends to be joined as little as possible, and only such smoothing down as is absolutely necessary to obtain an

equal bearing of the parts should be attempted.

#### Putting on New Heads.

The putting on of a wooden club-head presents no very great difficulties, but merely requires that care should be taken. The first point is to make sure that the shaft and neck of the head are in perfect alignment, and all that has been said under the head of gluing will apply here. After the head has been set perfectly (this should be done in a vise) it should be left there all night to allow the glue to thoroughly harden, and the next day the club can be taken out of the vise and the little inequalities rasped down with a file so as to present a smooth surface for the wrapping. This rasping down is always necessary on a piece of gluing that has been well done, as the vise should always be so tightened up as to force all the superfluous glue out from between the two surfaces of contact.

#### Treatment of a Split Shaft.

If a wooden club shaft breaks the owner should be advised to replace it by a new one, but an iron club shaft, being of a stiffer nature, is not such a hopeless case and can very frequently be repaired, of course with the exception of cases in which it breaks off inside of the neck. If a shaft breaks off entirely it usually does not pay to bother with it. When a good shaft breaks it will usually break part way through and then split lengthwise, thus giving a long surface for gluing and wrapping. Fit the fractured parts together, having first given them a coating of glue well worked into all the little crevices and leave the shaft in a vice over night to allow the glue to set. The following day sandpaper down all the little inequalities and wrap the shaft at intervals, as shown in Fig. 6. A very good repair can be made by binding the fractured parts, after gluing, with electrical tape in place of the usual whipping, using wrapping, however, at the point of fracture.

#### Tightening Loose Irons.

The principal source of trouble in iron clubs is the loosening of the shaft in the iron neck, usually due to drying out. This can often be remedied temporarily by soaking over night in water, but to effect a permanent cure the head should be reset. Punch the rivet out and the shaft may be removed easily. Then wrap a few turns of twine around the end of the shaft that goes in the neck and put it back again, seating it home with a few gentle taps with a hammer and taking care that the rivet holes in shaft and neck are in alignment. Re-rivet with a soft wire nail of snugly fitting size cut to such a length as to project about a sixteenth of an inch on either side.

In putting a new shaft in an iron the part that goes in the neck is first carefully fitted rather snugly, then given a good coat of glue and seated home by tapping the end of the shaft.

#### Shrinking the Head on the Shaft.

A stronger job can be accomplished by working the shaft down until, when fitted in the neck and given a few sharp taps, it will come only up to about a quarter of an inch of where it ought to come when completed, heating the blade of the head to expand it and then seating the shaft home with a mallet. Then plunge the head into cold water to shrink the neck tightly onto the wood. Heads put on in this manner rarely come loose.

It will not be necessary to explain how to make a grip, as anybody who takes a grip apart, observing as he does so the method of wrapping, will have no difficulty in getting it together again. Glue is a good thing with which to secure the leather and flannel wrappings to the shaft, but care must be taken that none gets on the outside of the leather.



# Excelsior Supply Company's Specialties

FAMOUS TIRES

FAMOUS CEMENTS

FAMOUS ENAMELS

FAMOUS LUBRICANTS

## Everything for Bicycle Builders and Dealers

EXCELSIOR SUPPLY COMPANY

(ESTABLISHED 1876)

88-90 LAKE STREET

CHICAGO, ILL., U. S. A.

# SUNSHINE

## AND HOW IT AFFECTS THE DECALCOMANIA BUSINESS.

**T**HE sunshine is streaming in at the window at the moment this advertisement is being written, and it's a sure sign that it's not only streaming into our window but into the life of every bicycle agent and repairman at this time. The past two months have been hard ones, owing to the backwardness of the season, but now that the rush is sure to be on we advise all agents to take time by the forelock and purchase their stock of transfers for the repair trade before the rush is here, for a rush there will be. We can always tell the state of the weather from the amount of correspondence we receive from the bicycle trade.

Repairmen, if you have never yet done any bicycle enameling buy an oven, hang out your sign, and put in a stock of transfers. The oven man will tell you how to run the oven, the enamel man how to bake the enamel, and we will certainly take great pleasure in letting you have samples and directions how to put on transfers. A successful bicycle repairman will so conduct his business that he fills up all spare moments with something to do. Enameling can be done at odd moments, early hours before the rush of callers. The time it actually takes to enamel a bicycle is very slight; the time is consumed in the baking. Any repair shop will find that an excellent paying adjunct to its regular business is that of enameling, and, of course, with every enameling oven a stock of transfers is necessary.

We also sell, in addition to decalcomania decorations, a line of stock name plates which any repairman or dealer can purchase in small quantities and have lettered according as the goods are sold by, repaired by, re-enamelled by, remodeled by, or whatever the case may be.

Our catalogues and samples are free for the asking. Remember in buying our transfers you buy the American-made guaranteed quality. Sketches for special designs submitted free.

## THE MEYERCORD CO.

....INCORPORATED....

AMERICAN MANUFACTURERS GUARANTEED DECALCOMANIA TRANSFERS

New York Office: 805 St. James Bldg.

Main Office: Chamber of Commerce, Chicago.

St. Louis Office: 610 Fullerton Bldg.

## RETAIL MISCELLANY

### General Information Concerning Cycle Agents and Repairmen Throughout the Country

#### California.

B. S. Webb of San Pedro has sold out his hardware and bicycle business to J. H. Hixon & Co.

Hawley Brothers have sold out their hardware business in San Francisco.

#### Canada.

Rogers & Rogers, the "bicycle men" of Summerside, Prince Edward Island, have opened a bicycle establishment, fully stocked, in the McLeod building on Kent street. They will have their fully equipped repair department in charge of an expert, P. G. Armour, who has spent the past winter in the Massey Harris bicycle factory at Toronto, and the sundry and livery department will be in competent hands.

#### Connecticut.

The Plautt-Cadden Co. succeeds the Cadden Cycle Co. in Norwich.

#### Delaware.

Owing to the great increase in their bicycle business, Daniel Ross & Son of Wilmington have added a special department to their store, 210 Market street, for this line. The entire second story of their large department store has been converted into a bicycle and sporting goods department. They are exclusive agents for the following makes: Stearns, Spalding, Relay, Stormer, Monarch, Eclipse, Crown, Imperial and Ross Special.

#### District of Columbia.

The store of the Cleveland Cycle Co. has been gutted by a fire which originated from an imperfectly insulated electric wire in one of the show windows. The flames spread rapidly, damaging a large portion of the show rooms and the stock of bicycles. The building was damaged to the extent of \$1,500, while damage to the stock will be more than \$2,000.

#### Florida.

The Tampa Harness & Wagon Co., Tampa, will handle bicycles this year and has taken on the Featherstone and Olive lines.

E. D. Hobbs & Co., of Tampa, large buggy dealers, will carry a side line of bicycles and have selected the Monarch as their leader.

#### Georgia.

Askew & Bradley of Hogansville have dissolved partnership.

#### Illinois.

O. L. Putnam is making preparations to open a bicycle repair shop in the basement under McKinstry Brothers' store in Harvard.

George Decker has rented a building in Rock Falls and will open a bicycle shop soon.

Bohner & Son have opened a new bicycle establishment in Oregon. The firm's leaders are the Eldridge and Belvidere bicycles. The Sherman and Stone are also carried in stock.

W. A. Schmitz has opened a bicycle repair and supply shop at 219 National street, Elgin. He will also manufacture and store machines.

C. H. Barrett, a machinist of Benton, has taken a partner and the firm is now Barrett & Biggs.

Charles T. Schelling succeeds P. T. Sprecher in the hardware, harness and bicycle business at Leaf River.

#### Indiana.

Jay Parkinson has opened a bicycle repair shop at 713 Indiana avenue, LaPorte.

M. D. Jones has purchased Mr. Wysong's interest in the bicycle business of Jones & Wysong and is now in the Opera House block on Brick street. He carries a complete line of machines and a large stock of sundries, and makes high grade repairing a specialty.

Fred McCullom has opened a bicycle and repair shop on Mechanic street, Valparaiso.

The Erie Cycle Co. has established an up-town store at Twelfth and Meridian streets, Anderson.

#### Iowa.

E. E. Brown's bicycle and repair shop was burned out in a big fire at Keota. The contents, however, were saved.

A. N. Highley of Allerton has advertised to close out his stock of hardware and bicycles.

The Jones Hardware Co. of What Cheer has been damaged by fire.

C. W. Leonard of Brooklyn has taken a partner. The new firm is Leonard & Drake. They handle hardware and bicycles.

Firkin & Nelson of Roland have dissolved partnership. M. O. Firkin will continue the business.

H. Dillon & Co. have bought out the hardware business of Mrs. E. Bayne at Martinsburg.

The hardware firm of Shrock & Zarger, Pandora, has been changed to Zarger & Denton. They deal in bicycles.

Isham Brothers & Colyer have gone out of the hardware and bicycle business at Walker. Archibald & Lamb succeed them.

#### Kansas.

W. J. Keyes, who was in the bicycle business in Hutchinson last season, has accepted a position with the Hutchinson Hardware Co. and will have charge of their bicycle department.

#### Maine.

The Old Town Bicycle Co., F. H. Hart, manager, has opened its place of business on Main street, Bangor. This company will carry a complete line of bicycles of all grades. One of the special machines which this company sells is the Eclipse with automatic coaster and brake.

The Bangor Bicycle Co. has opened a branch store in Bangor at 230 Hammond street. Jerry T. Carrow is manager and a full line of bicycles and bicycle sundries will be kept on hand. Special attention will be given to renting bicycles and experienced workmen will be in charge of the repairing.

#### Massachusetts.

J. C. Gilbert has opened a bicycle store in Abington.

J. W. Merriam has opened his bicycle school, corner State and Market streets, Springfield, for the eighth season. He has given more than 11,000 lessons in the last seven years.

#### Michigan.

Rechlin & Frank have opened a bicycle store at the foot of Center avenue, Bay City.

George Pendleton has leased a small building in Albion and will open a bicycle repair shop.

S. Seney is the proprietor of the Baw Beese machine and bicycle works at 68 Broad street, Hillsdale. Bicycles are made to order. Mr. Seney claims to be the only machinist running a shop in that territory.

H. E. Gibbs of Traverse City has added an electro plating branch to his bicycle business.

H. M. Stevenson will occupy a store in the new Fogarty building, Escanaba, with a stock of jewelry and bicycles.

#### Minnesota.

R. A. Costello succeeds M. R. O'Neil in business at Graceville. Hardware and bicycles are the goods carried.

Oleson & Eveans of Ulen have dissolved partnership.

#### Mississippi.

The Jackson Cycle Co., Jackson, are agents for about ten of the leading makes of high grade bicycles. They are increasing their stock of sundries and supplies and are entering into the jobbing business in a small way. They are prepared to do repairing for the smaller dealers and make a specialty of out-of-town work.

#### Nebraska.

S. N. Wolbach & Co. have gone out of business in St. Paul.

#### Nevada.

Isaac Olcovich, the proprietor of a dry goods store in Carson which carried bicycles as a side line, is dead.

#### New York.

Victor Wiss has opened a bicycle store in Morristown.

S. H. Conklin has added a bicycle department to his store in Richfield Springs.

Arthur M. Butts has removed his entire stock of bicycles, wagons, harness, guns, etc., to the Mendel block, Oneonta. The repairs already made to the store include new and larger plate glass windows, new shelving and fixtures and new paint and varnish throughout.

C. L. Brainard has purchased the bicycle business of F. D. Hatch and will open a store for the repair, rent and sale of bicycles.

Jesse Wright of Fulton has sold his stock of hardware to A. J. Snow, and will occupy the ground floor of the Patterson block with his bicycle repair shop.

C. C. Bradley & Co., jewelers and bicycle dealers of Batavia, have dissolved partnership.

Adam G. Robson of Camden has sold out his hardware and bicycle business.

The name of the Power City Bicycle Co. of Niagara Falls, has been changed to the Niagara Bicycle Co.

#### New Jersey.

The Bridgeton Cycle Co., Bridgeton, has re-arranged their store and removed all their repairing work to the second floor.

#### Ohio.

H. F. Grimmssey of Warren has reopened his bicycle department at Brooks' hardware store.

Mr. Gillum has retired from the firm of Gillum & Spetnagel of Chillicothe and the firm is now the Spetnagel Hardware Co.

J. E. Swank, a bicycle dealer of DeGraff, has moved to Sandusky.

J. W. Brumbaugh succeeds Spittler & Brumbaugh at West Milton. Bicycles are handled as a side line.

Hy Fricke of Cecil has bought the bicycle business of Chas. K. Bristol.

#### Pennsylvania.

O. H. Dietrich has opened his new bicycle store at 142 North Seventh street, Philadelphia, in a building which has been remodeled and turned into a handsome store room. His stock is all new. The sundry and repair departments are complete.

Jack L. Straub of Lancaster retires from the jewelry business and will deal in bicycles and bicycle sundries exclusively. He will move his store to 50 West King street.

E. M. Newell and Chester J. Langdon of Huntingdon will again occupy the Blair building on Penn street as agents and repairers of bicycles.

R. Bruce Fleagle, who had a bicycle store in Carlisle before going to the war, has opened a new store on East Main street. He will handle the Wolff-American as a leader and will also sell some cheaper grade machines. He will carry a fine stock of sundries and will do all kinds of repairing.

#### South Carolina.

Byar & Carmichael of Marion have recently opened an up-to-date repair shop. They will handle the Rambler and Olive lines.

J. D. Strange, Plain street, Columbia, has recently disposed of his stock of bicycles and sundries.

McCants & Quattlebaum, Greenwood, have just opened a shop for the repairing of bicycles.

J. F. Cox will soon engage in the bicycle repair business at Darlington.

#### South Dakota.

Jacob Isaak & Co. succeed Mewink & Isaak in the hardware and bicycle business at Eureka.

#### Tennessee.

The Vance Hardware Co. succeeds Vance & Kirby in the wholesale hardware and bicycle business at Chattanooga.

#### Texas.

J. H. Smith & Co. of Dangerfield have dissolved.

#### West Virginia.

G. W. Smith has sold out his hardware and bicycle business at Buckhannon.

#### Wisconsin.

W. Weselsky has moved his bicycle repairing shop from 1281 Main street, Green Bay, to Thomas' sporting goods establishment on Pine street.

J. W. Warnken has taken the Milwaukee agency for the Thistle bicycle and will shortly open an emporium on the east side. Trade in Milwaukee is beginning to pick up and the roads are in fair condition.

Otto Spengler and Albert Fritsch have opened a bicycle emporium in the Buchman building at Hortonville. Besides having bicycles for sale, they are making preparations for all kinds of repair work.

J. I. Steves of La Crosse has added some new lathes and other machinery to his bicycle shop on Caledonia street.

Frank Bonnis has opened a bicycle repair shop in Tigerton for the coming summer.

Smith Bros. of Durand have gone out of the hardware business.

C. M. C. Taylor, who was in Beaver Dam last season, will resume the bicycle sale and repair business and will open up with a large supply of new machines and repair parts of all kinds.

# CYCLE ADVERTISING

Vol. XXII. No. 24.

THE CYCLE AGE OFFICE.

April 13, 1899.

## ADVERTISING ADVICE

### Careers of Those Who Do and Who Do Not Advertise.

The Chinese are very superstitious. When there is an eclipse of the moon they believe that some fiery dragon, with green eyes and yellow mane, breathing liquid fire, is eating the silvery orb like a hobo at the pie counter.

Then they get out all the old tin cans and brass cymbals and kettle-drums, and hold a pow-wow, as if it were the last night of an L. A. W. meet.

This is to scare off the untamed dragon and make him disgorge the moon.

But, somehow, the eclipse goes on as scheduled. There is no change in the program.

There are a whole lot of superstitious bicycle men. They don't believe in advertising, as a general thing. They manage to do a little business, taking things philosophically, blaming the weather, condition of financial market, the coming election, or the fact that the Great Swat of Ashantee has an ingrowing toenail.

One of these days the Cycle Age makes it plain to them that some up-to-date concern is pushing ahead and securing more business than formerly.

Immediately there is a great to-do among the superstitious. They believe that there is to be a business eclipse. They are going to be darkened entirely. They didn't care as long as these fellows were shedding moonlight by jogging along in the same style as themselves, but now—there would be no chance at all for them. They won't do enough business to keep up current expenses.

Then these superstitious merchants commence beating their tom-toms, to scare away the trade from the merchants who are constant advertisers.

They get out all kinds of dodges, and spoil white paper with green and yellow paint, and talk about bargains and whole trainloads of goods for sale at cost, etc.

But the noise doesn't have any effect. The business eclipse goes on just the same.

People have learned to rely on Smith and Jones, the steady going advertiser, just as they have on the movements of the planets.

When Smith or Jones says he is going to do a thing, he does it, just as when the good old green-covered almanac says that the moon is going to be eclipsed, it is eclipsed.

If you don't want to be eclipsed get into the light of publicity at once.

Don't try to get there during an eclipse, for it will be pretty dark then.

If you get in now, and stay there, people will know you are there, even if your competitor does go you one better for a

week—next week you can get even with him.

That's the life of trade. If you advertise at all, advertise steadily. Don't plunge once a year—take small doses all the year round.

### Case Hardening Conundrum.

A number of replies have been received to the Cycle Age's offer of a suitable prize to any correspondent who would send particulars of a suitable method of case hardening for use by repairers and in small shops generally. Without exception the correspondents recommend the use of either prussiate or cyanide of potassium, which have been used by machinists for years as the only available methods of case hardening mild steel in small lots, but which give only a thin and slightly serviceable shell of carbonized steel.

Mr. J. B. Ferguson, of Princeville, writes: "Procure an ordinary piece of gas pipe, of size and length to accommodate the piece to be hardened; plug one end tightly with asbestos paper and drop in the pieces to be hardened with sufficient prussiate of potash to cover all when shaken down. Roll up another piece of asbestos and plug tightly. Lay in a clean fire and keep at a cherry red heat for from thirty minutes to two hours, according to the quality of the job required. When taken from the fire hold with heavy tongs and punch out plugs and all into a tank of water while the gas pipe is at red heat. If the thing is properly plugged no gas will escape and the parts will come out clean and of a nice gray color."

Mr. Ferguson's plan would give better results than any other suggested, but on account of the time consumed a regular bone meal case hardening method might as well be employed.

I thank you very much for the Modern Cycle Repairs; I can assure you it will prove very useful. I thought I knew considerable, but find I am not the only pebble. It will save lots of time taken up in showing and explaining, as any man can look up the book without taking the time of the boss and with just as good results.—John Capp, Buffalo.

## POINTS FOR LOCAL ADS.

### Stolen Bodily from the Bulletin Issued to Agents by the Western Wheel Works.

Do not try to crowd in too much matter in your space. A few words in a fair sized space is much more attractive than a volume of matter in a small space.

In stating prices do not use the ciphers indicating cents. \$25, \$30, \$50, stand out much plainer than \$25.00, \$30.00, \$50.00.

Do not repeat your ads. too often. New food for thought is as desirable in advertisements as in a boarding house bill of fare.

A slipshod ad. is too apt to indicate a slipshod store. Your ads. should make a good impression.

Do not plunge in your advertising. Better do a little for a long time than a lot for a short time.

A border sometimes brings out an ad.—separates it from other ads.

The names of your goods should be in larger type than your own name. Remember you are offering CRESCENT BICYCLES for sale, not Smith, Jones & Co.

It is advisable to use a cut of a bicycle in connection with your advertising whenever possible to do so. They attract attention. Do not use last year's cuts in advertising this year's models. Be up to date.

In writing an advertisement you should be clear and concise, but do not make it so brief as to have your announcement misunderstood. A paper once contained this ad.:

"Bulldog for sale; will eat anything, very fond of children."

It is doubtful whether the ad. brought a customer.

Modern Cycle Repairs is just the thing for any repairman. Many of the articles in it are each worth more than the price of the book. Would not part with mine if I could not get another.—J. J. Good, Upper Sandusky, Ohio.

I feel that I can truthfully say the Modern Cycle Repairs is the best work ever gotten out, and every man, either mechanic or cyclist, should by all means possess a copy.—Geo. M. Ross, Washington.

Modern Cycle Repairs is at hand and I must say it is the finest thing of its kind I ever saw, and no repair shop should be without it.—Jno. Dutil, New York.

"Modern Cycle Repairs" is the title of a hand-book published by the Cycle Age Company, of Chicago, containing illustrated descriptions of economical workshop methods for repairing bicycles and their equipment. The repair man will find it a useful reference in the equipment of his shop, but more so in the study of remodeling and assembling wheels. Hints are given on the art of enameling, with miscellaneous suggestions, as to the different parts of a bicycle. The work comprises 130 pages, well printed and bound.—Iron and Steel.

## A GOOD AD. FOR A BICYCLE AGENT.

**"For That Tired Feeling"** Your System Needs a Spring Tonic.

**R** Take one bicycle—the best; to be used in homeopathic doses until cured.

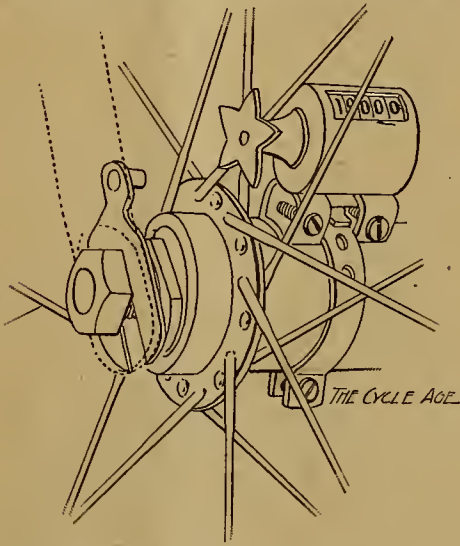
It is essential that you buy **The Blank Bicycle** to secure the best results—easy running and absence of danger. It is pre-eminently the best bicycle of this territory. It has the prestige, the sale, the confidence of the rider. It is the easiest bicycle to ride because it is the best bicycle. It is not the best bicycle because it is turned out cheaply and sold at a low price, but because years of use have proved it to be unexcelled. :: :: **We have but one price to all, and that is the lowest—considering quality.**

# INFORMATION FOR BUYERS

## THE SECURITY CYCLOMETER.

One of the causes which has led many riders to discard their cyclometers, much against their inclination and desire, is the fact that they are easily broken off when the bicycle is put into a rack or stacked in a pile with others, or become bent so that the trip does not engage and the record is lost. It sometimes happens also that mischievous persons bend the cyclometers out so that the trip will not engage.

Having in mind these objectionable features of the cyclometer in general, the New Departure Bell Co., of Bristol, Conn., has perfected and placed on the market the Security cyclometer shown in the accompanying illustration. The cyclometer proper is



mounted inside of the spokes on the hub, the star wheel projecting outward between the spokes, but not far enough to catch or be hit by anything. The trip is mounted on the axle inside of and behind the fork, thus being entirely out of the way and out of sight.

It will be noted that this construction at once removes all source of danger to the instrument and affords the rider means for keeping his mileage correctly without danger from breakage or mischievous handling, as if the cyclometer is tampered with it immediately is apparent. The New Departure Security cyclometer is made entirely of the best materials obtainable, and the workmanship is of the highest order. Every gear is machine made and finished accurately to gauge. No soft metals or cast parts are ever used, but on the contrary none but the best hard brass and special nickel silver (which gives the peculiar non-corrosive quality to the New Departure cyclometers) enters into its manufacture. The trip is noiseless, and the whole outfit has an exceedingly small, neat, and symmetrical appearance, the cyclometer being one of the smallest ever put on the market.

The Security cyclometer is marketed by John H. Graham & Co., 113 Chambers street, New York city, who are general selling agents for New Departure products, or will be mailed to riders on receipt of advertised price by The New Departure Bell Co.

## FOOTE SINGLE TUBE TIRES.

D. F. Foote & Co., 270 Euclid avenue, Cleveland, are manufacturing a single tube tire which, while unguaranteed and sold at a very moderate price, is recommended as a very satisfactory tire of that character. By devoting all its energy to the production of this one pattern of tire the company is able to produce an article much more reliable than the average tire sold at the same price. This is the second year of the tire's manufacture. The company's factory is at Erie, Pa. The firm of Collister & Sayle of Cleveland has handled the tires since their introduction and reports very favorably upon them.

## UNIVERSAL PRICE LIST.

Dealers and repairers buying from supply houses have been much inconvenienced in the past by the varying discounts of the different firms, which makes the figuring out of net prices somewhat of a task. The Bicycle Repairers' Tool Co., 84 West Washington street, Chicago, is issuing to the trade a list of all standard fittings, materials and sundries, the correct net prices of which may be obtained by deducting a uniform discount. In compiling this list the company figured out the net prices of all the different prod-

ucts included and then raised them to list prices, from which a uniform discount if deducted would yield the correct net prices. The list contains no illustrations, being a straight price list intended to save the buyer many inconveniences and mistakes during the course of a season. To it is appended a complete list of the repairers' and machinists' tools and supplies made and handled by the Bicycle Repairers' Tool Co.

## H. B. ADAMS BALL BEARING CO.

The H. B. Adams Ball Bearing Co. of Philadelphia, Pa., was incorporated last week, capitalized at \$500,000, and has opened offices in the Witherspoon building, corner of Walnut and Juniper streets. This company is formed to manufacture anti-friction ball bearings for trolley cars, engines, shafting, machinery—in fact, ball bearings for everything to which they are applicable and on which they are desirable, but at present is making a specialty of carriage, motor vehicle and bicycle hubs. It is understood several prominent Philadelphia capitalists are interested in the company.

They have acquired valuable rights, including the well-known Lake patents, of which they have sole control. They have also purchased the hub and crank hanger business of H. B. Adams.

H. B. Adams is president of the new company. He is well known in the trade as an expert on the construction of ball bearings, besides being the manufacturer of the famous Lake hubs. He claims that hubs for automobiles constructed under his design and the Lake patents will save nearly 25 per cent of the power necessary to run them with ordinary hubs. This company will have something interesting to manufacturers of horseless carriages as well as bicycle makers.

## BARGAINS IN TIRE FLUIDS.

The Tireine Mfg. Co., 514 Central avenue, Cleveland, which has been manufacturing tire fluids exclusively since 1894, is making a special offer of a sample order box containing packages of Tireine, Ideal puncture fluid and the company's special vulcanizing liquid. The box is offered at an extremely low rate in order that it may act as a salesman for future orders and thus gain wide notoriety for the goods without the usual introductory expense of traveling men. The company is doing a first-class business, the orders already taken being said to be equal to the entire output last year. The trade is also notified that the firm will protect its customers against possible infringement suits by parties claiming broad patents on puncture healing compounds.

## ROLLER GEAR WITH POINT CONTACT.

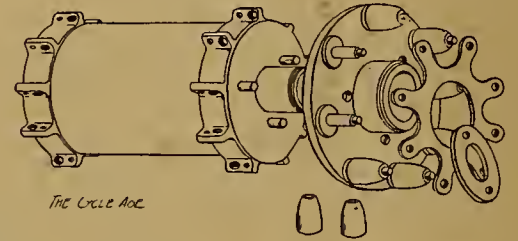
The Spinroller Company of Rochester, N. Y., supplies manufacturers with the Spinroller gear and its connections, including

in comparison with other chainless gears are explained. From this pamphlet the following passages are quoted:

"The gear consists of two sets of inter-meshing rotary roller teeth, each tooth curving inwardly towards its axis. The rollers are supported at their outer ends by a finger-like plate which holds them rigidly, and prevents them from springing in the slightest degree when pressure is placed upon them.

"The Spinroller gear is so constructed that when one roller rolls against the other the working surface is in point contact, and for this reason will stand a wide degree of deflection. All chain troubles are abolished; no noise; no jar to the feet; minimum of friction is reached, consisting only of contact of the rollers, which, instead of rubbing, turn each other slightly in opposite directions.

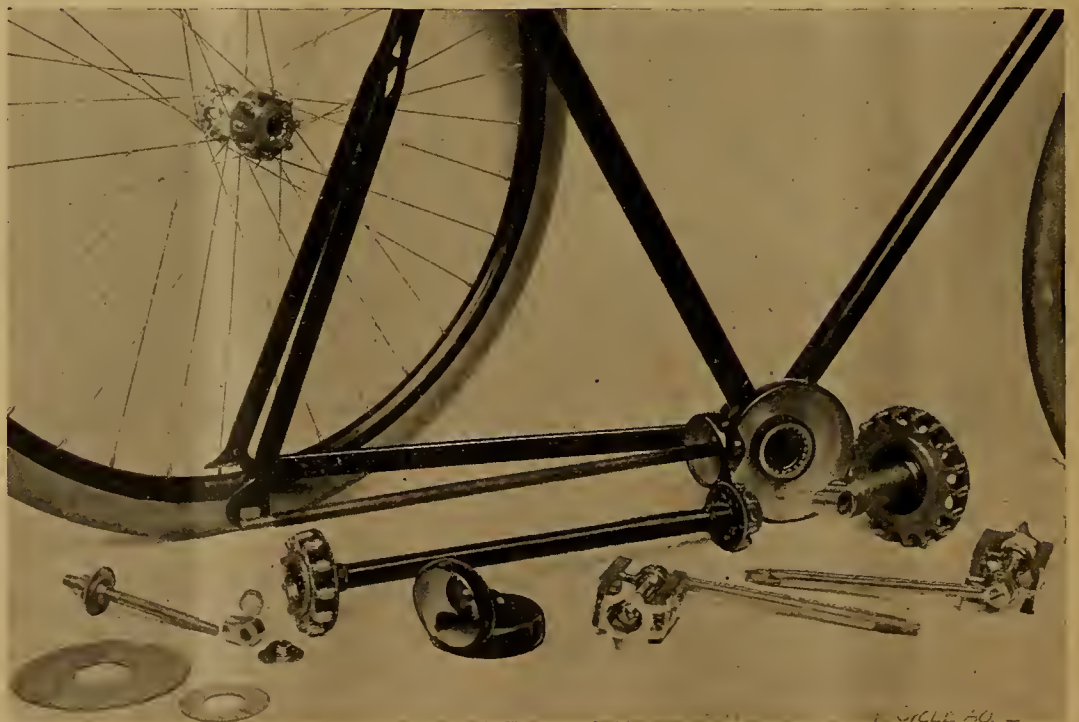
"It should here be remembered that other gears of the roller type are made up of rollers revolving on studs supported only at one end, and very unstable to resist heavy driving without bending. In the Spinroller



gear this defect has been entirely overcome by supporting the studs at their outer ends, and it is impossible for them to bend, even under the heaviest load. All the objections, such as backlash, variable ratio of velocity, roughness, etc., have been overcome with one stroke by designing the contour of the rollers with a generated curve. The curved surface of the rollers of a Spinroller gear has been determined mathematically, and for this reason the Spinroller gear is a new and wide departure from the old crude and undeveloped face gearing."

Favorable opinions of Prof. C. W. McCord of the Stevens' Institute of Technology, Prof. Carpenter of Cornell University and Prof. Archibald Sharpe of Central Technical College of South Kensington, England, are cited, the latter authority stating, according to the pamphlet that: "The adaptability and flexibility of the Spinroller gear exceeds that of any other mechanism for cycle driving. This is a property of immense practical importance, which should make it find favor with assemblers and component makers. In case of an accident causing distortion to the frame, the great adaptability of this gear is a most valuable feature."

The accompanying illustrations show the

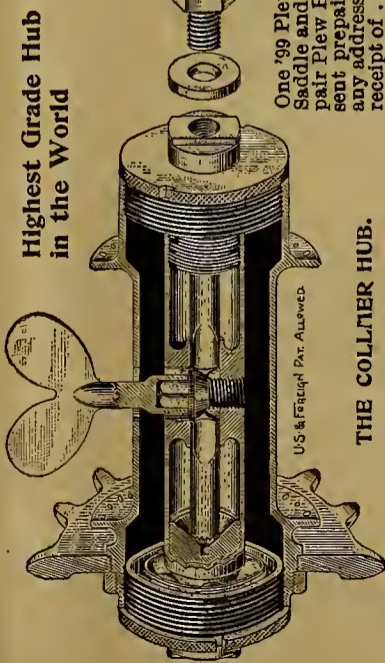


crank hanger, dust cases, driving shaft and rear hub, and has published a pamphlet in which the advantages of the Spinroller gear

construction of the gear and the fittings as supplied to the trade. It will be noticed that the casings are provided with transparent

We have a proposition to make to one dealer in every town in the United States.

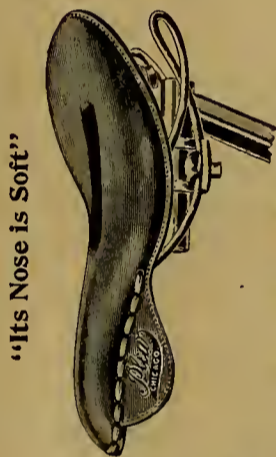
YOU SEE WHAT WE CARRY—WRITE US FOR PARTICULARS



Highest Grade Hub in the World

One '99 Plew Saddle and one pair Plew Hubs sent prepaid to any address upon receipt of . . . . .

THE COLLAR HUB.

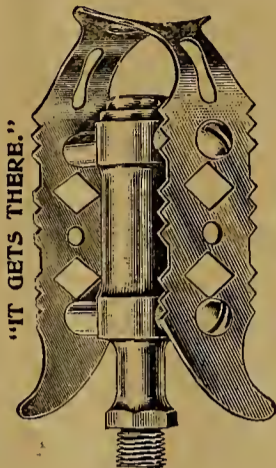


"Its Nose is Soft"

THE PLEW SADDLE.

Selling Agents for  
Peru Rims  
Excelsior Balls  
India Tires  
Duthie Chains  
Indiana Chains  
Wood Guards  
Perfection Chain Guards

"IT GETS THERE."



The Plew Hub

turned from solid bar,

\$1.50 per pair

THE ELI PEDAL.

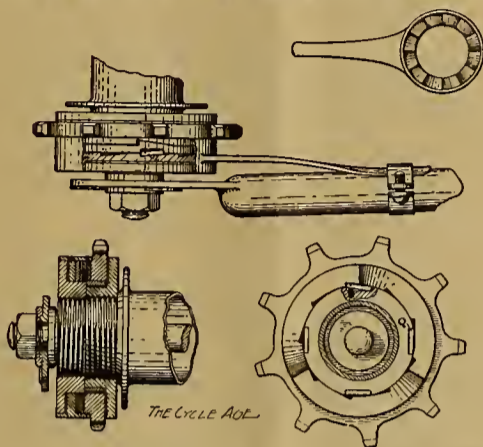
THE PLEW SADDLE COMPANY, 1446 Wabash Ave., CHICAGO, ILL.

\$2.50

face covers so that the workings of the gear may be observed.

McELROY COASTER BRAKE PATENTED.

The accompanying illustration shows the construction of the backpedaling brake and coaster which the Frank E. Bundy Lamp Co. of Elmira, N. Y., has undertaken to market for George E. McElroy of the same place to whom letters patent were granted last week on the device. In this coaster and brake the rear sprocket is carried in a bearing formed by the annular groove left between two collars screwed onto the hub with right and left threads and having fiber friction discs on their perpendicular faces. The inner periphery of the sprocket is undercut with wedge shaped recesses in which engage spring actuated dogs seated in recesses on



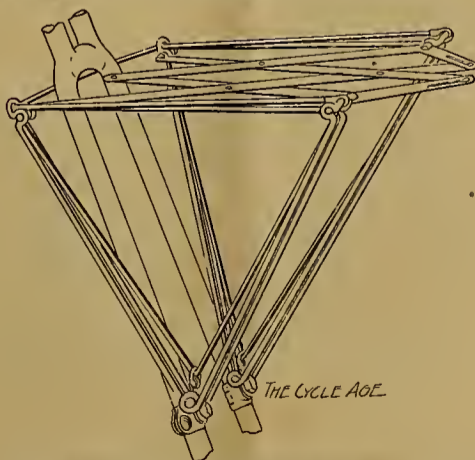
the inner collar. When the sprocket is given a forward impulse through the chain these dogs engage one of the clutch teeth and the hub revolves with the sprocket, but when the wheel is in motion and the sprocket is stopped, the hub continues to revolve the dogs clicking past the clutch teeth.

The outer face of the sprocket wheel is provided with three in-cut radial clutch teeth which engage with three similarly shaped outward cut wedge bearings on a rotary disc plate whose outer face has three recesses in which are situated spring actuated dogs that engage with a series of clutch teeth cut in the inner face of the outer collar. This stationary disc plate is held against revolving by an extension of its flange (covering the mechanism) which is attached by a clip to the rear fork as shown in the middle cut. The outer face of this stationary disc normally bears lightly against the outer friction disc on the inner face of the outer collar which revolves with the hub.

When the sprocket is moving forward to drive the wheel the rotary disc plate or ring engages with the sprocket and is carried around with it, the spring pawls in its outer face clicking past the clutch teeth in the stationary ring, but when the sprocket is given a backward motion the dogs engage with these teeth and the rotary ring becomes stationary while the sprocket moves backward on the wedge shaped teeth on the inner side of the ring and is forced inward against the friction disc on the face of the inner collar while the outer face of the stationary disc is forced against the rotating friction disc of the outer collar and a double acting braking force is applied, regulated of course by the backward force put on the rear sprocket. The patent also covers the use of balls in place of the spring actuated dogs.

PACKAGE CARRIER AND MUD GUARD

The Aetna Mfg. Co., 225 Dearborn street, Chicago, is introducing an attachment for



bicycles which combines a parcel carrier and rear wheel mud guard. The attachment is made from nicked rods and rubber bands and fastens to the rear stays of the bicycle frame. The horizontal top frame is expandible laterally so that it may be opened out to accommodate packages of different sizes.

When closed the side rods and the intermediate flat rubber bands form a mud guard over the wheel. The carrier is sufficiently strong to support fifty pounds of baggage and will accommodate any bundle not larger in diameter than eighteen inches. It can be attached to any bicycle without special tools or appliances and can be adjusted to its different positions and for its varying purposes without the slightest difficulty. The company strongly recommends the carriers for use by members of military cycle organizations.

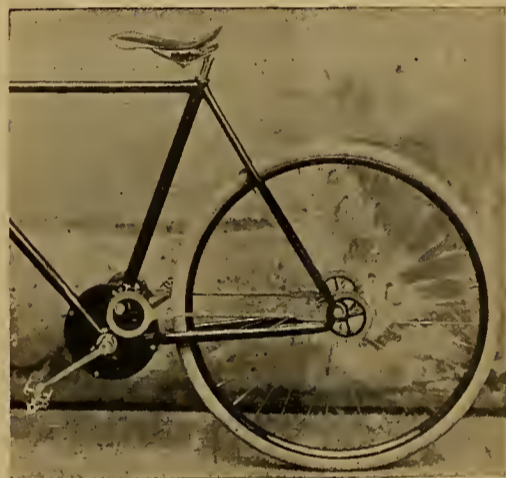
THE LEFEVRE WHEEL TRUER.

The LeFevre wheel truer, of which announcement is made on another page of this issue, is one of several devices offered for sale by the LeFevre Mfg. Co., of Philadelphia, Pa. The truer is a most clever piece of mechanism. With it any amateur can true his own wheel in short order and with perfect ease. It is a midget in size; no larger than a cyclist's oil can.

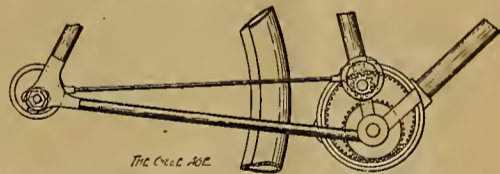
This company also manufactures a cycle stand with which forty different positions of the machine can be obtained, and which retails at a popular price and is proving a leader.

THE "YANKEE" CHAINLESS MACHINE.

A. R. Justice & Company, manufacturers of Silverware cutlery at 718 Chestnut street, Philadelphia, are placing upon the market a chainless bicycle to be known as the Yankee, the invention of E. C. Doolittle, of Philadelphia, who has assigned one-half of his patent rights to Mr. Justice. The contours of the finished machine are shown in the accompanying half-tone and the gear mechanism in the line drawing. The machine is propelled by cranks in the usual



manner. A four and half inch pinion is mounted on the pedal shaft, the teeth of which engage the teeth of an internal gear wheel. This transfers the motion to a one and a half inch pinion mounted on a shaft above the pedal shaft. On each side of this upper shaft are placed dust proof ball-bearing, adjustable eccentrics, which are connected by rods with corresponding eccentrics mounted on the hub of the rear wheel. The internal gearing is covered with a dust proof case, which snaps on each side like



a watch case. It is placed in the center of the frame, which affords the best possible protection to the gear in case of accident. The eccentrics are set at quarters, so when one is on dead center the other is at its best pulling point. The eccentrics mounted on the hub and the connecting rods are protected by the rear and side stays of the frame. The tread is four and three-quarter inches, gear eighty-four, weight twenty-nine pounds, which can be materially reduced.

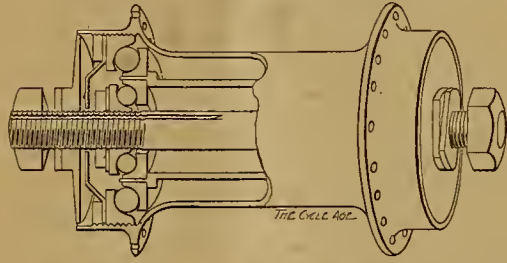
STEARNS CUSHION FRAME BICYCLES.

E. C. Stearns & Co. of Syracuse, N. Y., have issued a special circular presenting the merits of the Stearns cushion frame models. The folder contains six pages of carefully compiled and well illustrated matter relative to the construction, utility and exterior appearance of these machines. Detail views of the various parts comprising the completed cushion device are also shown and described.

THOMAS HUBS AT PARIS EXPOSITION

J. P. Thomas & Co., 439 to 443 Thirty-first street, Chicago, report a satisfactory demand for the new Thomas hubs and hangers and state that they are making preparations to increase their facilities for manufac-

turing. The bearings, as shown in the accompanying illustration, are of an entirely new construction and were devised to reduce friction as much as possible. The axle carries a cone much the same as in the ordinary hub; surrounding the axle is a sleeve upon the ends of which are mounted two bearing rings, one forming the cup for the axle bearing while the other acts as the cone for the outer bearing, the cup of which is screwed into the barrel as in an ordinary disc adjusting hub. After the parts are assembled and the adjustment made, the cone on the axle is locked. The cup in the



barrel is then adjusted after which a dust cap is slipped over the axle to take the place of a washer against which the lock nut is tightened. Outside this and fitting over the axle is another dust cap which fits the inside of the barrel end. It is secured from turning around the axle by means of a small projection fitting in a groove which runs longitudinally along the axle as shown. The arrangement of parts is such as to almost exclude dust; in machines that have been run for a season, dust was found to have worked in between the outer cap and the inner ring, but had not entered the bear-

ing proper. This feature is attracting attention, especially as there are no felt washers used in the bearings.

Mr. Thomas has been in correspondence with the managers of the American department of the Paris exposition and has about concluded to make an exhibit. He will arrange a display of sets of hubs, hangers, etc., suitable for single and multipler machines and will endeavor to have his invention brought as prominently before the French and continental makers as possible. He may not be able to visit the exposition personally but will have a representative there who will be thoroughly conversant with the business.

Mr. Thomas recently shipped large orders of goods to Philadelphia and San Francisco.

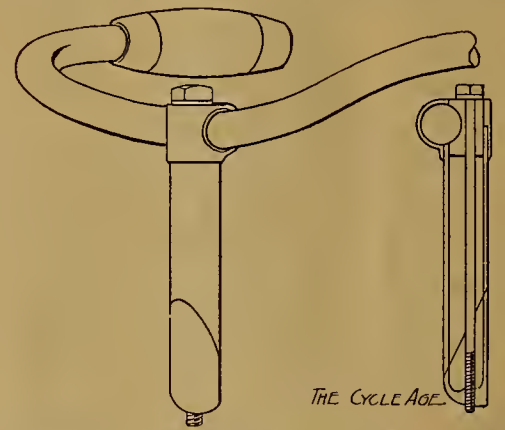
**INCREASE IN FACTORY SPACE.**

The Union Drop Forge Co., 64 East Ohio street, Chicago, is building a brick addition to its forging plant that it may keep abreast of its constantly increasing business. The addition when completed will give the company 3,125 square feet of added floor space. Changes are also being made in the office to increase the facilities for taking care of customers.

**LEAGUE ADJUSTABLE BAR.**

The League Handle Bar Co., 215 South Clinton street, Chicago, besides making a large assortment of rigid handle bars of popular patterns, is introducing its new adjustable bar in which the bar tube is locked to the stem in any desired position by the same bolt which operates the wedge expander for binding the lower end of the stem to the wall of the fork stem of the bicycle. The bar passes through a transverse, semi-

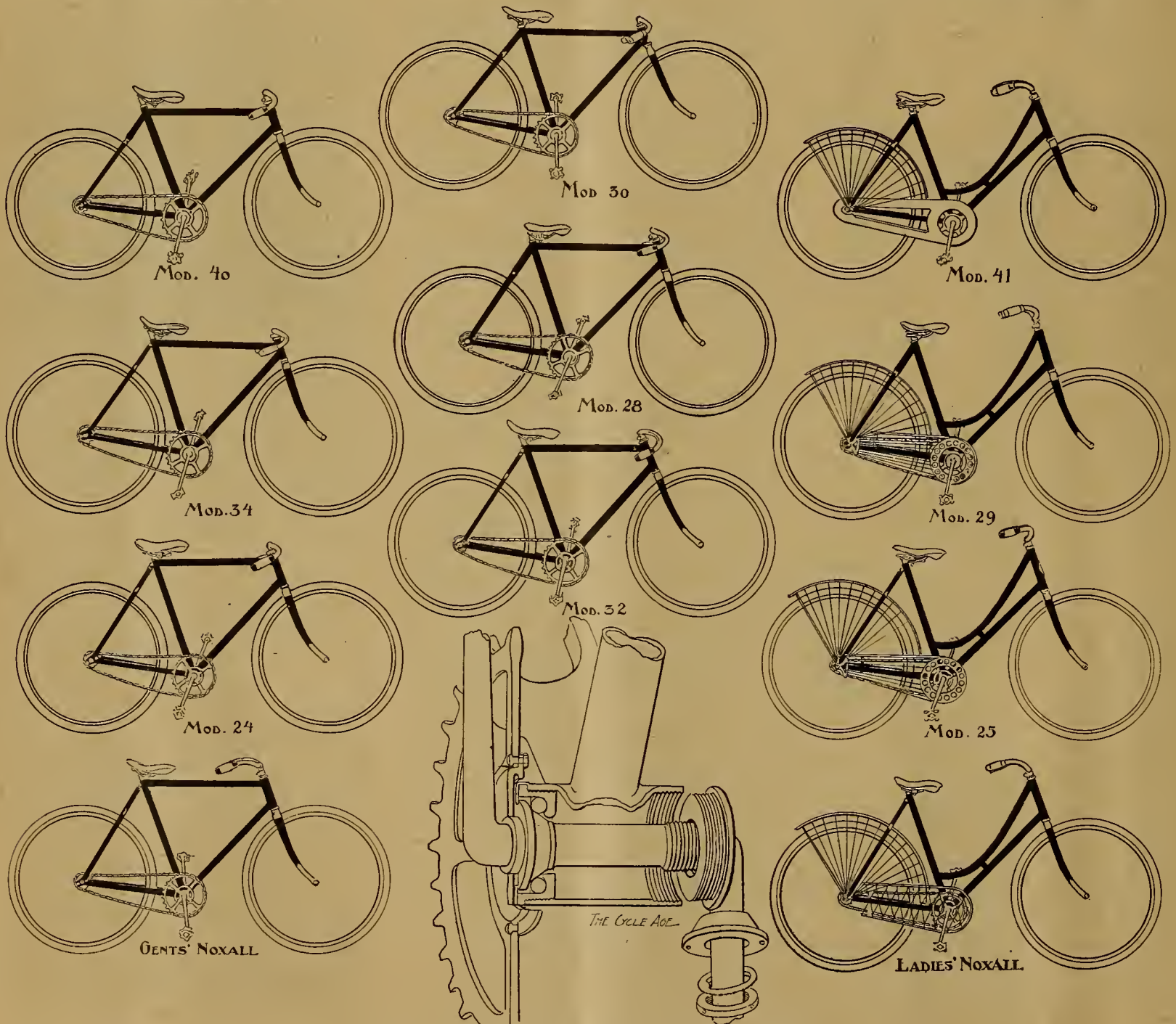
circular, corrugated opening in the stem head and engages a matching semicircular groove in a snugly fitting lug in the upper end of the stem. The expander rod passes through this lug or clamping block which furnishes a binding surface for the expander rod nut. When the rod is turned for tightening the clamping block presses downward upon the handle bar and locks it securely in position. The company furnishes all of its bars with expanders if desired and supplies



both bars and seat posts either nicked or unfinished. Handle bars will be made from brazed tubing in contract lots.

**BOTTOM PRICE REACHED.**

By an error in the Pope Mfg. Co.'s advertisement which appeared in the last issue,



**BEAN-CHAMBERLIN MFG. CO.'S COMPLETE LINE.**

The illustrations above show the eleven models of Hudson, Lenawee and Noxall bicycles manufactured by the Bean-Chamberlin Mfg. Co., of Hudson, Mich., and the construction of the company's one-piece hanger made under Fauber patents. Model 30 is the 3-crown Hudson roadster with 30-inch wheels. It sells at \$60. Models 40 and 41 are the standard \$50 Hudsons in men's and women's patterns, and Models 28 and 29 are a pair of Hudson bicycles retailing for \$45 each. There are four Lenawee patterns. Model 34 is a 30-inch and Model 32 is a machine designed for the road racer and scorcher. The retail price of each of these is \$45. Lenawee Model 24 and the corresponding women's machine, Model 25, are designed to meet popular requirements in \$40 machines. The Noxall is made in both men's and women's patterns. No retail price is made on these machines, a net price being quoted to dealers who are at liberty to make their own list prices to suit local conditions.

# Kozy Baby Seat!

LIGHT, SAFE, COMFORTABLE.

Do you carry them in stock? You can not afford to be without it. Ask your Jobber or obtain them direct. Sell quickly at \$2.00.

Send for Catalogue of

## FITTINGS AND SUNDRIES

LARGEST STOCK BETWEEN NEW YORK AND CHICAGO.  
Orders filled same day as received.  
Prices right, too!

GEO. HILSENDEGEN, Detroit, Mich.



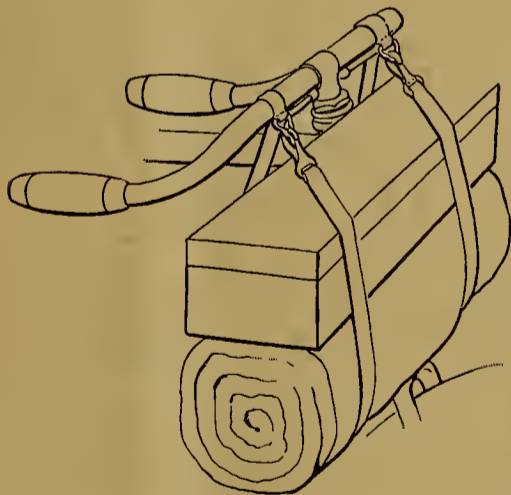
Columbia Model 46, ladies' machine, was listed at \$40. The price of this machine has been reduced from \$45 to \$42.50, which may be regarded as the bottom price.

### HARRIS FITTINGS CATALOGUE.

B. E. Harris & Co., 71 West Washington street, Chicago, have just issued one of the neatest and most complete catalogues of materials and sundries they have ever published. On the colored front cover is an artistically executed portrait from a painting reproduced by the three-color process. The catalogue contains illustrations and brief descriptions of the materials handled by the firm and also a large list of sundries and small specialties. Frame sets are offered in several patterns and built-up frames and stripped bicycles are listed for the benefit of those repairers and dealers who do not care to erect their own frames. Two models of complete bicycles built from Harris fittings are shown by full page half-tone illustrations in colors. The company makes a specialty of fittings for juvenile bicycles.

### DEXTER LUGGAGE CARRIERS.

One of the many forms of luggage carriers made by the Dexter Mfg. Co. of Troy, O., is shown in the illustration herewith. The carrier shown comprises two adjustable

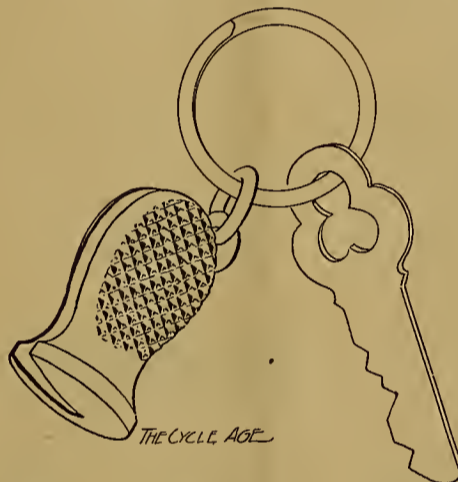


straps attached to the handle bar by suitable and readily applied clips. Almost any form of package or bundle may be held in the carrier. Other forms of carriers supplied by this firm include a carrier for attachment to the rear of the bicycle frame, a steering head carrier in the form of a canvas school bag, and a handle bar carrier with wire frame to support the load and straps to secure it in place. The carriers all retail at reasonable prices and dealers may obtain liberal discounts by writing to jobbers handling the goods.

### KEY RING NIPPLE GRIP.

The accompanying illustration shows one of the latest specialties brought out by the Buffalo Specialty Co. of Buffalo, N. Y. It is called the Baby nipple grip and is designed as a practical grip which can be conveniently carried in the pocket or on the

key ring. Its retail price is low and this, coupled with the attractiveness, and readily recognized convenience of the grip, makes it a good seller. The jaws are tapered to fit any nipple and are well hardened so that there is practically no possibility for the grip



to wear out. Dealers may obtain the Baby grip in two-dozen lots mounted on counter display cards.

The Whitely Steel Co. of Muncie, Ind., has removed its Chicago offices from the Fisher building to the Marquette building, corner of Adams and Dearborn streets.

## MISCELLANEOUS.

Advertisements under this head 5 cents per word first insertion; 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders or stamps received.

## WANTED.

**WANTED**—Bicycle man with \$200 to take interest in new process brazing business. Trade established. Apply Room 1, No. 9 S. Halsted st., Chicago.

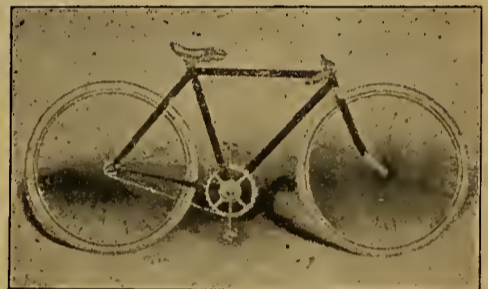
**INDIA, BURMA, AND THE EAST**—Henderson & Co., Rangoon, English Watchmakers, Opticians, Cycle Engineers, Agents and Repairers, are prepared to correspond with responsible manufacturers and agents in novelties pertaining to any of the branches of trade above enumerated. Samples (where possible) and prices to be submitted. Splendid area for trade. Highest London and American references. Address HENDERSON & Co., 63 Phayre st., Rangoon, Burma, India.

**SIDE LINE**—Salesmen in the bicycle and hardware trades wanted to sell standard bicycle sundry on commission. Quick seller and liberal commission. Samples carried in vest pocket. B. H. DIVINE, Utica, New York.

## FOR SALE.

**FOR SALE**—Morgan & Wright Vulcanizer and Cement Kettle for \$12.00. No use for them. Address S. O. CUMMINS, 3340 Belmont st., Bellaire, Ohio.

## A NEW PROPOSITION:



## Wheels Built to Order \$12

upwards. FROM HIGH GRADE MATERIAL and fittings of your own selection.

SEND FOR CATALOGUE of the

Famous **TEMPLE 3 CROWN** Frames

and all standard makes of bicycle parts and fittings. Make your Selection. We build the bicycle accordingly. **LOWEST PRICES GUARANTEED.**

WRITE TO-DAY

and send for Catalogue of **"MAGIC"** \$2.00 GAS LAMP—BEST MADE.

Graphophones and Cameras.

**RALPH TEMPLE CO.**

81 Lake Street, CHICAGO.

The Neatest, Tightest and Cleanest Oiler is the

"PERFECT"



25c

Regulates supply of oil to a drop. **DOES NOT LEAK**

CUSHMAN & DENISON, 159 Ninth Ave., New York.

IF DEFECTIVE PARTS ARE FOUND IN

**THE MANSON BICYCLE**

WE WILL REPLACE FREE AND PAY ALL EXPRESS CHARGES

**MANSON CYCLE CO.** 153-5 W. JACKSON ST. CHICAGO.

**AUTOMATIC BICYCLE PUMPS...** (Penny-in-the-slot)

—DO A CASH BUSINESS—

Thoroughly tested —Testimonials— Guaranteed Sold outright at moderate price Exclusive territory assigned when quantity purchased. Write today and secure choice points. R. L. PEGRAM, Western agent, care Cycle Age.

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The Push Button is Adjustable to Any Position.

THE GONG DOES NOT TURN (except in winding).

Rings longer and winds quicker than any other.

IT IS THE BEST PUSH-BUTTON BELL ON THE MARKET.

THE BRISTOL BELL CO., Bristol, Conn., U. S. A.

J. P. THOMAS  
Revolving Hubs and Hangers

Double Ball Bearings with Inner Sleeves Increased the Speed 40 per cent



Patented.

A bicycle fitted with J. P. Thomas revolving hubs and hanger will travel 40 per cent faster than any other wheel on the market, or is the fastest wheel in the world. Compare the construction of our hubs and hangers with others.

J. P. THOMAS & CO.,  
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- Rims
- Spokes
- Hubs
- Hangers
- Handle Bars
- Grips
- Cyclometers
- Enamels
- Cements
- Saddles
- Pedals
- Chains
- Tires
- Rear Stays
- Rear Forks
- Frame Sets
- Etc., Etc.

To Repair }  
To Make } With  
To Equip }

For Material and Sundries, write us. Special prices. . . . .

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Capacity, 20,000 Watch Us Grow

HONEST CONSTRUCTION  
POPULAR PRICES  
WANTED—A FEW MORE AGENTS

The Bean-Chamberlin Mfg. Co.  
HUDSON, MICH.  
BRANCHES—San Jose, Cal.; Rochester, N. Y.

THE SOLITAIRE  
GAS LAMP.



The best seller of the year. Strictly high-grade.

List Price, \$2.00.

For sale by all jobbers. Manufactured by

The Sanford & Pollow Co.,  
CHICAGO, ILL.

Weight 8 ounces. Height 4½ inches.  
Burns 5 hours.



ORIENTS LEAD THE LEADERS  
Waltham Mfg. Co., Waltham, Mass.

Hamilton 3 Crown }  
Wellington 1 Crown } HIGH GRADE  
Greenwood 1 Crown } BICYCLES

Secure agency at once. Write for Special Prices; they will interest you.

WELLINGTON WHEEL WORKS,  
35 Randolph Street, Chicago, Ill.

As Good As Any Better Than Many  
TRILBY

TIRES \$2.50 PER PR.

If you want the BEST it is

FOOTE SINGLE TUBE

PRICE

Trade, \$5.00 List, \$10.00

Smooth or Corrugated Tread.

::: Order a Sample Pair.

D. E. FOOTE CO.

270 Euclid Avenue, - CLEVELAND, OHIO.

TERMS: Express, C. O. D., privilege of examination. Draft attached bill of lading, freight.



Kapp's Expansion Jack.

To remove and replace the front wheel without straining the fork or destroying the thread on the axle. Will send one by mail on receipt of 30 cents. Discount to trade.

The A. Joseph Kapp Sons Ivory Co.  
114 E. 14th St., NEW YORK CITY.

## Liquid Brazing Crucibles!

All sizes and shapes as required to fit any make of furnace, made by the original makers of brazing crucibles and the largest and oldest manufacturers of plumbago or graphite crucibles in the world.

JOSEPH DIXON CRUCIBLE CO.,

Jersey City, . . . . . New Jersey.

**ADLAKE BICYCLES**  
THE WHEELS OF HIGH DEGREE.  
THE ADAMS & WESTLAKE CO. MAKERS. CHICAGO.

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Mail us your Subscription.



# THE CYCLE AGE

VOL. XXII—No 25.

CHICAGO, APRIL 20, 1899.

NEW SERIES No. 74

## DUNLOP TIRE PATENTS SAFE

**Hundred Thousand Dollar Investment is Protected by the Court—Story of the Legal Encounter.**

Messrs. Brown and Stillman of Syracuse, Charles Metz of Highlandville, Mass., C. K. Welch of Coventry, England, and Charles F. Roth of Cincinnati, all claimed to have invented, within a short period of each other, what is now known as the Dunlop tire. The Dunlop Pneumatic Tire Co. of London owned the Welch application. The interests of Brown, Stillman and Metz were combined in a partnership arrangement and were bought up by the Dunlop company, and in due course the patent was issued to Brown and Stillman and became the property of the American Dunlop Tire Co.

### Beginning of the Litigation.

Shortly afterwards the American Dunlop Tire Company entered suit against the Phelps & Dingle Mfg. Co. for infringement, and the latter put in as part of their defense the Roth application which they in the meantime had bought. This litigation ended in a victory for the Dunlop company.

Some years later Mr. Phelps and Mr. Dingle of the above mentioned company entered the employ of the New Brunswick Rubber Co. Mr. Phelps called upon Kirk Brown, manager of the American Dunlop Tire Co., and tried to sell him the Roth interference. Mr. Brown, however, absolutely refused to consider the proposition at any price.

### Roth's Claim is Transferred.

Through the exigencies of business Mr. Phelps afterwards assigned the application back to Roth, so that it could be in turn sold to the New Brunswick Rubber Co., which firm came into possession of it. Mr. Phelps received no compensation whatever for this transfer.

The New Brunswick Rubber Co. thereupon pressed the interference, with the hope of nullifying the value of the Dunlop patents for which the Dunlop company had paid \$100,000. The matter has been dragging along in the patent office for a long while and has now been decided in favor of the American Dunlop Tire Co. by a decision of the patent office throwing out the Roth application.

### "Good Old Days" Eclipsed.

Milwaukee, April 17.—Less than three weeks ago there was nearly a foot of snow on the ground here, but today the grass is green, the trees are budding and the roads dry and in excellent condition. This has operated to throw an unprecedented volume of trade to the dealers. There were rush times in the "good old days" of '95 and '96, but the wildest dreamer never thought of anything like the rush at the present time. Everyone seems to want to buy a bicycle—people

who never wanted to buy before—and the best of it is that they have the cash with which to buy. There is very little trading in of old machines and time is asked for on but few purchases. One of the largest dealers said that in the few instances in which credit was asked at least half the purchase price was paid down.

## SPRING WEATHER STARTS TRADE

**Cleveland Stores Freed of Burden of Sold Machines  
—Better Grades in Demand.**

Cleveland, April 17.—As a result of the genuine spring weather which began last Monday morning, for the first time this year and extended through the week, the stock of "sold" bicycles accumulated in the local stores during the past month were all called for during the first two or three days, and every dealer in town reported a very satisfactory business throughout the entire week. As has always been the rule here, the early sales were of the better grades of machines.

Notwithstanding a report to the contrary made in a recent issue of a contemporary, the chainless is meeting with very good reception, but its success seems to depend very largely upon the inclination of the dealers handling it.

Three department stores, two of which have just entered the field, promise to make things interesting in both the bicycle and sundries trade. They are offering bicycles as cheap as \$18 with "first class equipment and fully guaranteed;" but the larger portion of their business promises to be in several comparatively well known makes which they are selling at considerably below the usual list prices.

In the sundries business the department stores are cutting into the dealers worse than ever before. Just at present two of the "big stores" are waging a small sundries war between themselves and doing it so vigorously that the legitimate dealers are making little effort to compete.

Traveling salesmen are alarmed at the suit brought by the attorney-general of Ohio against the railroad companies to do away with interchangeable mileage.

## PHILADELPHIA FRAUD EXPOSED

**A Retail Firm Found Selling Spalding Machines at a Very Low Price and Without Nameplates.**

Manufacturers, agents, and those who are interested in the decent conduct of the bicycle business, will be pleased to hear that A. G. Spalding & Bros. have secured an injunction restraining a Philadelphia concern from attempting to trade upon the name of Spalding. For years past the prominent makers in the trade have been annoyed by unscrupulous concerns throughout the country who have attempted to trade upon names established by a liberal expense of advertising and good business methods.

A. G. Spalding & Bros.' attention was attracted to an advertisement which appeared in the Philadelphia Record of April 8, as follows:

### The Advertisement.

Spalding bicycle, \$13.50; all new wheels. These wheels are manufactured by the Spalding company; made of Shelby seamless steel tubing, 3-inch drop, Spalding hangers, Spalding pedals, Spalding hubs, with felt dust-proof caps; Excelsior spokes, Fairbanks one-piece rims, internal expander head and seat post; strictly 1899 models; guaranteed for one year; choice of tires and saddle.

The price, \$13.50, is the result of a stroke of good fortune, which threw this famous wheel into our hands, at one-fourth the usual wholesale price. Don't waste your money on a cheap wheel when you can buy the Spalding for \$13.50.

All leading wheels at one-fourth regular prices. With 400 feet of floor space, filled with wheels, we can show you any make you name, and sell it to you at one-fourth the regular price. Reliable high-grade second-hand wheels, thoroughly overhauled, from \$5 up. Lamps, bells, saddles and sundries of every description at one-half regular prices. Tandem tires worth \$8 per pair, \$1.75; the great Samsons, \$1; American Pacemakers, \$1.50; American Flyers, \$2; New Yorks, \$1.50; Ormonds, \$1.50; Pathfinders, \$2; Amazons, \$1.50; Goodyears, \$1.50; Stars, \$2; Morgan & Wright, 3 styles, 99; Hartford, 3 styles, 70, 77, 80; Vim tires, \$2.50; Chase, \$2.50; 30-inch tires, \$2.25; pure Rubber tires, guaranteed new and to hold air, 49c. 311 Market street.

### A Detective Gets to Work.

Messrs. Spalding realized that such an unauthorized use of their name in a misleading advertisement would prove ruinous to their Philadelphia interests, and at once put the case in the hands of their attorneys, Jones & Carson, with instructions to proceed to a more thorough investigation and to take the matter to court, in order that their name and interests might be protected. The following is a report of the detective placed on the case:

Operative went to the store No. 311 Market street, when a man came up to him and asked him if he wanted to buy a wheel. He replied that he first wanted to know the cost of the outfit. The man then invited Operative to the center of the store, and showed him their \$13.50 wheel. Operative asked what make it was and the salesman replied, "Spalding." He then gave Operative the following figures: Spalding wheel, \$13.50; "Never-Out" lamp, \$2.70; tool bag, complete, \$1; good bell, 65 cents; express to Palmyra, 25 cents. Operative told

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the salesman that he wanted the wheel for his brother, a minister at Palmyra, who had seen the advertisement in the Record, and wanted something for road use. The salesman suggested that the Operative get the Hartford tires. Operative again examined the wheel and the salesman struck the pedal with his finger, at the same time saying, "Spalding pedal and Spalding hub."

Operative then asked if they were the same people who had been up on Chestnut street, and the salesman replied, "Yes." Operative said that he knew their reputation, but thought that the "Spalding wheel" was much higher in price. The salesman then said that Gimbel was selling the same wheel for over double the money, but that they, meaning No. 311 Market street, were making a big rush, and as their expenses were small, they could do it.

#### No Nameplate on Machine.

Operative noticed that the wheel which he claimed was a "Spalding" had no nameplate on it. He then said, "Wait until I show you how we are selling them." He went to the rear of the store and returned with an order and sales book. He turned the pages, and the Operative saw that they spelled the name "Spalding" in lead pencil, and about half of the sales were for the Spalding wheel.

Operative states that they are doing a good business, and the Spalding wheel is the attraction. In fact the Spalding is the main topic of conversation. The salesman suggested that the Operative leave a \$5 deposit, but the Operative replied "No." The salesman then said, "You are going to look somewhere else, and in the end will come back and buy a Spalding." He stated that so many people did the same thing. Operative replied that perhaps he would do so.

He then gave Operative his card, which reads, "David G. Hirsh, No. 311 Market street, Philadelphia, American Flyer Bicycle Co."

Armed with the above report and those of other witnesses, J. W. Spalding went to Philadelphia on April 15, and his lawyers presented the evidence to a judge sitting in the Common Pleas Court, who thereupon issued an injunction against the American Flyer Bicycle Co., of 311 Market street, its officers and employees, restraining them from making, selling or advertising any bicycles under the representation that they are the same bicycles as made by A. G. Spalding & Bros. The security was fixed at \$1,000.

#### Trapping the Salesman.

Operative called again and said that he, like the others he had spoken of, "had come back."

The Operative stated that he had seen Wanamaker's \$25 wheels and could not see the difference, although the price was \$11.50 more, and believed that he would buy a Spalding, and take it with him to Palmyra. Mr. Hirsh replied that he was sorry, but he could not let the Operative have a wheel until evening; that they had them in the city, but some hitch kept them from getting them to the store. Operative said he would call in the morning. He asked the Operative to make a small deposit, and let him pick out a wheel for him (Operative), and for the latter to come in the morning and get it.

Mr. Hirsh and the Operative then went to the office, which is the rear of the building. He told the Operative if he would get Hartford tires it would be a wheel far ahead of the highest grades. In making out the bill he understood that the Operative wanted the tires taken off, and the Hartford tires put on, and made the amount, in the first place, \$18, but afterwards changed it to \$13.50. Operative gave him \$5 on account.

#### An Opening in Cuba.

Milwaukee, April 17.—Martin J. Riley, who made the journey to Cuba in the interests of the Julius Andrae & Sons Company to scan the field and examine into the possibilities of the country as a market for bicycles, has returned.

A fair number of bicycles are being placed on the market in Havana, Mr. Riley reports, and he predicts that the trade will be good in that vicinity if it is carefully worked up. Of course there are all the difficulties to be met that accompany wheeling in the tropics, but nevertheless a greater success than ordinarily is predicted because of the lazy nature of the inhabitants. When they begin to appreciate that it is easier to ride a bicycle than it is to walk it is expected that the whole population will be riding. There are a number of good roads in the vicinity of Havana, particularly in the sub-

urbs, and some of the country roads are hard and firm, excepting during the rainy season. In Havana proper the roads are just passable, being paved for the most part with cobblestone. It will be a long time before the women of Cuba take to the bicycle, because of the national prejudice against women taking a prominent part in any phase of life there.

### CANADIANS MAINTAIN SECRECY

#### Big Manufacturers Meet to Discuss Amalgamation But Say No Options Have Been Given.

Either the consolidation plans of the Canadian manufacturers are being conducted with great secrecy or there is some hitch in the scheme, for nothing authentic develops regarding the combination. The firms reported to be interested in the scheme assert that they have not as yet given any options on their plants and appear to be waiting for something. Senator Sanford and William Hendrie have been mentioned as backing the project, but will make no statement until the deal is further developed.

Mr. Evans of the Evans & Dodge factory, who attended the first preliminary meeting held in Toronto, April 11, for the purpose of discussing the proposed amalgamation, at which all the big Canadian companies were represented, made the noncommittal statement that the affair may go through in a few days or may not be brought about at all. Refuting the report that the E. & D. plant would be removed from Windsor he said, "The industry will not be removed from Windsor whether the proposed amalgamation of the Canadian wheel manufactories is a go or not. On the contrary, if the companies are amalgamated the mechanical staff will be increased from 150 to 300. The same addition will also be made in other factories that figure in the deal, because there will be a great increase in the number of cheap machines turned out. There are now about 30,000 low grade bicycles manufactured in the dominion, and about 40,000 imported from United States. The Canadian companies expect, under their amalgamated power, to make a bicycle to compete with the imported American cheap bicycle, and ultimately keep it out of Canada."

### THINKING OF ORGANIZING

#### Repairmen of Washington City Wish to Reap Benefits of Uniform Prices—Existing Charges.

Washington, April 17.—There is some talk among the prominent repairmen of this city of organizing an association to maintain a uniform schedule of repair prices and to correct certain abuses which now exist in the local repair business. That there is urgent need for such an organization is apparent to all the well-informed men in the business. Repair shops are as thick as bees in a hive, and in many cases they are operated by inexperienced workmen, the work they turn out being naturally far from satisfactory. Such a condition of affairs has a tendency to bring discredit to the entire trade, but with a permanent organization the abuses could be remedied and all the evils that now exist could be successfully attacked. It has been amply demonstrated that unanimity of action is desirable among repairmen and it may be that local repairmen will get together at no late date and effect an organization, which should be of such a nature as to keep out poor and unsubstantial work.

The following are the reigning prices among the better class of local repairmen:

Cleaning wheel all over, including bearings ...	\$1.00
New chain guard .....	.75
Putting link in chain .....	.25
Lacing chain guard .....	.25

Lacing mud guard .....	.40
New crank axle .....	2.00 up
Cementing grips, per pair, including grips .....	.25
Enameling rims, per pair .....	1.00
Cones made, each .....	.75 up
Truing wheel .....	.25 to .75
New axle, front or rear .....	.25 to .50
One new spoke .....	.25
Two new spokes .....	.40
Each additional spoke .....	.10
New rim put on .....	1.75 to 3.00
New thread and nut on axle .....	.25
Rear sprocket .....	1.50
Cutting down frames, including enameling .....	5.00
Truing frame .....	.75
New fork .....	4.50
New fork sides, single crown .....	1.25
New fork sides, double crown .....	1.50
New fork tips, each .....	1.00
Truing forks .....	.50
Enameling machine complete .....	3.50 to 6.00
Striping frame .....	1.00
Vulcanizing valve stem and recementing .....	.75
Vulcanizing puncture and recementing .....	.75
Patching inner tube .....	.35
Putting in inner tube .....	1.50
Metal valve, put in .....	.50
Valve only .....	.25
Valve stem .....	.25
Valve and stem .....	.50
Valve cap .....	.05
Cementing tires to wheel, each .....	.25
Plugging, each hole, separate tires .....	.25
Chain guard, put on .....	1.25
Mud guard, put on .....	1.50
Splicing seat post, not nicked .....	.50
Splicing handle bars, not nicked .....	.50
Replacing top tube, including enameling .....	2.50 to 3.50
Replacing lower tube, including enameling .....	2.50 to 3.50
Replacing seat post tube, including enameling .....	2.50 to 3.50
New head lug, including enameling .....	2.00
New rear stays, including enameling .....	3.75
Seat post cluster, including enameling .....	2.50
Hanger bracket, including enameling .....	2.50 to 5.00
Rear fork ends, including enameling, each .....	1.25

### Exports of Cycles and Materials.

Exports of bicycles and materials from the port of New York for the week ending April 11 are recorded as follows:

	Bi-cycles.	Materials.
France .....	\$25,113	\$ 5,857
Germany .....	15,233	9,721
Sweden .....	14,055	1,078
England .....	8,508	5,721
Denmark .....	9,325	1,354
Russia .....	9,184	482
British East Indies .....	6,032	564
Africa .....	5,926	283
Italy .....	1,040	1,763
British West Indies .....	1,857	522
Belgium .....	475	1,504
British Guiana .....	961	316
Scotland .....	327	....
Argentine Republic .....	320	....
Roumania .....	748	....
Egypt .....	635	....
Holland .....	....	632
Prussia .....	....	444
U. S. of Colombia .....	40	130
Danish West Indies .....	123	17
Norway .....	100	....
French West Indies .....	50	....
Austria .....	50	....
Hong Kong .....	50	....
Bavaria .....	....	50
Venezuela .....	50	....
Ecuador .....	....	40
Cuba .....	21	12
French Guiana .....	23	....
Totals .....	\$121,246	\$30,540

### New York Repairers Rushed.

Only in the transforming days, when pneumatic tires were substituted for cushion tires, were the retail dealers of New York city as busy as they are at the present time with repair work. One Harlem dealer took in nearly twenty jobs one evening last week. Other dealers report extensive work in rebuilding old machines, besides re-enameling and re-nickeling. As this class of work brings in from \$2 or \$3 up to \$20, it is a fruitful source of income.

The Leipzig postal authorities have provided a number of cycles for their telegraph messengers. They also employ tricycles to carry the letters from the street collections to the central offices.

## BRAZING BY IMMERSION

### Enameling Over Brass Coating Left After Dipping—Common Faults in Newly Installed Furnaces

Frame Connections Must be Open

Regarding the various reasons why some experimenters with immersion brazing have trouble in getting the brass to flow from the tubing after dipping, it clogging in the joints instead, an expert with several years' practical experience in such brazing says:

"I recall one instance where a firm dipped twenty-five frames, and in order to get the spelter out of the tubing was compelled to cut every frame to pieces. The reasons for this clogging of the brass are several. In some cases the frames have not been properly prepared. Before a frame is dipped it is necessary to have as large a hole as possible through each of the connections in order that the spelter may flow in and out of the tubes quickly. Some are of the opinion that a one-quarter-inch hole is large enough to allow the spelter that will get in through a one-eighth-inch hole to flow out readily, but such persons need but to dip one frame to find that the smallest hole through which the spelter will run out satisfactorily is five-eighth-inch.

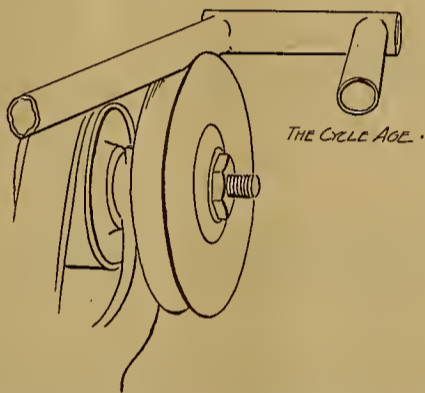
"In some cases when a crank hanger is dipped, the spelter that flows into the lower rear forks will force itself two or three inches above the line to which the joint is dipped. The reason for this is that the rear end fitting is air tight and no small hole has been drilled near the rear extremity of the fork tube to allow the air to pass out, and as the air forces itself out the other way it also forces the brass up into the tube, where it there solidifies at once.

"Another reason for clogging of spelter is that the brass in the crucible has not been brought to the proper heat at the time dipping operations are commenced. Some imagine that as soon as the spelter has reached a point where it will pour if lifted in a ladle it is all right for brazing. This is not true. The brass must be some degrees hotter before it will run freely into and out of frame connections. The kind and amount of flux used in the crucible also has to do with this question, but the experience of different brazers is so at variance that it is pretty hard to state definitely just what is the best method of procedure in this line."

Enameling Over Spelter Coating

A Cleveland manufacturing concern has settled the spelter removal question, to its own satisfaction at least, by leaving the bulk of the brass coating on the frames and enameling over it. After the frames have been brazed they are sent to the filers, whose sole duty it is to remove the largest lumps of spelter around the joints. The frames are then handled by polishers working on grooved polishing wheels coated with emery. Wheels of different sizes and with different curvature of groove, to conform to different joints and different sizes of tubes, allow all but the close corner portions of the brass covered surfaces to be reached. These polishers do not remove the brass from the tubes and lugs, but merely smooth it down so that there are no abrupt changes from high to low spots and no distinct line showing where the brass coated area merges into the clean tube surface. Corners not reached by the wheels are smoothed down by hand with emery cloth.

After the frames have been finished in this manner they are placed in large ovens similar to enameling ovens and baked there at a temperature of about 400 degrees Fahrenheit. This baking operation leaves the brass without its usual characteristic greasy surface, which has formerly been the foundation of the chief objection to enameling upon it. After the baking, the brass coating is said to take the enamel as well as the steel tube. The company employing the process has experienced no trouble on account of the enamel peeling or blistering from the brass coated parts. The brass, in fact, after the removal of the greasy substances furnishes a ground for enameling which cannot possibly rust, as do steel tubes quite frequently



long after the frames have been enameled and the bicycles sold and used.

The great reduction in the filing expenses brought about by the process referred to and the small cost of smoothing up the brass on the polishing wheels have led the firm to believe that it had better leave well enough alone, and so it is satisfied to continue with the process rather than to experiment with anti-flux preparations and cheap methods of removing spelter.

Many Kinds of Flux in Use

Flux plays an important part in immersion brazing, but no definite ideas on its use seem to have been reached by brazers. In some shops the flux covering the surface of the spelter in the crucible is maintained at a depth of from two to three inches, while in other factories the layer is as thin as one-quarter of an inch. Flux layers of all depths between these limits may be found.

Not only is there a wide divergence of opinion as to the amount of spelter to be used, but the kind of spelter used is different in almost every shop. In one factory now employing immersion brazing successfully a flux composed of three parts borax and one part boracic acid is considered the proper compound. Another factory, however, turns these proportions right around and uses a compound of three parts boracic acid and one part borax. In other places there are furnace operators using straight borax. Boracic acid is also used without mixture with borax or other chemicals, and some brazers have been successful in applying a compound consisting of sixteen parts of boracic acid and one part of common soda. This last compound is made by placing the two ingredients together in a pan and baking in an enameling oven, or similar heating place, till the two melt and unite. After solidifi-

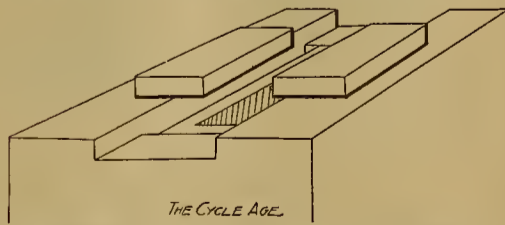
cation the resulting compound is broken up and is ready for use. The compound is of the nature of borax, but contains but one-fourth as much sodium in relation to the boron present as does straight commercial borax.

A large western factory in which immersion brazing has been practiced for two years has found that the cleaning out of the joints is much aided by dipping the frame joints in a liquid flux preparation previous to brazing. While satisfactory results have been obtained by leaving the entire work of cleaning off the metal parts to the flux in the crucible, the painting or dipping of the joints previously makes assurance doubly sure, and as but little expense is added, if the work be carried on systematically, the practice will doubtless be more or less adopted by other manufacturers.

Numerous Causes of Failure

In the line of causes of failure to make dip brazing furnaces operate successfully, the experiences of many factories show that there are any number of small points to be observed, any one of which if neglected will sometimes place the process in an unfavorable light. A plant installed in an Indiana factory gave unlimited bother because it smoked constantly and filled the room in which it was located with disagreeable fumes. The furnace came near being abandoned when it was discovered that the only fault was that there was not sufficient draft. This error being corrected, the furnace ceased smoking and has been in constant use ever since. In fact, so successful has it been that every joint brazed in the factory with the exception of the union between the front fork stem and crown is dipped, and the superintendent of the factory has estimated that since the introduction of the furnace and supplementary practices made possible by its use he has reduced the cost of brazing and finishing frames ready for the enameler about thirty cents each.

The furnace installed in a Cleveland factory had while in operation several small ills, any one of which was easy of remedy, but all of which together made the furnace nearly a total failure. The bricks which formed the cover to the flame and heat passages from the firebox did not extend to the ends of the crucible, but merely covered the passages for a short distance to each side of the center of the crucible, leaving at the ends open passages for the heat to rush upward toward the hood without effecting in any way the spelter in the crucible. The distance between the sides of the crucible and the walls of the furnace and the distance between the top of the crucible and the lower face of the cover were very irregular and in most places greater than they should have been. The forcing of the heat over and across the crucible was, hence, very irregular and ineffective, and much more fuel than



necessary was burned in the endeavor to maintain the spelter at brazing temperature. The draft entered the furnace through two distinct pipes each of which had an independent regulating valve. At no time was the operator able to regulate these two drafts so that the air blown into the two ends of the furnace would be equal in volume and pressure, and consequently either one end or the other would be much the hotter.

# Crescent Bicycles

At the Crest of Favor.

ALL THE EXCELLENCES OF A PERFECT BICYCLE ARE UNITED IN THE CRESCENT.

Adults' Chain  
Models, \$35

Bevel-Gear  
Chainless Mod-  
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We should like to send you our  
Illustrated Catalogue, No. 2,  
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Crescent Quality

... AND ...

Crescent Prices.

The essential thing in bicycle-making is quality. Bright nickel and smooth enamel may sell one wheel, once; but it is the quality under the nickel and enamel that gives a wheel a good name wherever it is ridden, that makes this year's sales better than last. And that has been the story of Crescent Quality from the start.

The only thing about a Crescent that is not "sky-high" is the price. It is just high enough to give you your money's worth and us our product's worth. It is a moderate price and a firm price. You never hear a Crescent rider complain of Crescent prices. You never hear us apologize for them.

WESTERN WHEEL WORKS, Chicago and New York

NEW TESTIMONIALS EACH WEEK.

## MILWAUKEE TIRES

PUNCTURE PROOF

Pneumatic



Single Tube



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Resilient



Easy Riding

PRESENTING TESTIMONIALS.

PROOF AGAINST TACKS AND CACTUS.  
Phillips Bros., Bicycles, Sundries and Supplies.

WACO, TEXAS, April 15, 1899.  
MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee Wis.  
Gentlemen: We are in receipt of your favor asking what success we are having with your tires. As far as we have seen them used we cannot say too much in their behalf, and think we can truly say they fill a long felt want. We have never had one punctured nor expect to meet with any such accident. A rider who we sold the first pair to was in the other day and said, "take your old tires; I have a tack in my rear wheel." We immediately examined the tack and removed same from the tire, which proved to have penetrated only through the rubber and then turned back as if struck with a hammer, simply clinched. No other tire that we have ever sold would have stood this test. The only reason that we can see for not handling and trying to sell to all of our riders is, as our puncture-boy says, "I am afraid I will lose my job if this keeps up." Wishing you success and assuring you of our support, we remain,  
Very truly,  
(Signed) PHILLIPS BROS.

MILWAUKEE, Wis., December 1, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.

Gentlemen: As an expert on parts and high-grade bicycle construction, I have given your puncture-proof tire a thorough and severe test, and in all such tests have found it as claimed—a puncture-proof tire.

I have used quite a large number of them during the past season and never had the least complaint. Your tire is heartily recommended.

Faithfully Yours,

(Signed) A. G. HENRICKS, Montgomery Building.

Representatives Wanted. Write for prices and other information.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.

# THE CYCLE AGE

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

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ALL remittances should be made to THE CYCLE AGE COMPANY.

## DEMAND FOR CHEAP MACHINES

A great many people whose views upon trade affairs are usually regarded as sterling have pronounced favorably upon the outlook for the sale of high priced bicycles, and so persistent have they been in proclaiming this belief that the trade at large has unconsciously fallen into the mistake of imagining that serviceable machines at lower prices are not meeting with any marked degree of favor. The unprecedented heavy sales of high grade stock by agents in parts of the country where weather conditions have encouraged buyers does not imply that the humbler goods have been eclipsed, for it is admitted by these same agents that the public demand is much larger than it was this time a year ago and the increased patronage has been extended to cover all grades of machines.

Everything conspires this year to give unwonted advantage to makers and sellers of high priced machines; values are lower than formerly, public appreciation of grade—as it may be indicated by price—is rising to its zenith, and there is such a leveling of values that people do not shrink from the largest investment as they did of old. But in the face of all this the lower priced product is more than holding its own, and for two very plain reasons: (1) There are countless poor people who wish to ride bicycles; (2) there are more, and more active, forces at work in the manufacture of low priced goods than are opposed in the manufacture of high priced machines. Moreover, every form of selling agency, dealer, jobber and department store, has of late years spent the greater part of its energy in pushing the cheaper grades.

Cheap machines—not inferior ones—are scarce today. They are easily sold at retail; they are hard to procure at wholesale. An eastern trader spent a few hundred dollars to ascertain these truths. Two weeks ago he advertised his willingness to purchase good machines at moderate prices. He got but two replies—one an offer to sell, and the other, from another buyer, begging the privilege of buying all he did not care to purchase of his offerings! Not deeming this conclusive evidence of the state of the market, he advertised again, but this time without result of any kind. Then, to test his conviction that low priced machines were practically out of the market, he advertised to sell good machines at low figures, and when last heard from was still cutting open replies.

## ACCOUNTANTS AT CYCLE FACTORIES

Aside from the possibility—or probability—that success will attend the present movement to consolidate cycle makers, it is the opinion, commonly shared, that the presence of a small army of expert appraisers and accountants among the factories is a matter of no misfortune either to the individual concern or to the trade at large. In the first place, the mission of these gentlemen is neither to alter nor destroy anything, but simply to determine values and conditions and report faithfully and impartially thereupon to those interests which have sent them forth; and the fact that this or that factory is visited by them with those strict purposes in view is a silent but valuable compliment to the favorable opinion entertained of its good name, commercial standing and capacity for earning dividends, by cold-featured investors.

That the results of the examinations now finished or under way will ever bother the public eye or ear, whether or not the combination takes form, is among the remotest of possibilities;

the men engaged in that undertaking can be trusted—they are no novices in such work.

Very possibly the individual manufacturer may learn something of value in the process. The nearest correct valuation of plant, equipment and stock of a cycle making concern can be made quite as well, if not better, by men having no special knowledge of the business, but yet equipped with abundant experience in similar work in general manufacture, than by any committee possible to be selected from among the makers themselves. Their appraisals do not take trade conditions or other side issues into consideration; they strike for current values only, though interpretation of the results presented by them must be made by the financiers in the light of the history of the industry.

Many see as a result of this general accounting a judicious leavening of the industry's spirit. Concerns which have passed through a similar experience, wherein a display of strength or courage—in the vernacular, a "show-down"—has been called for and given, usually exhibit a gratifying increase in their mutual respect, and cordiality of thought one for another is almost invariably enhanced.

In the future business enterprise will prosper best in the clearest light; the day of prosperity for covered means and methods has been permanently eclipsed. Industry is now passing through a period of evolution, without precedent, which will ultimately teach to all men the value of light. The larger day of the expert accountant is but dawning. It may come to pass in the early days of the approaching century that his certificate, supported by invited examination, will be a more common basis of credit than the conjectured ratings of the commercial directories.

## PERMANENCE OF EXPORT TRADE

Probably the most important problem in relation to the export business in manufactured products is the extent to which domestic products should be adapted to the existing tastes and demands of an importing nation. Irresponsible critics do not hesitate to condemn manufacturers for what they choose to consider conservatism when the volume of foreign trade appears to be less than it would be where the outline or non-essential characteristics of the product varied. This attitude, however, is consequent upon a superficial study of the question.

Without going into the broad questions of economics in their national aspect, but dealing with the question from a purely individualistic standpoint, it is evident that the object a manufacturer has in creating an export demand is to increase the gross volume of business, that his profits may be either increased or placed upon a more equal basis. It must be apparent to anyone who investigates the subject that other issues than actual turnover are essential to the increase of net profits. It is of small value to the manufacturer if in increasing his turnover by \$50,000 the cost of creating the business exceeds that figure.

As usual with questions relating to modern commerce, the commercial aspect of the subject is closely related to practice followed in the factory. The excessive competition among the manufacturers of this country has resulted in a condition in which the profit that is added to the factory cost is restricted to the lowest possible margin. It is a generally recognized fact that the additional profit that is added beyond first cost and ultimate charges is so small that it has almost to be ignored. The manufacturer having to look for the maintenance of his income for economies effected in the internal operation of his plant and production of output, apart from improvement in system and the specialization of departments, the principal factor in effecting these economies is an increase of output. It is apparent, however, that this increase must take place along the general line of manufacture and not take an exceptional character which would necessitate the establishment of a distinct department and system in order to produce at prices which would compete with the foreigners' own product.

The net result of the investigation indicates that if export trade is to be of permanent value to the country it must be of American goods built in the American way and the American style. The magnitude of the business must depend entirely on the aggressiveness and tact of the salesman and consistency of commercial relations.

## STORE WINDOW DRESSING

### Dealers Should Scheme to Make Show Windows Attractive from an Advertising Viewpoint

If you are a retail bicycle dealer you must have some kind of a display window or you would not be keeping a store. The man who built the store put in the window to be used for displaying samples, not merely to admit light or make the place look like a store. You are handling bicycles to sell and make a profit on—then why not make the best possible use of the space you are renting, by utilizing the show window to the maximum advantage?

In the first place, keep it clean. Glass is put into windows because it is transparent, and you would kick very hard if your show window was of inferior glass. Then, by all means, keep the dust from the inside and the storm spatters from the outside.

#### Display Should Invite Inspection.

You no doubt place bicycles and sundries in your show windows, but how do you arrange them? You may have some of the best machines in the market standing in your window, yet passers-by scarcely give them a glance. Why? To begin with, your window is dirty, and that is sign of carelessness and indifference that may be inferred to extend to your business methods. Then, what have you covered your window platform with? Or have you left the boards bare? You have covered it with oil-cloth? Well, that is almost as bad. Oil-cloth is all right for a kitchen, but if you are conducting your business with a view to attracting custom your store should present the finest appearance possible, and the window ought to be the first thing to arrest attention and invite the public inside.

Perhaps you have scattered your sundries in that window in such profusion that you have made utter confusion; there is no order about their display, and they attract very little notice. No doubt there are many other faults about your show window that you can pick out if you will stop to think awhile.

#### Make War on Your Window.

Now, a revolution means a total or radical change—you want to start a little revolution of your own in that show window. Outside appearances are indicative to the public of the unseen things within. Make your window display of such a character that people will stop to look at it and talk about it. The man who stops to look to-day is the man who buys tomorrow, and it is by attracting his attention on one occasion that you secure his custom on another.

You may be of a mechanical turn of mind only, your artistic ideas having been undeveloped, but the man who can see beauty and symmetry in the lines and form of a piece of metal work does not have to struggle long to originate a few practical ideas about decorations that concern the displaying of that work. There are ways innumerable, notwithstanding you may think it difficult to formulate a plan, and no one can state a limit to the variety of effects to be attained. What if some of the decorations are a trifle expensive—was any commercial business ever conducted without some expenditure? The show window is one of your best advertising mediums. Suppose you try its effect on your public, and see if it does not warrant the expenditure.

Decorative bunting, also known as

cheese cloth, can be obtained at any dry goods store in a large variety of colors and several qualities. The best width for your purposes is 36 inches. It will cost you from 5 cents to 12½ cents a yard, and of course the better the quality the better the appearance. Purchase enough of this material to inclose your window, unless it is necessary for all of the light to pass into the store. If your room is not too high it is well to run the bunting to the ceiling, although a fine effect can be made by extending it only part way up. It may be necessary to build a framework on which to tack the bunting. Strips of pine or whitewood one inch square will answer the purpose to perfection. Tack the bunting in folds or plaits of neat width, up and down the sides and back of the window, using common pins for the purpose. If your window is of good size and you wish to display more than one machine, make separate compartments—a horseman would say stalls—for each, using the bunting for the partitions. In the bottom strew the bunting in puffs, and on this place your bicycles in such positions as will be most attractive from the outside.

#### Use of Harmonious Contrasts.

If you wish to admit plenty of light to the store, make your decoration reach five or six feet above the bottom of the window, and on the top of the framework make a succession of pretty puffs by gathering a continuous strip of bunting in small bunches and fastening every few inches; narrow strips will serve best for this. This style of ornamentation may be carried out wherever it may add to the general appearance. The color to be used must depend on individual taste and harmonious relation to woodwork and machines. If you are going to show a black enameled bicycle white bunting will make a beautiful contrast. It will answer also for yellow and blue enamels. Use pink bunting for green enamel, and green bunting for red enamel, and so on, endeavoring to make a pleasing contrast.

Put some sundries in the bottom of the window if you like, but do not endeavor to show every article you have at once. You may have half a dozen styles of lamps, but it is not necessary to display them all the first time. So with the other sundries, which you can change often.

Now, this window dressing is not intended to suffice for all summer, and should not be allowed to become covered with dust and dead flies. Try to think out another effect yourself. Scheme to make your show window—your leading card—stand ace high. You can do it.

#### Developing Ability in Employees.

Some employers never seem able to understand the first principles of handling employees. They never allow themselves to think that the store could get along even for a day without their presence. They burden themselves with all the minor details of the various departments and thus in large measure relieve the heads of departments and subordinates of all responsibility. Such wholesale distrust on the part of employers is reprehensible in the extreme. They do themselves infinite harm while at the same time they injure their business and weaken the capabilities of their employees. There is but one

way to develop ability, and that is to place responsibility upon the shoulders of those with whom you desire to intrust the execution of important instructions. Retail merchants are not the only business men who make mistakes in the management of employes, for even manufacturers frequently err grievously in this most important particular. They go on year after year laboring under the delusion that they themselves only understand the business in which they are engaged; and apparently it never occurs to them that they could entrust at least the routine work with others. In consequence the ability of employes lies dormant and the employer finds his work grows more burdensome with passing years.

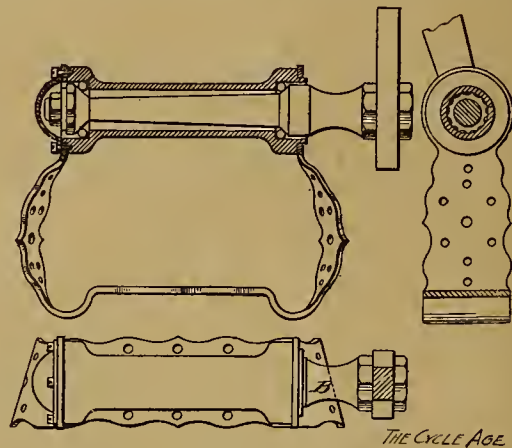
#### Cleaning Show Cases and Windows.

There is nothing more untidy in a bicycle store than dirty, greasy showcases—excepting, of course, show windows impervious to light and vision.

Showcases may be kept shining and bright with very little work. A good cleaning powder for showcases, and also for windows and mirrors, is prepared by moistening calcined magnesia with pure benzine, so that a mass is formed sufficiently moist to let a drop form when pressed. The mixture must be preserved in glass bottles with ground stoppers in order to retain the easily volatile benzine. A little of the mixture is placed on a wad of cotton and applied to the glass. Do not use near a fire or light, as the benzine vapor is very inflammable and explosive.

#### Garcia's Stirrup Pedal.

The illustration shows all the details in the construction of a stirrup pedal recently patented by Raphael B. Garcia of New York city. One half of the pat-



ent is assigned to C. F. Kabisch of the same city. The fastening of the stirrup portion to the pedal sleeve seems to be the weakest feature in the device.

#### Lax Laws in San Francisco.

The cycle ordinances of San Francisco are in a rather chaotic state. There is a bell law, but it was not enforced for months. The Hibernian city authorities, however, celebrated St. Patrick's day by arresting all wheelmen without bells, who were subsequently bailed out, admonished and discharged. Lamps are not obligatory except in Golden Gate park. There is one cycle path, not too wide, extending to the ocean, and although this is necessarily used both ways, there is no speed restriction whatever. Indeed, it would take a jaded wheelman to resist the invitation to scorch offered by the signs "Quarter Mile," "Half Mile," "Three-Quarter Mile" and "Finish" erected along a fairly level but dangerously curved part of the path.

The winter just past has been one long period of the most perfect cycling weather, perpetual sunshine, with a lovely, bracing atmosphere and the best roads ever known in California.



TRADE MARK



# The Rubber Trust Knocked Out



The attempt to nullify the value of the Dunlop patents by resurrecting the Roth Interference, has been defeated by a decision of the patent office upholding the Brown & Stillman (Dunlop) patent, throwing out the Roth application.



## Thou Shalt Not Steal



BELLEVILLE,  
N. J.

AMERICAN DUNLOP TIRE CO.

CHICAGO,  
ILL.



TRADE MARK



# The Sun...

is a shining light that makes the world beautiful.

**T**O GET the same results on a bicycle use **Decalcomania Transfers**. As the sun diffuses its light and warmth to the inhabitants of the earth to make them happy, so do decalcomania transfers aid in making cyclists a happy, contented lot. The repairman is the medium through which the greatest number of people can be made happy. In doing such work—a work for the benefit of his fellowmen—he not only pleases them but adds a few \$\$\$ to his bank account, for the work brings its own reward.

The sun is shining now and will be the means of bringing hundreds of old, dust coated and scratched wheels to the shops to be made "look like new." This is where the repairman's business sagacity will stand in good stead. An oven doesn't cost much, but its earning capacity is great—many times its cost. We can still further increase its earning capacity and will be glad to do so. Our process is simplicity personified and is a money maker. We will supply catalogues and samples free. Ask us about them. All goods are guaranteed. Will submit sketches free.

## The Meyercord Company, Inc.

American Manufacturers Guaranteed Decalcomania Transfers,

NEW YORK OFFICE:  
805 St. James Building.

MAIN OFFICE: CHAMBER OF COMMERCE BUILDING, CHICAGO, ILL.

ST. LOUIS OFFICE:  
610 Fullerton Building.

## LIGHT FRAME CONSTRUCTION

### Flush Joints Secured Without Using Lugs or Thimbles— Rigid Front Forks of Tubular Design

To the Editor—The drawings herewith show the main features of a design I have had in mind for some time for light, rigid track machines in which weight should be reduced without sacrificing strength and without making some parts abnormally light in comparison with other parts left quite heavy. The purpose of the construction and design is to accomplish the oft-attempted engineering aim to proportion the weight throughout the machine according to the work and abuse imposed upon each part. I do not attempt to give exact measures and plans for making the various parts of the bicycle, but merely describe the general scheme in such a manner that anyone may work it out. It might also be stated that no claim is made for marked originality, or for radical or sweeping improvements; the design is merely offered as a conservative and commercially safe method of producing distinctive appearing, light and thoroughly reliable bicycles which will meet popular requirements.

#### Connecting Lugs Centralize Vibration.

For several years frame builders have been wavering between various forms of joints, and many attempts have been made to produce frame connections which should at once be distinctly novel and possess the strength required of them. But in all of these attempts some form of connecting lug has been used. Even in the butt end flush joints, which were introduced and dropped almost in the same moment, a thimble or similar distinct and separate piece was used in forming the connection.

Though used in many forms and called by many names the connecting lug is still universal, and while no widespread prejudice has been created against it, it will be found upon reflection to possess two obviously important objections which work against it in consistent light weight construction. In the first place, its bulk causes the vibrations of the frame members to centralize at the points where the tube joins the lug. Hence the many attempts at reinforcement by liners, taper gauge tubing, etc. In the second place, the weight of the lug formed joint is not consistent with the other parts of the frame in consideration of the fact that the factor of safety of the tubing need not be exceeded in the joint.

#### Lap Brazed Joints the Simplest.

Improved facilities for pressing and stamping metal now make it feasible within certain limits to form tubing and tube ends into any desired shape. For that reason I see nothing to hinder the use of lap brazed frame joints and to thus dispense with frame connecting lugs—forged, cast, stamped. The lap brazed joint is the simplest joint of all. It has been made and used with success and some of those old frames of '94, in which all of the joints were lap brazed, were in construction, if not in design, products a maker might be proud of today. Lap brazing need not be as expensive now as then, and can doubtless be accomplished with much more accurate and reliable results. The bicycle design herewith is accordingly offered as a suggestion in the way of constructing a light bicycle frame without the use of connecting lugs and in a fashion commercially practical.

The frame construction is shown in Fig. 1. The upper and lower front frame rails

are of taper gauge tubing. The forward end of each is flashed to inclose the steering head tube which is roll swaged down at each end to a degree corresponding with the thickness of the flashed tubes. The front tubes of the frame thus surround the steering head in a manner which after the frame has been brazed and filled affords a flush joint.

The reason for using taper gauge tubing is that in flashing the tubes enough wall thickness shall be left at each flash to afford sufficient strength. Were the tubes flashed in dies in such a manner that there were no tendency to thinning out of the metal during the operation, the grad-

projection enough to give it the strength of a seat post and allows the saddle to be clamped to its upper end with perfect security.

In these days when frames are built in at least three heights, saddle adjusting, especially in racing machines, for which this construction, as previously mentioned, is recommended, is of no such importance as formerly. Supposing that frames built in this manner were furnished in heights of 20, 22 and 24 inches, and that in each frame the purchaser were offered a choice between seat masts projecting respectively one and two inches, then six saddle reaches might be had ranging in difference from one to the next above or below but one inch. Almost any desired reach could then be accommodated with stock machines.

#### Hanger Joints Can Also Be Lapped. |

The crank hanger joint in the illustration is shown as formed with outside lugs and swaged tube ends, giving a flush joint effect. This is done with two purposes in view. First, that a graphic comparison with regard to bulk of metal

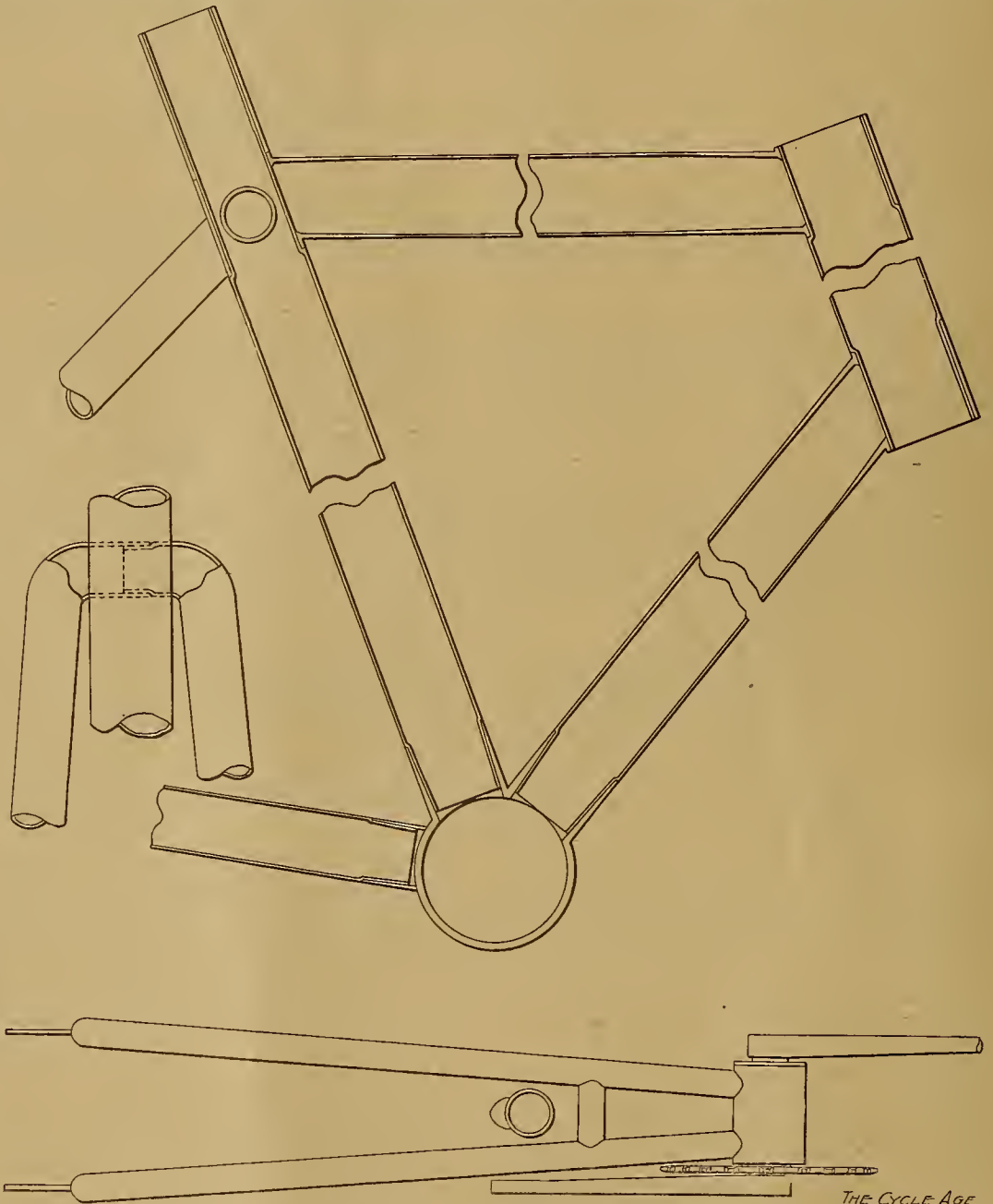


Fig. 1—Method of Forming Joints and Plan of Frame.

ual thickening of the tube walls near the ends might not be necessary. The seat mast tube is cut a few inches longer than ordinarily and swaged down as was the head tube, the decreased diameter extending clear to the upper projecting end of the mast. A piece of tubing is slipped over the upper extension of the seat mast, and reaching down to the lap formed by the flashed rear end of the upper frame rail surrounding the seat mast, forms a flush union between the upper reach and the mast.

The supplementary tube also has another object. It reinforces the seat mast

in joints may be afforded between the flashed joints and one of the best known forms of flush joint connections where lugs are used; second, that the feasibility of using lap brazing at the upper joints, where it is more readily accomplished in connection with lug joining at the hanger, may be made clear. It must be understood, however, that lap joining at the hanger can be accomplished without any practical difficulty if the tube ends are properly formed in presses.

The seat mast can be lapped around the rear half of the bracket and the lower frame reach tube around the front half,



the two meeting each other at the bottom of the bracket. Each rear fork is lapped entirely around the bracket. By making the flashed ends of correct shape the entire system of lapping when completed, brazed and filled will yield a smooth flush hanger and branches. The bracket, suppositiously being the rigid base of a frame, it might be well in forming lapped

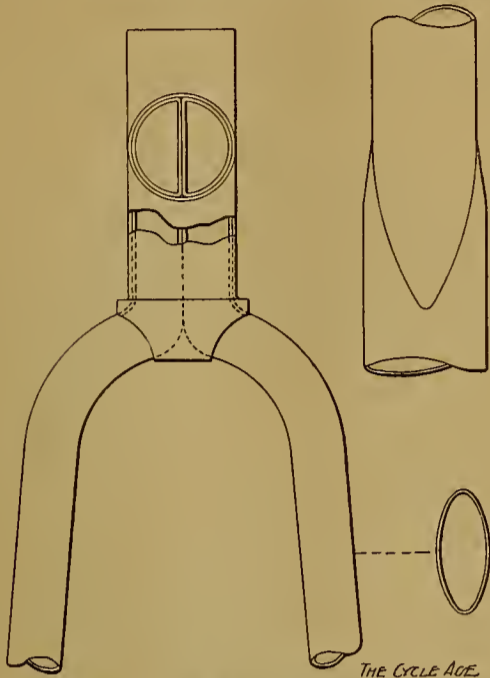


Fig. 2—Construction of Front Fork.

unions to it to use taper gauge tubing that the rigidity of the base might not be suddenly diverged into less rigid frame members.

**Straight Rear Forks and Stays.**

The design illustrated brings back one other feature of the old days besides lap brazing. It includes straight, round section rear forks and stays. This is, of course, not imperative in carrying out the main scheme of the frame, but adds to the rigidity and carries out the original intention of placing metal where it belongs and of using straight lines as the surest means toward the end of attaining symmetrical light weight construction.

The plan view in Fig. 1 is a reproduction from a scale drawing showing that straight rear forks can be used in connection with modern frame lines and without widening the tread or increasing the chain line. The tread is here four and one-half inches and the chain line is one and one-half inches, the standard chain line of track machines. No specified form of hanger is considered as almost any of the popular patterns in which the sprocket and right crank are closely hung can be employed. The connection of the rear stays with the seat mast completes the frame structure, the form of rear fork ends being left optional, there being so many varying ideas concerning this

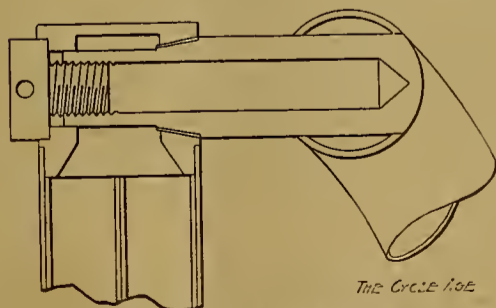


Fig. 3—Handle Bar Fastening.

point. At its upper end each stay is bent on a short curve that there may be a short horizontal arm substantially at right angles to the stay. One of these horizontal projections is swaged down to enter snugly the open end of the other. A horizontal hole lateral in its relation to the frame is drilled through the seat mast

at a point that would occupy the center of the cluster were one present, and into this hole from each end are slipped the ends of the rear stays, one of these entering the other as described and as shown in the detail view in Fig. 1. When brazed in place the union is not only strong and rigid, but presents an appearance clean cut and suggestive of light weight design and construction.

**Front Fork Sides and Stem Continuous.**

The front fork is also of tubular construction, in keeping in principle with the construction of the frame. Each fork side or blade comprises a piece of tubing of oval section along its lower half and of half-round D section along its upper portion. The convergence from the D to the oval section is sharp and combines a convergence from small diameter to large. This does not necessarily mean a large difference in original diameters before the round tube was flattened into oval and D sections, but a difference between the finished diameters.

At the points where the D section begins to merge into the oval each tube is bent away from the flat side of the D at almost a right angle bend and is then carried down and out in a graceful curve which forms one-half of an arch which is formed by placing the two blades together with the faces of the D portions against each other, these then forming substantially a round section tube in two parts and reinforced with a double liner. By slipping over the two part upper tube so formed a round tube flashed at its lower end, much after the fashion of the one-piece stem and crown now used with continuous forks, a crown cone seat is fur-

their lowest position in the fork stem, and all riders aim to get bars of such curvature that the position of the grips will be right when the bar is at its lowest point of attachment.

In Fig. 3 is suggested a handle bar fastening for use with this fork. It might also be adopted successfully in connection with regular construction. A hollow cap is brazed to the upper end of the stem and has walls about one-quarter-inch thick. Through this cap is drilled a hole in longitudinal relation to the bicycle. The hole through the front wall is formed tapering and provided with serrations which match serrations on the tapering surface of a thick walled tube about five-eighths or eleven-sixteenths of an inch in diameter and which extends forward for an inch or more, according to the taste of the designer, and passes through a hole drilled in the handle bar tube, to which it is brazed and a connection without lugs or flashings easily and securely formed. The rear end of this tube or arm is of reduced diameter and is tapped to furnish screw threads back for a short distance from the end. The outside diameter of the reduced end is such that it will fit snugly into the hole in the rear wall of the fork stem cap, which latter hole is counter-bored at its outer end to form a seat for the round head of a screw engaging the interiorly threaded end of the arm or horizontal stem from the handle bar. The screw head is provided with one or more spanner holes or if desired is made hexagonal that a wrench may be used to operate it. It will be readily understood that by drawing up on the screw the handle bar stem will be drawn tightly into the serrated

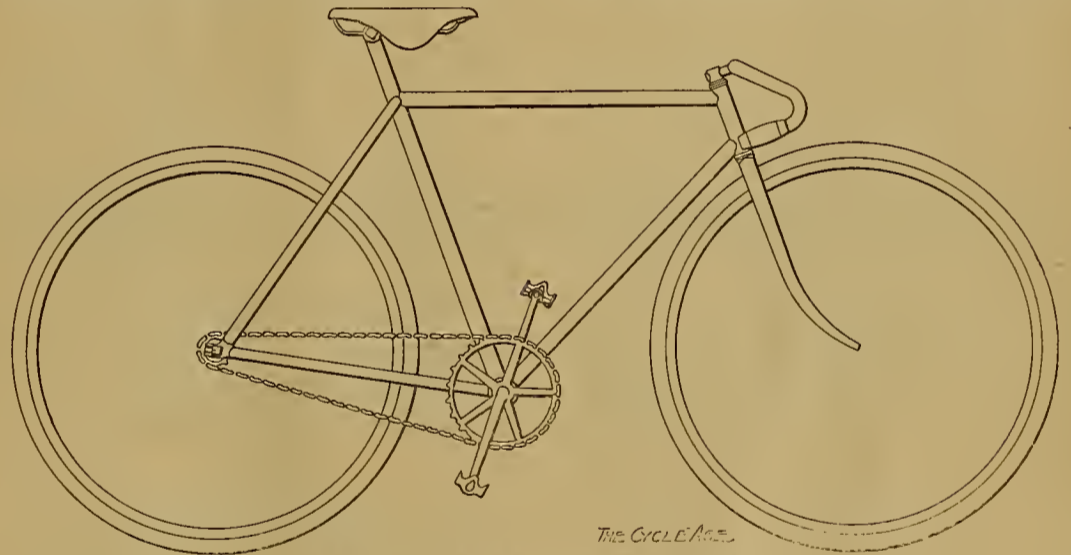


Fig. 4—Appearance of Completed Bicycle.

nished which may be lapped around the under side of the arch and cover the union between the sides.

The fork and stem are thus complete, the stem and the blades being a unit in construction and the blades extending from the axle of the front wheel of the bicycle to the upper end of the steering head and there being also a liner throughout the entire length of the stem in exact line with the strains thrown upon the stem when obstacles are met in riding. The construction is clearly depicted in Fig. 2.

**Stemless Handle Bar Fastening.**

The foregoing construction obviously prevents the use of handle bars with a stem intended to slip down inside of the fork stem, but as few riders nowadays adjust the height of their bars by raising or lowering them bodily in the fork stem, any of the clamps now in use which attach exteriorly to the upper end of the stem may be used. Several well known makers are now using handle bars without stems and find such construction no drawback commercially. On racing machines the bars are never raised from

taper hole in the fork stem cap and thus secured in place. The same bar may be used either in an up-turned or in a down-turned position.

**Dip Brazing Desirable.**

From Fig. 4 the completed appearance of a bicycle so built and designed can be gathered. The frame lines are after the popular conception. One-inch tubing is used in the main tubes, the machine as it stands being intended as one for track use. The rear stays and forks are three-quarter-inch in diameter. Frames and forks built after the plan suggested are well adapted to be brazed by the immersion process which would insure a sure union of the double front fork stem parts and of the inserted stays at their union with the seat mast.

L. G. A.

**Hand Wheel for Handlebar.**

The old idea of employing a hand wheel instead of a handlebar for steering bicycles has been revived in a patent secured by W. C. Brandenburg of Sykesville, Md., with the modification that he makes the handwheel elliptic in shape,

so that the rider may have a wide or a narrow spread of hands accordingly as he turns the wheel stem in the fork stem. The main advantage claimed for the device is that the hand-wheel in any of its adjustments provides a number of convenient gripping places giving the rider a chance to rest by changing his posture. The illustration shows the device.

### WRAPPINGS FOR BICYCLES

**An English Inventor Produces Simple Paper Tubes to Replace Present Antiquated Methods.**

Despite the rapid improvements made in the construction of bicycles and in many of the operations employed in their production, the method of packing and covering them for wholesale delivery is at present in much the same condition as it was ten years ago, says an English exchange. It is one of those details, apparently trivial, which get overlooked; it is beneath the consideration of most works managers, whose minds are occupied with seemingly more important improvements in the workshops, while the intellect of the packer has never soared so high as to contemplate the possibility of improving anything. Thus it is that the ancient method of swathing frames and wheels in yards and yards of intricate paper or fabric bandages is yet with us. The system teems with disadvantages and difficulties; the number of packers required, the space necessary for wrapping at the works and unwrapping at the agent's shop, the untidiness of both these operations, and the time occupied—at least fifteen minutes per machine, a matter which often delays an important consignment at the last moment—all these things, and others besides, are against the present method.

It is remarkable, therefore, that until now no rapidly attached mechanical protection for the tubes of cycle frames has been invented. A Birmingham man has, however, lately patented a system of protecting the frame by means of tubes of stiff paper or cardboard slotted longitudinally, so that they may be slipped over the frame tubes and held in position both by their natural contraction and by tapes or other suitable additions. For all ordinary purposes, the paper tubes, such as are used for containing unmounted photographs sent by post, form ample protection for the frame, but the inventor also provides for the lining of these tubes with a soft material, for additional protection and for attaching fabric to the ends of the tubes to wrap over the lugs.

The idea is strikingly simple and practical; it has been carefully patented, and, when better known, the wrapper, already past its experimental stage, may be expected to command a big sale. It is certainly quicker and quite as effective as the very primitive bandaging methods which it is intended to replace.

### HARDWARE MEN AS AGENTS

**Fifty Per Cent of the Hardware Trade Now Sell Bicycles—Why Some Fail**

A large wholesale concern in the northwest writes concerning the handling of bicycles by the retail hardware trade:

In our opinion more than 50 per cent. of the regular hardware merchants in the country and in the smaller towns are in the bicycle trade. We also believe that this number is increasing and that in the future the bicycle trade will be largely in the hands of hardware dealers. You will infer from this expression of opinion that our hardware merchants are largely finding the bicycle trade fairly satisfactory. In our opinion the bicycle trade at a future day is likely to hold about the same position with hardware merchants as does the tin shop.

The hardware merchant is more favorably situated for selling bicycles and taking care of bicycle customers than dealers in any other line of trade can be. In our judg-

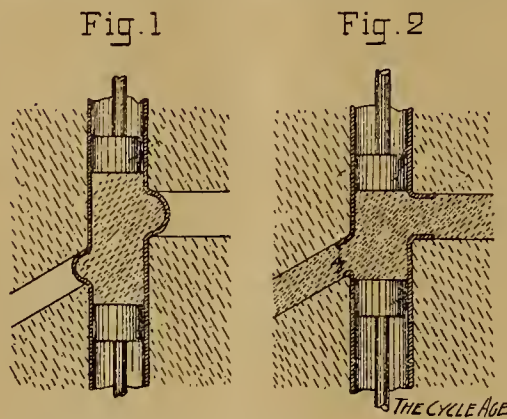
ment it is a wise step for the hardware merchant who is in a section of the country in which bicycles can be used to advantage to take hold of the trade judiciously and secure the best line of bicycles for his trade that he possibly can, and then to work the business intelligently and see that he makes it profitable and satisfactory, both to himself and to his customers.

Some dealers make a success of it; others make a complete failure. Where a failure ensues we think it is due to the fact that they have not taken sufficient pains to post themselves in regard to the construction of bicycles and as a consequence are not able to talk them up satisfactorily. The matter of making this business profitable or not is one that lies largely in the hands of the individual himself and depends much upon the policy which he pursues. If he endeavors to market his goods strictly upon the basis of price, buying anything that is offered to him, we think it must inevitably result in failure. If, on the other hand, he makes it a point to handle standard goods manufactured by responsible parties and sells the goods upon the basis of quality, then it cannot fail to be a profitable business. There was a strong tendency last season, in our opinion, to experiment with trashy bicycles because they were cheap, and it is barely possible that those who handle nothing but the better grades may suffer slightly on that account. We look upon this injury, however, as being but a temporary one, as quality is bound to win out in the end.

### BICYCLES WITHOUT LUGS

**Step Toward Brazeless Joints—Internal Pressure Transmitted Through White Sand.**

Three German engineers, Messrs. Schilling, Schorz and Ulmer propose to make bicycles without any other lugs than those formed on the crank hanger. Their method is similar to the hydraulic or oil-pressure methods already in practical use in this country for producing hangers and lugs, but instead of oil or water they employ white sand and they



propose to treat the bicycle tubing in such manner as to make special connection lugs superfluous. To this end the tubing is placed between heavy metal die plates which surround the tube completely except where the lugs are to be formed. The tube has been previously filled with the white sand and heated. By means of pistons moving in the tubes great pressure is now brought to bear on the sand with the result that the walls of the tube bulge out where they are not supported by the die, as shown in Fig. 1. The pressure is now relieved and the swollen portion is punctured from without. Pressure is then put on again, after first limiting the flow of sand by closing the openings in the die, and the bulged-out portion thereby assumes the form of the adjacent parts of the die, as shown in Fig. 2.

The logical sequence of this system would seem to lead very close to the hydraulic methods of frame making which were espoused by Mr. Hooley in England before his bankruptcy. The inventors state that their treatment produces no deterioration, weakening or malformation of the tube metal, but for those who are acquainted with the difficulties in making lugs on crank-hangers long enough by hydraulic or any other form of pressure, it is evident that tubes of the gauge usually employed in bicycle frames will not afford all the material

required for making a strong lug. With taper-gauged or butt-ended tubing better results might be obtained.

The information so far received points to an unfinished experiment, for which the inventors have hurriedly secured patent protection, rather than to a full-fledged workshop method.

### REPAIR PRICE SCHEDULES

**Evils Caused by Existing Irregularities Can be Overcome by Wide Adoption of Uniform Scale.**

(Reprinted from The Cycle Age.)

On another page there is presented a list of the repair prices in various towns.

In looking over the list it is at once apparent that great irregularities in prices prevail; that the same piece of work is estimated as being worth very much more in one town than in another. In several instances some towns in which greatly varying prices are charged, are so close together on the map that it must happen frequently that cyclists from one of the towns visit the other town and have occasion to become acquainted with the variation in charges.

The moral effect of this condition is, of course, to prime the public thoroughly with the idea that all repair prices are arbitrary and extravagant, and thereby bring about a general suspiciousness and ultimately force prices all over to the lowest notch. When that point has been reached the ambition to do good work, on the part of the repairman, must gradually vanish and give way to a desire to do as little as is absolutely required for obtaining the depressed price which the customer grudgingly pays.

If a somewhat uniform scale of prices could be adhered to the downward tendency which has already gone too far, might perhaps be arrested and a higher standard of workmanship would eventually follow.

The experience with uniform price schedules has, however, not been altogether successful except in places far removed from the centers of the bicycle and parts-making industries, and before any attempt is made to reach a general and fair estimate of what each of the most common repair jobs is worth, the cause of previous failures should be looked into.

A repair price schedule should be flexible enough to suit existing conditions, and it should not be plainly inimical to the interests of the public who are expected to pay the charges.

Better results may be expected from a schedule which gives maximum prices for the information and protection of the public while leaving the repairman all the latitude which he may desire for showing special favors to customers by lower quotations when circumstances warrant them.

### Geneva Company Not Burned Out.

It has been currently reported through various channels that the Geneva Cycle Company of Geneva, O., had been burned out. The fact is that the fire occurred in the factory of the Geneva Wheel Company, which manufactures carriage and wagon wheels, and the bicycle company's plant was uninjured.

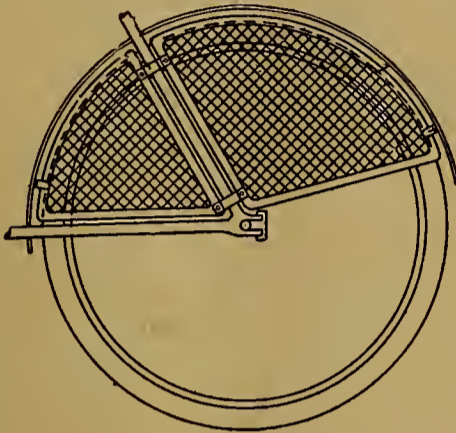
### First Mortgage Held Valid.

The case of the Central Trust company against the Worcester Cycle company as to foreclosure of the trust company's second mortgage on the plant at Middletown, Conn., has been decided in favor of the cycle firm, the court returning to the trustee the personal property at the factory so far as the encumbrance of the Central Trust company is concerned. The value of the real estate will be absorbed by the American Surety company, which

has claims to it by first mortgage for an issue of bonds. The personal property was the much more valuable part of the Central Trust's claim, being appraised at \$100,000. The mortgage was given for an issue of \$500,000 twenty-year 5 percent gold bonds issued in 1896, of which \$320,000 were placed on the market.

**Hinged Cane Netting for Dress Guards.**

Max Diehl of Hanover, Germany, has patented in United States an interesting innovation in dress guards. He uses two sector-like frames of wood or metal



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which are filled out with cane or cord netting. He prefers cane as it is uninfluenced by moisture, easy to clean and preserves a neat appearance longer than cord. These frames are hinged, as shown in the illustration, to the upper rear stays in two places. If the stays are of round cross-section the frames may be simply clasped to them. At convenient points along the upper edge the frames are clasped, snapped or shackled to the mud guard.

The attachment of a dress guard to a bicycle should be effected in such man-

ner, says the inventor, that the following conditions are fulfilled, viz.: First, the guard-frame must be easily removable from the bicycle-wheel; second, the sector-frames of the guard must be so arranged that they can partly revolve upon the machine-frame without being removed from the same. The first condition is an absolutely essential one, because for the attachment and removal of the sector-frames neither hand-tools nor any devices which would occupy any special amount of time are desirable, while as regards the second condition—viz, the easy, quick, and convenient cleaning not alone of the sectors, but also of the wheel itself—this is also a necessary condition.

In accordance with this reasoning, it will be seen that either of the two frames on each side of the machine when unclasped from the mudguard may be readily swung around the rear stay and cleaned on the inside and that the cleaning of the wheel itself is also facilitated by this operation. The patent is No. 622,997, April 11, 1899.

**Brewster and De Grout Join Forces.**

Philadelphia, April 17.—“Pop” Brewster, president of the Philadelphia Cycle Board of Trade, and Harry De Grout, ex-manager of the Union Cycle Manufacturing Company's Philadelphia branch, have combined forces, and will act as manufacturers' agents for three lines of medium-grade bicycles in addition to lubricants, Columbia cash registers and other novelties. Their headquarters are at 618 Drexel building.

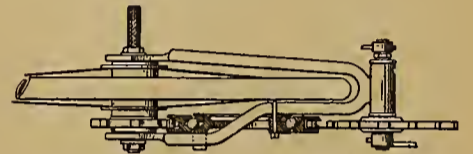
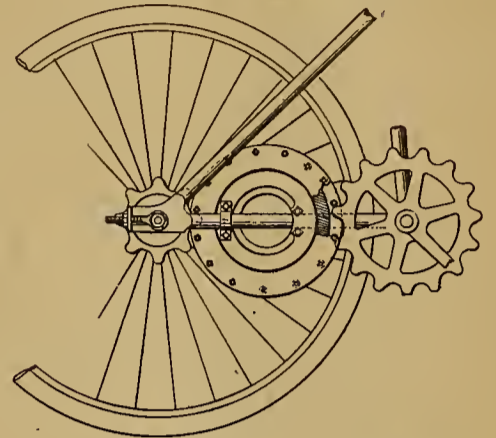
**British Exports to India.**

The value of cycles exported from London to India, Burma and Ceylon during the past year was as follows: Calcutta, \$107,825; Bombay, \$160,760; Calicut, \$140; Colombo, \$21,400; Karachi, \$34,565; Mad-

ras, \$49,295; Rangoon, \$8,480. These figures do not include American and Continental makes.

**Train of Gears for Transmission.**

The accompanying illustration shows a driving gear which has been patented by John and James Riddett of Yonkers, N. Y., and assigned to H. C. England of Reading, Pa. It seems to be identical with the Gentry-Storrs gear in principle,



THE CYCLE AGE

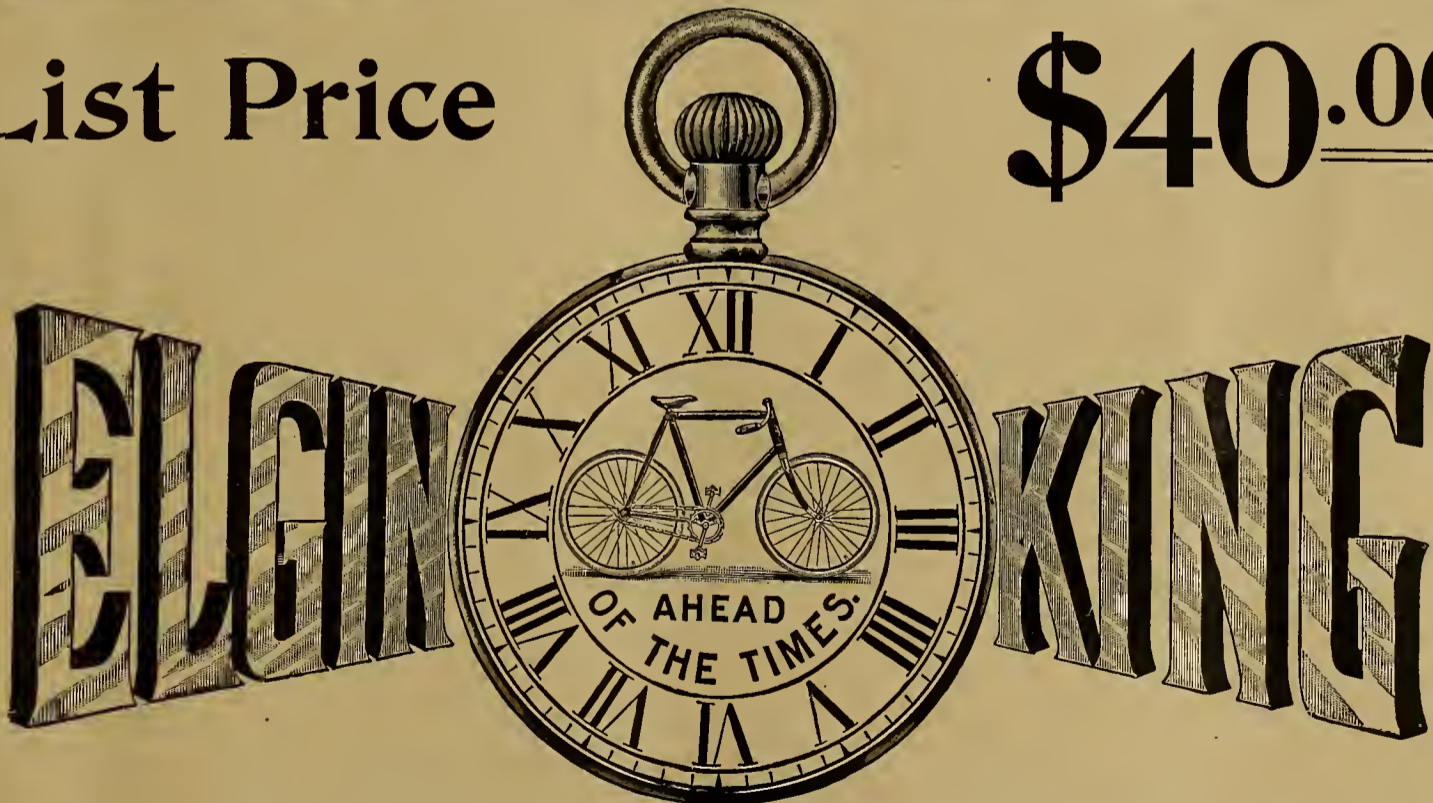
though a pin-wheel is employed as the middle gear member in lieu of the straight spur wheel.

The New Zealand Touring Club has 1,070 members and more than \$1,000 in its treasury.

All cyclists in Calcutta are required to carry lights after sunset.

List Price

\$40.00



ELGIN KING Bicycles are strictly high grade in every sense that the term implies. They contain many features entirely new to cycle construction.

We offer liberal inducements to energetic dealers who wish to take up their sale.

OUR GOODS WILL MAKE MONEY FOR YOU. Write to us at once for Terms and Prices.

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IRREGULAR REPAIR PRICES.

Table with 11 columns representing different cities in Iowa and Minnesota: Creston, Fayette, Sloan, Perry, Vinton, Minneapolis, Moorhead, St. Cloud, Fergus Falls, and Owatonna. The rows list various bicycle repair services such as 'Frame Repairs', 'Rims and Spokes', 'Chain and Mud Guards', 'Nickel Plating', 'Enameling', 'Tire Repairs', 'General Repairs', 'Front Fork Repairs', 'Sprocket and Crank Repairs', and 'Chain Repairs'.

# IRREGULAR REPAIR PRICES.

SO. DAKOTA.

NO. DAKOTA.

KANSAS.

	Mitchell (Pop. 2,500)	Redfield (Pop. 900)	Sturgis (Pop. 750)	Bradley (Pop. 168)	De Smet (Pop. 550)	Wahpeton (Pop. 1,500)	Forman (Pop. 200)	Humboldt (Pop. 1,500)	Hutchinson (Pop. 8,500)	Winfield (Pop. 5,000)
<b>Frame Repairs.</b>										
Replacing top tube	2.50	2.50	2.00	2.50-2.75	....	....	....	....	4.00	4.50
" lower tube	3.50	2.50	2.00	2.50-2.75	....	....	....	....	4.00	4.50
" top and bottom tubes	5.00	4.00	3.50	4.00	....	....	....	....	6.00	7.50
" one rear fork side	2.00	2.50	.75	2.25	....	....	....	....	2.00	2.50
" two rear fork sides	3.00	4.00	1.50	4.00	....	....	....	....	3.00	3.50
" seat post mast	3.50	....	.75	3.25	....	....	....	....	....	....
" head	3.50	....	.75	3.00	....	....	....	....	....	3.00
" head frame connection	....	....	1.00	1.50	....	....	....	....	....	2.00
" seat post connection	....	....	.75	3.00	....	....	....	....	....	2.00
" crank hanger bracket	5.00	....	3.00	4.50	....	....	....	....	....	3.50
" one rear fork end	2.00	1.50	.75	2.00	....	....	....	....	....	1.50
" two rear fork ends	3.00	2.50	1.50	3.00	....	....	....	....	....	2.25
Repairing unbrazed joint	1.50	.75	....	1.00-2.00	....	....	....	....	....	1.00
Lining up frames	.75	1.00-2.00	2.00	1.50	1.00	....	1.00-2.00	1.00	....	1.75
Splicing tube	1.50	....	1.00	1.25	....	....	....	....	....	2.50
Repairing dents, each	....	....	....	....	....	....	....	....	....	....
<b>Rims and Spokes.</b>										
Wood rim, common, 1 1/2 to 1 3/4 inches	1.50	2.00	2.00	1.50	2.00	2.00	2.50	1.50	2.00	2.50
" extra quality	2.00	2.50	2.25	2.75	2.25	2.50	3.00	2.00	2.50	2.75
" racing or tandem	....	....	2.25	2.50	2.50	2.50	....	2.00	2.50	....
" detachable tires	2.00	2.50	2.25	2.75	2.50	2.50	3.00	2.25	2.75	....
Metal rim	....	....	....	4.50	2.00	....	....	3.00	....	2.50
Truing wheels, each	.35	.50-1.00	.75	.50-1.50	.50	.25-.50	.25-.75	.25 up	.25-.50	.25
Wood rim and spokes	2.00	3.50	3.00	2.00	3.00	....	3.25	3.00 up	2.50	3.50
Respeking without rim	....	....	1.50	1.00	2.50	3.00	2.50	1.50 up	1.75	1.50
One spoke	.10	.15-.25	.25	.25	.25	.20	.20	.15	.15-.25	.25
Two spokes	.15	.25	.40	.40	.35	.35	.30	.25	.30	.35
Each additional spoke	.05	.10	.10	.10	.05	.10	.10	.10	.10	.10
<b>Chain and Mud Guards.</b>										
Silk lacing on mud or chain guard	.35	.75	.40	1.00	....	....	....	.25	....	.25
" on both guards	....	1.25	.75	1.50	....	....	....	.50	.65	.75
Wood mud guard on ladies' bicycle	1.50	.50	.75	1.00	....	....	....	.50	1.00	.50
" chain guard on ladies' bicycle	1.00	.50	.75	1.00	....	....	....	.40	.75	.75
<b>Nickel Plating.</b>										
Frame and forks	....	....	15.00	....	....	....	....	....	....	....
Handle bar	....	....	1.50	....	....	....	....	....	....	....
Large sprocket	....	....	1.00	....	....	....	....	....	....	....
Medium sprocket	....	....	.75	....	....	....	....	....	....	....
Small sprocket	....	....	.50	....	....	....	....	....	....	....
Fork crown and tips	....	....	1.50	....	....	....	....	....	....	....
" only	....	....	1.00	....	....	....	....	....	....	....
Spider crank	....	....	1.00	....	....	....	....	....	....	....
Pedal	....	....	1.00	....	....	....	....	....	....	....
Hub	....	....	1.00	....	....	....	....	....	....	....
Crank	....	....	.75	....	....	....	....	....	....	....
Seat post	....	....	.75	....	....	....	....	....	....	....
Small parts and fittings, each	....	....	.75	....	....	....	....	....	....	....
<b>Enameling.</b>										
Frame and forks, any dark color	2.00	3.00	3.00	3.00	2.50	2.00-3.00	2.00-5.00	....	3.00	3.50
" any light color	....	4.00	3.50	3.50	3.00	2.50-4.00	....	....	4.00	3.50
" white	....	5.00	4.00	6.00	3.00	....	6.00	....	....	....
Front forks	.50	.75	.75	1.00	.50	.50	....	....	1.00	.75
Striping frame, plain, extra	....	....	.75	.75	1.00	....	....	....	....	.50
" and decorating, extra	....	....	1.50	1.25	1.25	.50	....	....	....	.50
Enameling rims, each	.25	....	.25	.50	.50	....	.40	....	....	.25
" two rims	.50	....	.50	1.00	.75	.75	.75	....	....	.50
Air drying frame and fork	....	....	....	....	....	....	....	....	....	....
<b>Tire Repairs.</b>										
Punctures, single tube tires, each	.10	.25	.75	.25	.40	.25-.35	.25-.50	.25	.25	.25
" double tube tires, each	.50	.35	.50	.35	.50	.25-.35	.50-.75	.40	.35	.35
Vulcanizing, small patches	.50	....	.75	.35	....	.50	.50	....	.50	.50
" large patches	.75	.25	1.50	.50	....	.75	1.00	....	.75	.75
Cementing on tires, each	.15	.10-.25	.25	.15	.25	.25	.25-.35	.25	.25	.25
New valve	.25	.25	.25	.25	.15	.25	.25-.50	.20	.25	.25
" and stem	.30	.40	1.00	.40	.25	.50	.50-.75	.50	.35	.50
" stem	.15	.15	.75	.25	.10	.35	....	.25	.25	.25
<b>General Repairs.</b>										
Front axles, each	.50	.25-.35	.75	.50	.50	.50	1.00	.50	.50	.50
" wheel cones, each	.25	.50-1.00	.75	.40	.40-.75	.25-.50	....	.50	.50	.50-.75
" wheel cups	.50	.50-1.00	.75-1.00	.30-.50	.35-.75	.25-.50	....	.75	.50	.50-.75
Front or rear wheel nuts, each	.15	.05	.25	.15	.05	.10	....	.10	.05	.15
Rear axles, each	.50	.25-.35	1.00	.50	.75	.75	....	.60	.50	.50
" wheel cones	.50	.50-1.00	1.00-1.50	.30-.60	.40-.75	.35-.75	....	.60	.50	.50-.75
" wheel cups	.50	.50-1.00	1.00-1.50	.30-.75	.35-.75	.25-.50	....	.75	.50	.50-.75
Crank hanger cones	.50	.50-1.50	1.50	.35-.75	.40-.75	.50-.75	....	.85	....	.75-1.00
" cups	.50	.50-1.50	1.50-2.00	.35-.75	.40-.75	....	....	1.00	....	.75-1.00
" axles	1.00-1.25	1.00-2.00	1.50-3.00	1.00-1.50	2.00-3.00	....	....	1.50	1.50-2.00	1.75-2.00
Straightening crank	.10-.25	.25-.50	.50	.25	.50	.25	.25	.25	.25	.25
Straightening pedal pin	.15	....	.25	.25	.25	.25	.25	.25	.25	.25
Cleaning bicycle inside and out	1.50	1.50	1.50	1.25	2.50	1.00	1.00	1.25	1.00	.75
Cleaning bearings	....	....	....	....	....	....	....	....	....	....
Cleaning crank hanger	....	....	....	....	....	....	....	....	....	....
Pedal rubbers, set	....	....	....	....	....	....	....	....	....	....
Cementing grips	....	....	....	....	....	....	....	....	....	....
Handle bar expander	....	....	....	....	....	....	....	....	....	....
<b>Front Fork Repairs.</b>										
Lining up forks	.50-.75	.50-1.00	.75	.75	.50	....	.50-1.00	.50	.50	.50-.75
One new side	1.00	1.50	.75	2.00	....	1.75	1.50-2.00	....	1.50	1.50
Two new sides	1.50	2.50	1.50	3.50	....	3.00	2.00-3.50	....	2.00	2.50
New stem	1.50	1.50	2.00	1.50	....	1.50	....	....	1.50	1.00
New arched crown	1.75	1.75	1.50	2.50	....	1.50	....	....	1.50	2.50
One fork end tip	.50	1.00	.75	1.00	.25	1.25	1.00	.40	1.00	1.00
Two fork end tips	1.00	1.75	1.50	2.00	.75	2.00	1.50	.75	1.50	2.00
Complete forks, arched crown	4.50	4.50	7.00	4.50	2.50	3.00-4.00	5.00	....	3.00-4.00	....
<b>Sprocket and Crank Repairs.</b>										
Making rear sprocket, 7-8-9-10 teeth	1.50	....	1.00	1.00	1.00	....	....	1.75	....	1.00
New front sprocket	....	....	....	....	....	....	....	....	....	....
Truing front sprocket	.10 up	....	.75	.50	.50	....	.50	.25 up	....	.25
Crank	....	....	....	....	....	....	....	....	....	....
Crank pin	....	....	....	....	....	....	....	....	....	....
<b>Chain Repairs.</b>										
Putting in one link	.15	.15	.25	.25	.35	.25	.25	.20	.25	.25
Cleaning and lubricating	.25	.15	.25	.50	.50	.10	.25	.25	.25	.15
Taking out one link	.10	.10	.25	.25	.25	.10	.15	.15	.25	.10

## CYCLOMETER MANUFACTURE

### Branch of Industry Monopolized by United States Through Excellence in Mass-Productive Methods

One of the most remarkable results of the consideration given to and ingenuity displayed in modern machine shop practice is the practical monopoly created by American mechanics and methods in the production of specialties. A monopoly, in this instance, is dependent for its existence upon economical and precise methods of production, rather than protection granted by the issue of patents or geographical situation of the factories.

Excellent examples of the condition referred to are afforded by manufacturers of fine tools, typewriters, sewing machines and cyclometers in their modern form. It is with the shop practice associated with the production of the latter that this article will deal.

#### Cost and Durability Main Factors.

Cyclometers, in more or less practical form, have been in existence almost as long as the bicycle itself. Riders of the olden time will remember some of the strange devices used in the days of the ordinary. They were high in price, weighty, and not always accurate—a combination which prohibited their use in large numbers. Even in those days, however, the desirability of a well constituted article at a reasonable price was generally admitted, and it only required the introduction of a sufficiently accurate recorder, possessed of the essential attributes of moderate cost and durability,

precipitate not only the commercial importance of the cyclometer business, but the degree of accuracy and precision observed in the manufacture.

No more forceful illustration of the service afforded the world by the growth and development of repetition methods of production could be cited than is afforded by the low cost to the customer of so intricate and scientific an instrument as the Veeder. As indicated in a former sentence, its introduction is as closely associated with unique methods of production as the design of the actual product. As a matter of fact, one is essential to the other—that is to say, in the absence of an absolute departure from former practices, the product of the Veeder, within the lines of cost demanded by the public, would have been impossible.

The Veeder company has erected at Hartford a handsome steel building especially for its work. It is, as might be expected, equipped in a manner fully representative of modern factory architecture, especially in the manner of securing ample lighting facilities. The heating is accomplished by hot air circulated through the hollow girders forming the frame of the structure. As a great deal of wood is incorporated in the building, precautions have been necessary to insure drawings, gauges, special tools and finished stock from the effects of a possi-

matic or otherwise, the cost of production would be so high as to be well-nigh prohibitive.

The process which has enabled the Veeder company to revolutionize cyclometer manufacture is, strange to say, one which is essentially associated with the foundry. In the first place it must be understood that the metal of which the instrument is composed is an anti-friction composition which, as usual with metals of that type, melts at a low temperature. Advantage has been taken of this fact to produce each part in the form of a casting. The process is such, however, that when removed from the mold



Drilling Various Parts.

its parts are perfectly clean and accurate, so that the machinery operations are confined to the removal of the runners and the boring and countersinking of rotating parts. It will be readily understood that this process is of such importance that the Veeder company has no desire to make it public property. It may be safely assumed, however, that the molds are of steel and partake to some extent of the same nature as a die, inasmuch as the metal must be under considerable pressure. It would not be a matter of surprise if it proves eventually that the operation consists of a combination of casting in chilled molds with an automatic press. Whatever the process may be, the results are of unusual interest and form.

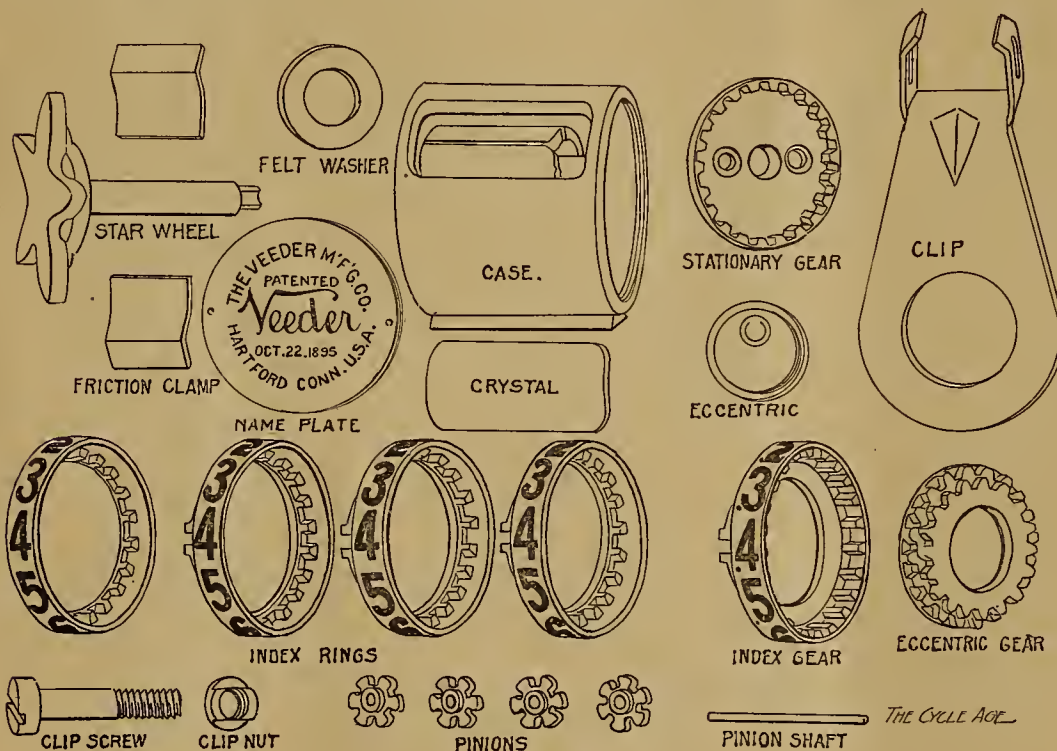
The first illustration shows more clearly than is possible by descriptive writing the remarkable nature of the parts. Internal and irregular shaped gears are produced with teeth of theoretically correct formation, while the cases with the various projecting bearing surfaces are productive of such precision and finish as are not usually associated with the word casting.

#### Special Tools Throughout.

It must not be assumed that because the initial stage of manufacture of Veeder parts forms such a unique example of modern method that the machine shop is without interest. As a matter of fact, many of the machining operations are of exceptional interest to the student of modern shop practice. The principal machine tools consist of precision lathes and sensitive drilling machines. The chief interest in them consists, however, in the ingenious nature of the chucks, jigs and attachments with which they are fitted.

Some idea of the delicacy of the work handled on these machines may be gained from the accompanying half-tone engravings showing various stages in the process of manufacture. Although ingenious, the method of operating the above tools does not differ essentially from that followed in other branches of industry employing tools of similar nature.

In the department in which the rings which record the distance are finished,



to create a demand unexcelled in the history of the sundry business.

These facts render the introduction of the small and unique Veeder cyclometer of historic importance.

The principal feature of the introduction of the Veeder was the fact that not only in outline, but in method of production, the instrument was so distinctively American that, up to this time, no cyclometers are purchased in commercial quantities outside of this country. It is not strange under these circumstances that the export business in cyclometers practically equals in volume the demands of the home market.

It is intended that the following description shall enable the reader to ap-

ble conflagration. These take the form of a number of fire proof vaults for the retention of the respective items.

#### Accuracy in Foundry Work.

The most important departure from usual methods in the system of manufacture is that despite the precise nature of the machinery operations, the machine shop is by no means the principal feature; in fact, it is by limiting, to a large extent, the machine shop operations that the cost has been so greatly reduced. If the component parts which constitute a Veeder trip cyclometer were produced by preconceived methods of turning, stamping and machining, by milling or profiling, whether the operations were auto-

Garford

Hunt

The Wheeler  
EXTRA

Brown

Gilliam

P &amp; F

## Comfort

**T**HE comfort of a saddle depends largely upon intelligent construction in the earlier stages of the work. It is easy to make something and call it a saddle, but is it just as necessary to have a thorough *practical* knowledge of what constitutes a perfect saddle, before one can be made, as it is to have a thorough knowledge of cutting before a good and well fitting suit of clothes can be made. The lack of such knowledge results in botch-work, and we see lots of it, both in clothes and in saddles.

Neither of them will ever command the respectful consideration of those who know (and their name is legion) what constitutes good work, and the makers of them are soon relegated to oblivion.

It is the strongest and most convincing evidence of the perfection in *style*, *durability*, and *comfort* of the saddles produced by this company, that their goods command the admiration of more than eighty per cent. of the riders of this country and a very large proportion of those of other countries. Write us for information and catalogues. We shall be happy to furnish either or both.



**American  
Saddle Company**

608-613 American Trust Bldg.

Cleveland, Ohio

several unique devices are employed. The rings, like the other portions, are cast. In the finishing operations they are first mounted on a mandrel, enough of them at a time to fill the mandrel. Then the outer surfaces are turned in a speed lathe of special construction to insure uniformity of size. The mandrel is then mounted in a similar lathe running at lower speed, and the paper is wound on the rings in spiral fashion, a tenacious and damp-proof glue being used. The paper is next thoroughly cleaned at high speed by sand paper and the complete series is dried in ovens heated to a medium but steady temperature.

The next operation consists of separating the rings from each other and is accomplished by a rotating cutter located so as to move in a line with the work after the manner of a slide rest. The cutter is so arranged that it accurately spaces the rings and cuts the paper at the juncture of one ring with another. After that each ring is separately finished with sand paper while running at high speed.

#### The Printing Operation.

The figures are printed on small rotary machines of ingenious construction, and entirely self-acting in character. The type is cast solid with a revolving roller, which, after passing the ink roller, is rotated with its periphery bearing against the face of the indicating ring.

The crystals which protect the rings are made in the works, the necessary ac-

Whitney precision lathes, Hendy-Norton engine lathes, a Norton surface grinder and Brown & Sharpe universal milling machines. Contrary to usual custom, the tool making shop is situated on the top floor, the object, probably, being to obtain the best possible light. No piece workers are employed at the Veeder works, and in every department there are



Printing the Indicating Figures.

apparent indications of goodfellowship between employer and employe.

The conduct of the work throughout is of such a progressive nature as to insure a minimum of waste. The amount of work in hand and in stock is always indicated by a diagram which not only shows the amount of complete sets, but the relative output of one part with another. Electric motors are used for power purposes, each gang of tools being driven by a separate line-shaft connected with the motor.

The foregoing details will, in a measure serve to demonstrate the influence of the bicycle business in building up industries of a subsidiary nature which are worthy of notice both from an industrial and economic standpoint as well as because of their contribution to the science and practice of modern shop methods.

#### A Frenchy Trade Story.

In the weekly edition of *The Velo* of Paris is reprinted the old story of fine

erary style and elaborate description of the circumstances under which the author made his discovery. While in form a fancy and a hoax, it has repeatedly served the purpose of throwing suspicion upon American business methods, and being hoary with age, can hardly be printed for any other purpose.

#### Cycle Exhibit at Centennial.

The bicycle enthusiasts of Toledo are interested in the work of the Centennial exposition committee and the local organizations are taking the lead in the matter of having a mammoth bicycle display at the exposition. The various organizations akin to cycling have appointed a committee, to be known as the Centennial committee. This committee met April 4 for the purpose of organizing. It is the intention to have the exhibit entirely out of the hands of manufacturers, and in this way every branch of cycling would be given recognition. The object is to give a grand exhibit of cycling interests.

#### Novel Method of Recovering Oil.

A simple but unique plan for recovering the large quantities of oil used in the factory of the Grant Ball Company of Cleveland where it becomes mixed with the emery used for grinding and finally



Assembling the Cyclometer.

becomes so thickened with particles of emery and steel as to make it of the consistency of mud, has been hit upon. In the city where this material accumulated no other way of disposing of it could be found except to pay for its removal outside of the city limits, for it was of such a character as to make it practically impossible to dispose of it in any other way. Finally the managers thought of running it through a centrifugal cream separator. The plan was tried and is now regularly in use, the separator completely separating the particles of emery and steel from the oil, which runs out at a separate spout, so that it can be used over again, while the mixed emery and steel can be disposed of much more readily than when, as formerly, mixed with oil.

#### Not a Good Auction Town.

A bicycle repairman in Calgary, Alberta province Canada, writes that a carload of bicycles made in Toronto was taken into that town by a stranger who advertised them heavily and then held an auction sale April 12 and 13. Only four machines were sold the first day and five the second day. The machines were valued at \$50 for the diamond frame and \$55 for the drop frame models, but the bids at the sale began at \$30 and went down to \$22. The sale was brought to a sudden end.



Running Paper Strip Onto Gang of Rings.

curacy of dimensions being obtained by large grinding stones upon which the edges are beveled. In addition to being made a close fit, the glasses are cemented in place in order to insure the dust and damp proof qualities of the instrument.

#### Assembling Made Easy.

If any demonstration of the precise nature of the workmanship embodied in modern cyclometers were needed it would be afforded by the assembling department of the Veeder factory. Despite the intricacy of the mechanism, no tools other than those essential for assembling purposes, such as pliers, etc., are employed. The narrow margin for clearances is in itself a sufficient guarantee against any initial inaccuracy being overlooked.

It is an interesting fact that the Veeder cyclometer is quite free from springs or other controlling devices, the mechanism being of toothed gearing type as indicated by the accompanying drawings.

After the various parts have been assembled the instruments are subjected to a severe test by being mounted upon a machine on which they are operated by toothed gearing at a speed equivalent to fifteen miles a minute.

Many of the tools which have been referred to in the above are made in the factory. The tool room possesses an especially fine equipment, including Pratt &



Numbering the Casts.

American bicycles placed in the hands of professional burglars through the "courtesie" of the manufacturer on the sole condition that the burglars, when they should happen to be arrested, shall proclaim loudly in court what make and pattern of bicycle enabled them so often to elude their pursuers. The story is as old as our export trade to France, but is dished up with all the attractions of lit-





**T**HE rider of a National is always proud of his machine.  
 It's handsome and well made.  
 Like a good horse well groomed it adds to its owner's pleasure in simply being "all right."  
 The real satisfaction in the purchase of a National comes when the buyer finds that his first expenditure is his last. No repair charges or delays later to reduce his cash or spoil his pleasure.  
 One season on a National and he says—  
*A National Rider Never Changes His Mount.*  
 Better join the procession.

**National Cycle Manufacturing Co.**  
 BAY CITY, MICH.

# Selling to Women

Women are great shoppers—great buyers. They want the most—the best—for their money.  
 You can not show a woman an out of date bicycle and expect her to buy it.  
 To get her trade you must give her more for her money than your competitors can give her.  
 Particular women—those who want a beautifully designed and finished bicycle—a graceful mount—can be satisfied with the

## ANDRAE model 41

They will compare it with other makes at the same price. They will see its advantages—its better qualities—and then they will buy it.  
 But that's not all. They will send other customers to you. They will show you that satisfied customers are good advertisers.  
 Write us about our Model 41; it is the finest ladies' model in the market.  
 If you will send us your name and address we will make you a subscriber of our monthly paper, "The Andrae Agent."

**Julius Andrae & Sons Company**  
 Milwaukee, Wisconsin.

**"IT FITS THE RIDER"**

THE 12-OUNCE

**HOLLENBECK RAWHIDE SADDLE..**

THE LIGHTEST SADDLE MADE.



Note the New Unbreakable Wood Cantle....

**\$2.00**

From any Dealer

**COOL HANDSOME COMFORTABLE**

30 High Class Wheel Makers Use Them.

**HOLLENBECK SADDLE COMPANY,**  
 SYRACUSE, NEW YORK.

**N. C. A. or L. A. W.**

which ever it is. The Olive red crown racer will be there and give a good account of itself.

\*\*\* RIDE AN \*\*\*

# OLIVE

A THREE-YEAR-OLD AND A THOROUGHbred \*\*\*

The most attractive wheel on the market—one of the reasons for its remarkable sale in the trade this season. OLIVE agents everywhere are enthusiastic. Join hands with us in success and represent the popular wheel.

\*\*\*

**The Olive Wheel Company**  
 SYRACUSE, N. Y.

## THE CRAZE FOR HIGH SPEEDS

### FRENCH WINDSPLITTER WAGONS

#### Wood Being Abandoned for Metal in Construction of Motorcycle Bodies— Novel Electrobat.

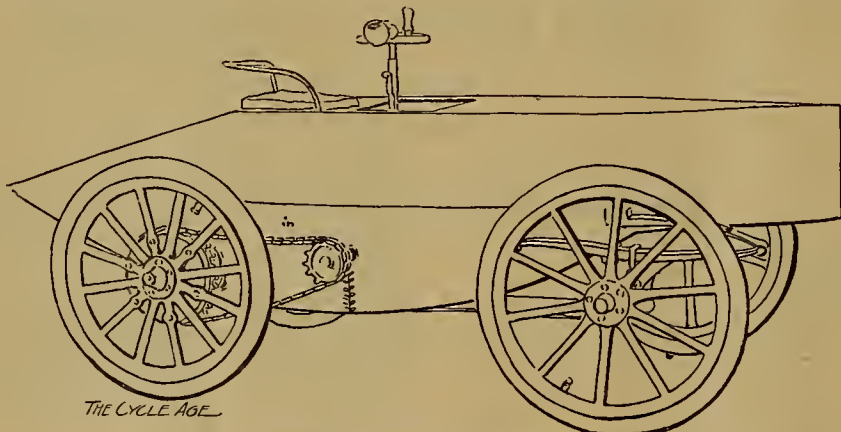
Until last summer it was the usual thing in France for those who wanted a motor vehicle to purchase the motor mechanism which they preferred and take it to a carriage maker to have the wagon body made. The result was usually that the carriage maker acted upon the ideas traditional in his trade and produced a carriage more or less on conventional lines and more or less unsuited to the requirements of mechanical power, says Locomotion Automobile.

#### Bollee Sets the Pace.

Then suddenly appeared the Bollee vehicle, which took part in the race from Paris to Amsterdam. The inventor had cared very little for conventional ideas. His vehicles did not correspond to any of the known and catalogued styles. They looked like the fishing barges used in the shallow waters around Newfoundland. The radiators extended freely on both sides in front from the cooling jacket, and the whole was dished out to the public in metal finish with aluminum trimmings and painted in ribald colors.

#### Carriage Makers Follow Suit.

That was the first step in crime against sacred tradition, and to this step may be traced the present rapid and revolution-



Count Chasseloup-Loubat's Mile-a-Minute Vehicle.

ary development in the building of motor wagon bodies. It was the farewell to laboriously curved and dovetailed wooden boxings, panels and ebony trimmings. All must give way to metal. Aluminum is king. When the elder Bonogne, who has solved the problem of being as fine a motor vehicle maker as he is carriage designer, conceived the idea of using aluminum panels first in steel frames and subsequently in frameworks also of aluminum, he had no suspicion of the revolution which he was accomplishing. After him followed other and younger men. There is still a little wood left in the wagon body proper, but the desire to dispense with even that is growing.

#### Looks Like Torpedo Maker's Work.

Says one of the best known carriage builders on this subject: "Now I am a coppersmith. Automobilmism means kettle making. Talk to me about angle-irons, rivets, gaskets, stop-cocks, packings and reinforcements and I will answer you."

"And that disgusts you?"

"Not in the least. I have been obliged to go through a short apprenticeship and hire a few special workmen. A little trouble in the beginning, but today the die is cast and all goes swimmingly."

It is in fact only necessary to cast a glance at such vehicles as that on which Chasseloup-Loubat made his recent record, or that which Jenatzy is building or the Paiva wagon and several others un-

der construction, to perceive that they might be more readily made by a torpedo manufacturer than by an ordinary carriage maker.

In the accompanying illustration is shown the Chasseloup-Loubat electric vehicle here referred to which was constructed by Mr. Jeantaud and on which its owner made a kilometer, flying start, in 3 4-5 seconds on March 4 this year, at Acheres, France.

#### Olds Vehicles to be Pushed.

A Detroit syndicate capitalized at \$500,000 has secured control of the Olds Gasoline Engine Works of Lansing, Mich. Ransom E. Olds, president and manager of the old company, will bear the same relation to the new company. The new company has been formed in order to manufacture Olds motor vehicles on a large scale under the Olds patents and the Olds motor-trucks under a patent which is now pending, and a factory will be built in Detroit for this purpose. The Lansing plant whose capacity is fully engaged in turning out Olds gasoline engines for other than motor vehicle purposes will be continued in operation for the present.

#### Electric Cabs for Chicago.

The Illinois Electric Vehicle Transportation company is being formed with a capital of 25 million dollars under New Jersey laws for the purpose of supplying Chicago with electric cab service. The new company will start with five percent of the nominal capital actually paid in, and the balance will be called for as

circumstances may dictate, thus giving the stockholder a chance for a progressive investment. The company is to be an organization vassal to the Electric Storage Battery company of Philadelphia and the Electric Vehicle company of New York, from which the batteries and cabs are obtained. These parent companies hold stock in all the subsidiary companies formed, of which that for Illinois is only one of many, and collect a royalty on the gross business done by them. The liability of stockholders is limited to ten percent of the face value of stock.

#### Cycle and Motor Cycle Races.

The motor cycle is becoming an indispensable feature in cycle racing in France and all the road races are now run off in two sections, one for ordinary bicycles and the other for petroleum machines. The pacing, too, is done very largely with autocars. In the annual race from Paris to Roubaix the success was due almost entirely to the motor cycle and the autocar pacing. Close on sixty motor cyclists took part in the event.

#### Electric Cabs in Paris.

The cab company in Paris, France, has finally succeeded in placing ten of the much heralded electric cabs at public disposal. They were placed for hire on Easter Sunday, April 2 and have been much in demand. They run, satisfactorily.

## AUTOMOBILIST EXPERIENCES

### EXPRESSIONS FROM THE USERS

#### Brisk Demand Leads English Manufacturers to Slight Minor Points in Construction—Troubles Result.

In this country the great majority of motor vehicles in practical use are still of the electric type, which are nearly perfect and free from trouble within their limited range of travel. Little is heard from the persons who buy them. The number of hydro-carbon vehicles and steam vehicles that have been subject to prolonged and hard usage is very small and the prospects are that more real experience will be accumulated during the summer of this year than it has been possible to gather from disinterested sources in all previous time from the "commencement of eternity" to date, so far as motor vehicles of United States manufacture are concerned.

In the absence of home data the communications from foreign drivers and owners of motor vehicles possess a certain interest, foreshadowing, as they do, to some extent the development in the public attitude to automobilism which may be expected here. In this respect the following extracts from letters written to The Autocar speak for themselves:

#### Speed on the Track.

Some time back Mr. Wridgway's statements as to the speed he could make on his motor tricycle were questioned, but his Easter Monday performance at the Crystal Palace track, when he beat the French kilometer record holder, Monsieur Rigal, and covered over twenty-nine miles in the hour, is a very conclusive refutation to the persons who questioned Mr. Wridgway's word. This performance for a motor tricycle on a track would be equal to about thirty-five miles an hour on a "straight away." The vast concourse of people who flocked to this meeting is strong testimony of the interest taken in motor races in England, and we hope to see considerable developments in this line, especially as the law prohibits fast speeds on the highway.

London, April 4.

PENNINGTON & BAINES.

#### Practical Experiences.

Like Mr. Collins I have had considerable trouble with the cylinder joints on a Benz car. Although I do not doubt that red lead is an effective remedy, it has other disadvantages which make it almost inadmissible. For instance, if a joint went on the road it would take a couple of hours or more to chip the surface clean, whereas if asbestos sheet is used and well oiled, and a spare joint carried ready on the car, it could be re-made in twenty minutes.

I quite agree with the suggestions made by Mr. Hope and others as to using boiling water on cold mornings, and also with Mr. Cragg's criticisms.

RUSSELL.

Maidenhead, March 29.

#### Electric vs. Tube Ignition.

Having read with interest the opinions of your correspondents upon "Electric v. Tube" ignition, I thought my actual experience of the tube method might interest some of your readers. I bought a Daimler in May, and ran her at Liverpool during the trials, and afterwards at Yarmouth and elsewhere, up to present date having covered over 9,000 miles. When I left the works at Coventry I was given six wicks, in addition to those then in the burners, and I have some of them still by me. This fact speaks for itself, as anyone who understands tube ignition knows he will have trouble if his lamps do not burn properly. How is it these wicks have lasted so long? Simply by occasionally taking them out and washing them in clean spirit, and always using clean and good petrol. I have just completed a seven hundred miles run without the slightest hitch, having encountered all sorts of weather.

Lowestoft.

O SIMPSON.

#### Nine Months Experience of Medicus.

In your issue of March 11 it was suggested (in reply to my communication) that (1) my piston rings were worn because of deficient lubrication. That was not the case; I particularly looked after the lubrication myself. From the very first I had great trouble with them. (2) The cause of jarring, etc., was due to deficient greasing of the pulleys. I may say that the cause was as I stated, the countershaft revolved in the collar of the central ball bearing; the

shaft at that place was actually worn bright. Perhaps Mr. Buttemer will suggest some good reason why that bearing should not be firmly fixed. My own experience compels me to come to this conclusion, that the "Ideal" of the '98 type, as sent out by the makers, was quite unfit for the daily use of a medical man; besides, in justice to those who are contemplating buying a car, those of us who have already bought one should tell the plain unvarnished truth about our experiences, then The Autocar will be of great practical help. It is ridiculous for anyone to calmly state that the "Ideal" is a good car if only properly looked to. She is a good car when one has fitted the following: New coil and wires, lever for regulating time of firing, new hand brake with rubber blocks, Brampton chains, pinion and sprocket wheels, chain lubricators and mudguards, new grease pots, piston rings, ignition plugs, band brakes, studs and nuts, tires, and, finally, altered the belt guides.

Even then with all this extra money spent on her I do not consider she is strong enough, or her engine powerful enough, for use over rough country roads during the winter months. MEDICUS.

**Some Technical Inquiries.**

Would some of your numerous mechanical readers kindly assist me to information I ask below re light spirit motors:

First, whether the mixture of vapor and air is subject to the same laws as a perfect gas; if so, give formulae for working.

Second, relative capacity usually used of compression chamber to stroke, not length of cylinder. Proportions of mixture, pressure after compression, taking into consideration the heats of gases, rule for finding same, amount of rise in temperature of cylinder after working, say, fifteen minutes without jacket, and what effect the temperature of cylinder has on gases when drawn cold into cylinder, pressure after explosion for different mixtures, and method of calculating, same, if any, from pressure before explosion. If firing is by tube, at what pressure will a certain mixture explode, and what mixture will it be for that pressure when tube is at bright red heat; also is it usual to so arrange proportion of cylinder capacity and compression space as to fire before top center, on center, or after center, supposing speed to be for explosion five hundred per minute, gear ratio two to fifteen, speed of vehicle fifteen miles per hour, and weight of vehicle and motor one hundredweight. A book containing the above would serve all purposes if any reader can tell me of one.

EXPERIMENTER

**Interchange of Ideas.**

I have to thank Mr. Sinclair for his letter in your last issue. He has not cut quite so deeply into the Benz pie as I have; if he had done so he would find, as I have found, that whereas there is a maximum of trouble, worry and expense to be experienced with a Benz car (I speak of cars delivered prior to 1899) for some time after delivery, when this has been got over they run excellently with a minimum of trouble and expense, and in fine do command one's admiration.

I beg also to thank one or two gentlemen who have kindly written to me privately to thank me for calling attention to a few improvements needed in the Benz car.

Birmingham, April 4. A. C. CRAGG.

**Saturday Runs.**

Several of my friends have asked me to get up some Saturday runs, so (weather permitting) on Saturday next, the 15th inst., there will be a run to Effingham, leaving Hyde Park corner at about 2:15, via Sloane Square, along King street, Putney bridge, Wimbledon Common, Kingston Vale, Kingston Surbiton, Ewell, Leatherhead, Bookham, Effingham. Hotel Blucher for five o'clock tea.

A few seats can be booked at a guinea each.

Further particulars of Hewetson, Ltd., 6 Dean street, Soho, W. H. HEWETSON. April 7.

**New Positive Ignition Coil.**

A Ruhmkorf coil designed for ignition in hydro-carbon gas engines has been placed in the market by Varley Duplex Magnet Co., 138 Seventh street, Jersey City, N. J. It requires from 4 to 6 volts and is capable of a spark 2½ inches long. It is said to produce positive ignition with the customary distance between terminals.

**Cooling Problem With Gas Engines.**

A French writer proposes to make the inner wall of explosion chamber and cylinder in gas engines very thin, surrounding the thin metal with a sieve-like thicker wall to afford the necessary strength to resist the force of the ex-

plosions. By this means he expects to obtain rapid cooling with or without additional radiating wings which should lead the atmosphere into constantly renewed contact with the metal to be cooled.

**Elliott's Gas Engine Carriage.**

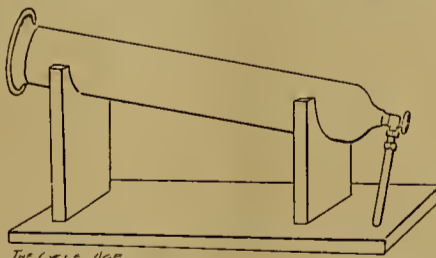
W. L. Elliott of Oakland, Cal., has constructed the motor carriage which is shown in the accompanying half-tone and has given it hard and prolonged tests which convince him that it is a thoroughly practicable vehicle. The motor is a two-cylinder 4 H. P. hydro-carbon en-



gine, which will run the carriage 18 miles per hour on level roads and make it ascend 15 percent grades with two passengers on board at 4 miles per hour. The exhaust is muffled and the carriage is so much like a horse-drawn vehicle that horses hardly look at it. The price at which the maker sells this style of carriage is \$1,200 complete.

**Carbonic Acid Gas for Inflation.**

A tire inflater is on the market now in Paris, which is charged with carbonic acid gas sufficient for a dozen tires. It is in the shape of an ordinary inflation pump of the hand size and is in fact a miniature inflation tank which the rider may conveniently carry in his pocket. The "pump" is charged at any of the beer saloons where liquid carbonic acid gas is employed for drawing beer or effervescent drinks. These large tanks containing 22 pounds of carbonic acid gas are also placed at the disposal of cycle depots or cyclists at the price of 50 francs (\$10) and one charge in them is sufficient for 1,000 tires. They are recharged for 10



francs. The illustration shows the act of charging a bicycle "pump" from one of these tanks. For inflating the tires of motor vehicles a larger size of "pump" is used.

**Is Petrol a Good Word?**

It is asserted that the gas engine, the gasoline engine, the hydro-carbon gas engine would sound sweeter under the English name petrol-engine. It would sound less dangerous to the broad public who associate the word gasoline with the extreme of caution for cooking purposes and with positive danger for locomotion.

At the Charles River Park trials it was noticed by hundreds of people that

the gasoline used for heating the boiler of the Whitney steam engine motor burst into an uncontrolled flame at times owing to faulty arrangement or workmanship, and it was the erroneous impression created among most of the lay spectators and also among some of the reporters, that the vehicle was gas-engine driven and that similar things might occur with any gas-engine driven vehicle. While an explanation would readily make it clear that similar mishaps are mechanically impossible in hydro-carbon engines and quite unnecessary with steam engines, though their boilers be heated with gasoline or petroleum spray, the most practical way to forestall misconceptions among the public would probably lie in the adoption of the word petrol to designate all internal combustion or explosion engines. It is more popular than hydro-carbon and less suggestive to the imagination of the timid than gasoline.

**Automobile Recharging Stations.**

A new company has been formed in Paris which proposes to establish along all good and popular roads leading out of the city little electrical stations where motor vehicles and motorcycles can be recharged. These will be placed at intervals of ten to twelve miles and will be equipped with all the supplies and appliances for recharging electric, petroleum, benzine and other motor driven vehicles. There will also be established in connection with them small restaurants, repair shops, medical depots and exchange stations for bicycles and motor vehicles.

Park commissioners in Buffalo have awarded a contract for park carriages to the National Motor Transit Company who will use the Haynes-Apperson pattern of gas-engine carriages. It was considered impracticable to use electric vehicles because these, in the opinion of the commissioners, cannot be operated profitably at a five cent fare per passenger.

The Woods Motor Vehicle Company has been incorporated at Trenton, N. J., with capitalization of ten million dollars. The leading spirit of the company is C. E. Woods of Fischer Equipment Company of Chicago.

The price question has swelled the demand for motor tricycles and small motor vehicles in France and England. It is beginning to create inquiries for motor bicycles and tricycles in United States.

De Dion & Bouton have abandoned the radiating wings heretofore employed by them for cooling the explosion chamber and cylinder and have returned to the use of water for this purpose.

The business of the Rubber Tire Wheel Co. of Springfield, O., has been sold to the New York Autotruck Co. for a consideration named at \$250,000.

Berlin boasts of fifty cycling clubs, but that is a long way behind London, which boasts of over 200 clubs with headquarters in the London district.

The Bavarian army has been supplied with cycles weighing about 22 pounds, fitted with 20-inch wheels and low gears.

La Locomotion Automobile, the oldest motor vehicle journal in the world, prints only four thousand copies per week.

A motor carriage valued at \$2,818 was exported from this country to Madrid a fortnight ago.

A. D. Stealey of San Francisco is building a motor bicycle to the order of a local cyclist.

# THE PASTIME AND SPORT

Balfour's  
Interest in  
Cycling

At the "coming-of-age" dinner of the National Cyclists' Union of England in the latter part of March, Henry Balfour, leader of the House of Commons, made an address upon cycling and the influence of the bicycle on modern life, which has been copied in all English speaking countries of the world.

Mr. Balfour is president of the N. C. U. and as such was slated for the speech, but when it became known that an important debate in parliament was to close that evening, and that Mr. Balfour would necessarily wind up the discussion with his reply to the criticisms to which the bill has been subjected, there were not wanting many who expressed an opinion that his presence at the dinner of the N. C. U. was an impossibility, and that the function would in a manner resemble the play of Hamlet without the Dane, but he had accepted the Union's invitation, he had fixed his own date, and though the delivery of a great and important speech upon one of the most important measures the government had introduced made it difficult, Mr. Balfour kept his word, and proposed the toast allotted to him in one of the most graceful and comprehensive speeches ever made in connection with the pastime of the sport.

Ninety-nine out of a hundred lesser men would have considered the circumstances ample to have excused them from even graver engagements. But Mr. Balfour evidently felt that the occasion was one upon which he should make an effort to be present, albeit at no small inconvenience to himself and to his party, and so he went, was most heartily welcomed, and certainly won the heart of every cyclist in the room.

Limiting  
Continuous  
Racing

Through the signing of the Collins bill by Governor Roosevelt of New York all contests of human speed and endurance whether afoot or awheel are limited to twelve hours' going a day. This is a statute far more stringent and less easily evaded than the Illinois enactment seeking the abolition of six-day racing.

So long as man has ambitions to succeed in contests of strength and endurance there will be a desire to test his limit against others, whether the majority of the public think it foolish and brutal or not. Six-day bicycle racing has yet to score a fatality. Its winners and leaders appear year after year to go further and faster and show greater endurance than ever and to demonstrate their superiority over the newcomers who are vigorous in a strength and health as yet unimpaired by these contests.

Illinoisans suspect an inside reason for their anti-six-day law and New Yorkers think they can trace theirs to personal revenge against the "outlaw" movement.

Twelve-hours-a-day racing will have to be accepted as a substitute for 142-hour continuous grinds, under the present Collins act, but twelve hours a day, for six days makes a sufficiently high-pressure contest.

Titled and  
Sweepstakes  
Races

The early entry blanks and official announcements of the programmes of meets to come present an innovation in giving to the principal races distinctive names. The tendency toward the time-honored practices of the turf is further shown in the establishment of sweep-

stakes, wherein the first prize is enlarged by embracing the entire added money, the place prizes being obtained from a division of the entrance fees. The importance of races will be increased in the public estimation by the featured races bearing titles. It will also assist the memory and we will no longer have to identify performances by referring to "the mile open Eddie Bald won at Boston" or "the two-mile handicap Arthur Gardiner captured at Louisville." The value of names to turf events is unquestioned. The greatest contest in foot racing is remembered as "the Sheffield Handicap." In cycling the "Austral" and the "Zimmy" made these great Melbourne and Paris contests known the world over, just as was the great "Quill" \$2,000 handicap in this country two years ago. In England some big races bear the names of the cups offered. Now we are to have the Wild West Handicap and the Ambrose Dash, the Atlantic Sweepstakes and the Seaside Dash, and the Great Peace Jubilee Handicap.

These names appeal to local pride, help identification and add to advertising importance. It is an innovation that has doubtless and deservedly come to stay.

The Need  
of Motor  
Pacing

Motor pacing may come and in fact may have to be adopted to save the middle distance paced racing game. It is not because man pacing is in itself impracticable or that it lacks elements necessary to promote speed, arouse excitement or sustain the interest in these contests. It is solely a question of expense.

The maintenance, transportation and incidental expenses of a pacing team of thirty men is not far below \$1,000 a week. The American Cycle Racing Association's team, which piloted Michael, Titus and the two Taylors last year cost \$8,000, and this sum has had all to do with putting this association out of the outdoor game for the coming season. The N. C. T. A. brigade, which paced McDuffee and Linton, met with equal financial disaster despite the fact that in most cases it captured the big \$2,500 purses. Neither association can be tempted into another trial, nor will the manufacturers consent to be the "angles." So it seems not only likely but certain that continuous middle distance racing cannot be expected the coming season and that in this line nothing can be looked for beyond a few big matches with pacing teams gathered especially for the occasion. "Pop" Elkes says he will have none of it for Harry unless some one will supply the pacing and unless this be forthcoming from the outside he will turn his speedy boy to the sprints and the big handicaps for a living. Floyd McFarland declares he will not be tempted from his former lucrative line of racing by his single success against Harry Elkes in California. Michael is out of the game until he proves that his pigskin ambition cannot be realized. Somebody has been jollying Nat Butler, that most consistent and constant of money winners at the sprints and handicaps, that he is a natural born pace follower and that pace will be furnished him. This leaves only McDuffee and Major Taylor really in the game. The former is sure to stick to it and seek a living through the occasional middle distance matches that may be promoted. Taylor is ready on anything in the game; for he can follow pace in matches, go for records at any distance behind the big machines and tackle the sprints and han-

dicaps with assurances of a greater measure of all-around success than any rider in the world.

We have some motor pacing already on tap here. Fournier showed a mile indoors in California in 1:32 and will take to himself in his brother a side partner to furnish pace in middle distance matches. He purposes to attach the foreign-patented contrivances to the lighter American machines, though it would seem that his present outfit is fast enough for all purposes. If his motor pacing proves enough of a success early in the season to establish it as a feature or the solution of the middle distance game here, either more machines will be imported or our American makers will turn them out at home without much delay.

In England there have been recent trials of motor pacing that have proved most encouraging to its adoption. At Crystal Palace F. W. Chinn went two miles in 4:11 behind a petroleum tandem and the same day R. Palmer rode five miles behind the same machine in 9:24. It being early in the season and the game being comparatively new, there was no attempt at high speed, the men riding merely "to see how it went." A more important trial was made at Woodgreen track on March 31, when Linton beat Chase in a ten-mile match behind petroleum tandems in 18:53 2-5 with a gale blowing.

Local  
L. A. W.  
Organization

Directly in the line of conveniences to be furnished members to secure their continual allegiance to the L. A. W. and the addition of new members is local organization. This was a pet project of ex-President Potter and is deservedly to be pushed by his successor, President Keenan. But the idea can be carried much further than the mere establishment of recruiting stations and headquarters for convenient enrollment and renewal.

Headquarters might be established that would serve primarily as clubs for resident members and refuges for touring and visiting L. A. W. members. The club idea is not developing with anything like the increase in the cycling population, but thousands who might not care to undertake the expense or fancy the attractions cycle clubs have to offer still might welcome a less ambitious and expensive place of meeting such as the local L. A. W. headquarters could offer with its maps, road books, cycle journals and good fellowship of companion wheelmen as sufficient attractions. Recruiting and renewals would follow, for the convenience of a meeting place would be found among the foremost inducements to become L. A. W. members.

## Attitude of the I. C. A.

New York City, April 17.—It is learned from authentic mail advices received last Friday that at the meeting of the International Cyclists' Association a most important understanding was reached in the matter of the future recognition of one of the warring race control bodies in this country, despite the official announcement of the action of the meeting to the effect that the I. C. A. could not consistently interfere in the cycle racing complications now existing in this country, and that the status quo must be maintained. It will be remembered that the Canadian Wheelmen's Association, in session at Toronto the day preceding,

adopted a resolution, which was cabled to Paris, requesting that the L. A. W. be required to make good its claim to complete control of the sport by July 1, and failing in that that all N. C. A. riders be granted racing privileges in affiliated countries pending the settlement of the racing controversy in the United States.

As a result of this advice of the Canadian body, the I. C. A. board agreed that in event of the N. C. A. establishing an indisputable supremacy over the L. A. W., the latter body would be asked to give up the control of racing and, if necessary, compelled to do so in time for the Montreal world's championships not to suffer from the state of affairs. It was also agreed that forthcoming events in this country would be watched closely and should it be deemed advisable a mail vote of the executive board would be taken to bring about any desired result which might be found necessary, so that the Montreal events would not be handicapped. At the Paris meeting some of the delegates were in favor of striking the L. A. W. off the membership list and affiliating with the N. C. A. at once. Such action, in the opinion of Secretary Sturmey, would have been illegal at that time, and after an animated discussion the subsequent conclusion found favor as being the logical solution of the difficulty.

### AMERICANS RUN SECOND

**Banker and Starbuck in Events in Paris—Grogna Wins Great Prize of the East.**

The Great Prize of Easter, the first of the big annual meets of France, was run this year at the Prince track in Paris April 2 and 3. The weather was perfect and the attendance was very large. Fifty riders competed for the great Easter prize, America being represented by Banker, Hills and Vanoni. Banker was heartily received, it being his first appearance in a Paris race meet since 1895. He was not in very good condition, but succeeded in winning his heat and the semi-final and lost the final by only a length. The race was run in eight heats at 1,000 meters, Banker, Parlby, Grogna, Gougoltz, Cornet, Bourotte, Felix Henry and J. B. Louvet being the winners. The three semi-finals were won by Parlby, Grogna and Banker. The final was paced after the American style by Collomb, who dropped out on the last turn. At 100 yards from the tape Grogna started his sprint and crossed the tape winner by a length, with Banker second and Parlby third. Time, 1:24.

The 1,500-meters handicap was run in seven heats. Banker ran second in his heat from scratch, Guiguard qualifying. The final was won by Gougoltz from 40 yards, Louvet running second from 35 yards and Carmant third from 55 yards. The time was 1:52 2-5.

Fourteen teams took part in the 2,000-meter tandem race, which was run in three heats, won by Domain and Banker, Carmant and Mathieu and Deleu and Leclercq. Six teams started in the final. At the bell Deleu and Leclercq started to sprint, but Domain and Banker went after them and succeeded in passing them, but in the homestretch Carmant and Mathieu made a splendid fight against the French-American team and finally crossed the tape in the lead by the width of a tire.

There were fifty-eight starters in the scratch race for class 2 riders, which was won by Bourotte, with Mathieu second and Leclercq third.

Starbuck, Bourotte, Lambrechts and Cissac were the only starters in the 10-kilometer electric paced race. At the pistol the four machines started off with their men at full speed, Starbuck taking the lead. But in the third Bourotte gained the lead, which he increased to

550 meters at the tape. Starbuck finished half a lap ahead of Lambrechts, with Cissac fourth. Time, 11:46.

### ANNUAL MEETING OF I. C. A.

**International Body Decides Not to Recognize National Cycling Association Just Yet.**

The annual spring meeting of the International Cyclists' Association took place in Paris April 1. Eleven delegates represented France, England, Belgium, Denmark, Norway, Scotland, Switzerland, Holland and Italy. E. Staal of Denmark presided, and E. Sturmey from England was secretary. It was a long and exciting meeting and more than thirty important questions were discussed and decided.

The American racing situation was reviewed at length and it was finally decided that the status quo would be maintained; that is, that the League of American Wheelmen would continue to be recognized as the official body governing racing in the United States until further developments and decision.

Following is a summary of the more important business transacted at the meeting:

Announcement made that the American Cycle Racing Association had withdrawn its suit against the I. C. A. and Secretary Sturmey.

The German Wheelmen's League announced that it renounced control of professional racing in Germany and Austria, concerning itself hereafter only with amateur racing. These two countries, thus being without any organization to govern the pros., the I. C. A. decided to issue licenses direct to professional riders in those countries.

Report made of the failure of the New Zealand Cyclists' Alliance which was affiliated with the I. C. A. at its last meeting.

Arranged details concerning the international championships to be run at Montreal in August.

German Wheelmen's League announced that the profits on the last championships run at Vienna amounted to \$2,895.

Affiliation of the League of New South Wales Wheelmen accepted.

Report upon the decision of the Dutch Wheelmen's League to give up the control of the sport in Holland and the application of a new organization for affiliation in place of the old body accepted.

Decided that the match between the professional and amateur mile world champions shall not take place on the same day that either of the mile championships is run.

Adopted a resolution expressing the desire of the I. C. A. that all national championships be run before August 1 of every year.

Rejected the proposition that the profits of the international championships be divided in proportion to the expenses incurred by the several countries in sending riders to the meet.

Established a new classification for records made with the aid of wind shields.

Decided that no rider could represent at the international championships any national organization except that of the country where he was born unless he had lived one year in a foreign country and become a bona fide resident thereof.

### PARIS-ROUBAIX ROAD RACE

**Champion Surprises Everybody by Winning Great Event on His Debut—Motor Tricycle Race.**

The fourth annual Paris-Roubaix road race was run April 2. As it was the first big road event of the season, it attracted much interest, particularly on account of Bouhours and Champion, who were to try their fortunes for the first time on the road. Thirty-one starters were pushed off. They were paced by motorcycles.

Champion's debut was more than had been expected, as he won the race in excellent style, covering the 166 miles in 8:22:38. Garvin, the winner of last year's race, quit the contest in the first stage to Beauvais, owing to an accident which delayed his motor pacing machine for twelve minutes, and Champion passed that station first, his time for the forty-seven miles being two hours. Champion was also first to reach Amiens, 85 miles,

in 3:28:00. Bouhours was only two minutes behind and seemed confident of winning, but less than five minutes after the start from there the motor machine he was following ran into a spectator, who turned a complete somersault, and upset itself so that Bouhours ran into it and injured his elbow. Champion continued to gain steadily and arrived at Roubaix with a lead of 23:40 over the second man, Bor, while Garvin, Jr., was third in 8:46:17.

The race for motocyclists had fifty-seven starters, all on petroleum tricycles, and all started at the same time. It was the greatest racing spectacle ever seen in France. All the best motocyclists, both old and new, were entered. The first to meet with an accident was the former world's champion, Rene Kuhling, who was obliged to give up the race about fifteen miles from the start. Osmont, Vasseur and Beconnais were first to reach Beauvais. They arrived together in 1:34:00. Between that city and Amiens many accidents forced several good riders out of the race. Vasseur and Osmont reached Amiens together in the lead in 2:07:00, but at Arras, 127 miles, Osmont had the lead, being six minutes ahead of the second man, and Vasseur had dropped back. Osmont arrived at Roubaix, the finish, first, having covered the distance in 5:35:30, at an average speed of almost thirty miles an hour. Beconnais finished second ten minutes later. Girardot was third and Vasseur fourth.

### TRAINING AT FOUNTAIN FERRY

**Crackajacks Gathering at the "Old Kentucky Home"—Low Gears and High Speed.**

Louisville, April 19.—Twenty racing men will be training at Fountain Ferry track before the close of the present week. Half that number have already arrived, including many of the most prominent ones, and many dark horses for the circuit work of '99. Tony Landen-wich says that things were never more promising than at present for the greatest camp over which he has been the presiding host. Owen Kimble, who opened this track to the outlaws through his early attempts to train here, has been joined by a number of good ones. From California the McFarland-Stevens combination arrived last week, together with F. Ed. Smith, who trained them last year, and "Jim" McFarland, a brother of the rider. Bald is expected early this week and Tom Cooper and Earl Kiser are already here. The last two were refused admission to Chester Park track at Cincinnati, that track having been closed to the N. C. A. riders pending a decision regarding the future policy to be made within a short time. From Chicago the newly formed Cleveland team is expected this week. Arthur Gardiner is the star of the new team with "Jimmy" Bowler and John Fisher as his mates, all Chicagoans. Gardiner will work the Grand circuit of the N. C. A. while the other two ride in the west under the same control. Harley Davidson and Angus McLeod, the Canadian champions, reported at Hot Springs, are expected also this week. Charles Porter, the former amateur, is training here for a middle distance career in the professional ranks. A letter received from August Mertens indicates an intention of that rider to join his old-time mates here in an attempt to gain a membership in the Union from which he was barred last fall owing to his stand taken at Philadelphia. J. S. Johnson and W. E. Becker from the Twin Cities will also be here soon, and Johnson's team mate, Ben Munroe, from Memphis, will join him here.

The work at present consists of five to eight-mile rides morning and afternoon by the entire bunch. Small gears are being used generally and yet the pace is oftentimes as fast as two minutes with

sometimes a fast finishing quarter, but more often not, as few of the men are equal to a hard sprint yet. Kiser is working out the medicine which he took the past winter to rid his system of the malaria which ruined his chances last season. Cooper is in fine shape for hard work and says that he is now rid once and for all time of the troublesome boils which ruined his chances for the two past seasons. McFarland and Stevens suffered from colds contracted in the indoor races in California and both have started in at the beginning and will work up to the great speed of which they had plenty out on the coast. Kimble is twenty pounds lighter than last year and is going great guns. The other riders watch him with interest, believing that in the Kentuckian they have perhaps the hardest nut of the season to crack.

McFarland trains for middle distances and will soon be following pace as it is his intention to take on Elkes for three races this year at different distances and to race Gibson May 30. He will pay no attention to McDuffee, who wants a race with him but will ride under L. A. W. sanction while McFarland will race with the N. C. A. riders.

The weather thus far has been all that it should be and four or five weeks of the present state of things will put the men right on edge. It is plainly apparent that the '99 circuit chasers will travel seconds faster than ever before.

#### Pennsylvania Path Bill Passed.

Philadelphia, April 17.—The Parshall bicycle side path bill, which passed both houses of the state Legislature earlier in the week was signed by Governor Stone last Wednesday and is now a law of the commonwealth. Boiled down, the new law provides that when twenty-five freeholders, who are also wheelmen, shall present a petition to the court asking for the building of sidepaths along certain roads, such paths shall then be constructed, under the supervision of a road supervisor appointed for the purpose, the funds to build and maintain the paths being provided by an annual tax of \$1 imposed upon each wheelman resident in the county. The new measure also provides for the appointment by the court of three resident wheelmen to act as side-path commissioners (who shall serve without compensation) and for the punishment by a fine of \$10 or 30 days' imprisonment, or both, of all horsemen or drivers who shall willfully injure or obstruct any sidepaths constructed under its provisions. Preparations are being made by parties of wheelmen in at least a dozen counties in this state to petition for such sidepaths before the close of the present month.

#### Momo in South America.

Momo, the Italian, has been having quite a triumphal march in South America since he landed there. He has at last, however, been defeated by Oliveira, the Brazilian rider, in the South American Brassard. It is claimed for Momo that he was suffering from the results of a spill, but it is only fair to the winner to point out that the time ranks as a South American record. At the close of the proceedings Momo challenged the Brazilian to a match race.

#### Easter Meet in London.

The announcement of the first important motorcycle match race to be run in London attracted nearly 12,000 spectators to the Easter meet in Crystal Palace. Wridgway and Rigal rode against each other for an hour on the "infernal machines." At the fifteenth mile the Frenchman's machine went wrong and caused him to lose eight laps during which the public jeered him without

mercy so that soon after resuming the match he left the track, while Wridgway finished the hour, covering about 29 miles 1,600 yards.

Palmer and Chase rode a thirty-three-mile match for the Century cup, paced by motorcycles and tandems. The race was very fast from the start, the lead alternating until at the tenth mile Palmer gained a lap. Chase then went after him and for fifteen laps forced him to take the outside but in the twenty-second mile Palmer gained another lap and finally won with two and a quarter laps lead. His times were: ten miles, 18:25 2-5; twenty miles, 39:17 2-5; thirty-three miles, 1:03:01.

#### Birmingham Two-Day Meet.

A two-day meet was held at Birmingham, England, April 2 and 3, in which most of the English crackajacks took part. The principal event, the mile race, was declared no race because the time limit set was exceeded. The half-mile scratch was won by Howard, with Bocquillon second, defeating Jenkins, Chinn, Camp, Reynolds and Scott. Camp won the mile scratch race with Bocquillon second, Chinn third and Green fourth. The ten-mile scratch went to Green, Camp running second and Jenkins third. The mile handicap run the second day went to Howard, with Camp second and Hall third. Platt-Betts and Chase rode exhibitions.

#### Sunday Match in Galveston.

Jack Prince seems to be making a success of Sunday racing in the south. He ran a meet in Galveston, Tex., April 9, and drew a fair attendance for the place and programme. The most interesting event was a ten-mile match between the two "Bobs"—Walthour and Miller—paced by two tandem teams each. The contestants started from opposite sides of the track, making it a pursuit race. In the first three miles Walthour gained 100 yards, but lost them all in the fourth mile. At the sixth mile Miller was leading by 200 yards. Walthour then made a desperate effort, jumping his pace makers and going after his opponent, who, however, in a hard sprint won out with a lead of an eighth mile in 21:37.

#### Walters Wins in Record Time.

A special cablegram announces that Walters of England won a fifty-mile race on the Parc des Princes track in Paris in the world's record time of 1:22:42 3-5 April 16, lowering the best previous time made by A. D. Frost in 1896 by 12:03. Digeon finished second and Linton third. Starbuck quit the race at twenty-five miles.

#### German Season Opened.

The racing season opened in Germany with a big Easter meet in which the scratch races were run after the American style and interested the spectators greatly. Verheyen and Buchner were the stars of the occasion, the latter winning the 2,000-meter scratch race the first day and the former the same race the second day.

#### Entry Blanks Out for Big Meets.

Announcements of early spring race meets are beginning to take the more tangible form of entry blanks actually out. The first in the field is that of the Atlantic Athletic Association for the opening of Manhattan Beach on June 17. Its main feature is the Atlantic sweepstakes at \$10 each, with \$500 for first and the entrance money divided among the second, third and fourth men in the ratio of 50, 35 and 15 per cent., respectively. The Seaside dash at a half-mile has \$185

in money divided among the first four men in the usual proportion. The opening meet of the season, for which entry blanks are also out, will be at Ambrose park on May 20. The headliner race will be the Wild West handicap at a mile, with \$200 for first, \$100 for second, \$50 for third and \$25 for fourth. The Ambrose dash at a half mile, with \$185 in money, and an invitation two-mile multi-cycle handicap with \$175 up, will give the money chasers generous rewards for their efforts.

#### Singrossi Wins in Record Time.

The 2,000-meter international scratch race run at the two-days Easter meet held in Milan, Italy, April 2 and 3 was won by Singrossi from a good field including Pontecchi, Eros and other leading Italian racing men. Connelli ran second in the final. Eros and Cisotti won the 2,000-meter tandem race.

#### Illinois Road Bill Defeated.

The Curtis hard roads bill, fathered by the Wheelmen of Illinois, was killed in the state legislature at Springfield last week. When called up for third reading it was defeated by a vote of forty yeas and sixty-three nays, the farmers having rallied against it.

#### NEWS IN BRIEF.

Edouard Taylore, the French rider, at the recent meeting of the I. C. A. in Paris paid the fine imposed by the L. A. W. to Secretary Sturmev, said he was sorry, and would not do so again.

The Walthour and Kraemer brothers, "Bob" Miller and other riders who have been racing in Texas this winter on the circuit of Jack Prince, are riding in good form and will soon come north to train with the racing men at Fountain Ferry.

Bald says that some time in June he will ride a series of match races with Arthur Zimmerman. There will probably be three races, the first being scheduled for Buffalo, the second for Asbury Park, and the third for some one of the tracks in New York.

As a result of the efforts of the Associated Cycling Clubs of Long Island, the police will from now on see to it that trolley car motor-men pay strict attention to the ordinance providing that all cars come to a full stop before crossing asphalt streets and bicycle roads.

The Associated Cycling Clubs of Greater New York decided by a unanimous vote last Wednesday night not to run a race meet at Berkeley Oval on Decoration day. Thus the L. A. W. loses its last chance to conduct races in the metropolitan district under its own auspices.

A large race meet is to be held on the new third-mile board track in Charleston, S. C., May 10, during the reunion of the United Confederate Veterans, when 40,000 to 50,000 visitors are expected to be in the city. Some of the fastest racing talent in the country will be secured for the occasion.

Frederick and Nawn have arrived in Paris from this country. The former states that while the result of his trip to America was not brilliantly successful from a financial point, he has learned much regarding continuous racing and that the 100-hour race in Roubaix next month will prove it.

After an interval of four years the Poor-man road race from Hamilton to Cincinnati is to be revived and will be run this year on Decoration day instead of July 4, as formerly. Early indications warrant the belief that it will be the most successful ever given. It is under the management of J. E. Poorman, Jr.

Chicago, Milwaukee and Racine will be formed into an N. C. A. circuit. Race meets will be given successively during the season, each city giving a meet in the same week. The prizes will be liberal and it is thought that the riders may be safely tempted from the eastern tracks at different times for a trip around this circuit.

It is the intention of Jack Prince to work north from the Texas points this spring, building coliseums in various cities and connecting all the main points from Omaha to Galveston in a chain of tracks upon which circuit meets will be held the year round. Prince has a national coliseum circuit plan in mind.

**The rush is on!**

*Mr. Dealer*—Now is the time to sell bicycles. If a sale slips past you now, it is gone forever. Nobody wants to wait at this season of the year for your manufacturer to make a bicycle before he can ship it to you.

**How are you fixed?**

Is your manufacturer able to take care of your requirements? Many of them are not, and there is going to be a panic for *good* bicycles in a very few days. Hadn't you better tie up with a responsible concern who can take care of your trade promptly? We can handle your business, and the

**“Patee Crest,” \$35.00**

is the easiest selling bicycle on earth. Built on the lines of the most consummate symmetry and perfection; magnificently finished; the easiest running machine ever straddled. Have you seen it? Read what this man says of it:

ST. AUGUSTINE, FLA., January 23, 1899.

PATEE BICYCLE CO., Peoria, Ill.:

**13,000 Miles  
on a...  
“Patee Crest”**

*Gentlemen*—Please send me catalogue of your '99 bicycles. I have ridden a “Patee Crest” since February, '98. I am a constant rider, my cyclometer showing 13,000 miles. Notwithstanding the long distance and hard usage, my machine looks as well to-day as the day I bought it, except, of course, the enamel is not so highly polished.

I certainly think the “Patee Crest” is the equal to any machine made, and I have ridden all of the standard makes. I have ridden the above number of miles through all kinds of roads and weather, and in spite of all this unusual wear the bearings are perfect and show no signs of wear. I have been to no expense on the machine and have only given it enough care to keep the bearings well oiled. I want another just like it for my wife. Awaiting your reply, I am,

Respectfully,  
R. V. PERINE, *Gen'l Agent Amer. Typewriter.*

We didn't pay a cent for that. He bought his wheel, paid cash for it, and we never knew he had it till we got this letter. We have hundreds more just like it, but not quite so many miles.

**Interested?** Write for catalogue to-day. It's the only cinch in the bicycle business to-day. Quick sales and good margins for the agent.

**PATEE BICYCLE CO., 111-113 Main St., Peoria, Ill.**

**To Buy Well is as important ..as.. To Sell Well**

TO ACCOMPLISH THE LATTER YOU SHOULD DO THE FORMER THROUGH US \* \* \* \* \*

**We Sell Everything  
for Bicycle Builders  
and Dealers**



**We Sell at Prices  
that Will Help  
Your Business**

In fact, your business is our business, and it is policy to look well after both. \* \* Never lose a customer. They come handy at times. We can help you retain them.

**EXCELSIOR SUPPLY CO.**

(ESTABLISHED 1876)

88-90 Lake Street, Chicago, Ill., U.S.A.

Our name is a  
Guarantee.  
It is back of  
Our Business...

Promptness  
is another feature  
of the service  
offered you.

## RETAIL MISCELLANY

## General Information Concerning Cycle Agents and Repairmen Throughout the Country

## Arizona.

Mesa—Abell, Wilbur & Co. have incorporated as the Abell-Wilbur-Mullen Hdw. Co.

## Colorado.

Pueblo—Geo. M. Knebel, L. J. Knebel and C. M. Bergman have incorporated as the Knebel Cycle Co.; capital stock, \$2,000.

## Connecticut.

Bridgeport—The bicycle store of Thomas R. Aston on State street has been entered by burglars, who succeeded in securing nothing but a second-hand machine.

Naugatuck—F. Alton Clark will open a bicycle store in the Hopson block with several makes of machines and a complete line of sundries.

Norwich—The Plaut-Cadden Co., which is a consolidation of the Cadden Cycle Co. and the business of the late Abraham Plaut, will be managed by Julius W. Cadden and Rutherford C. Plaut. At their handsome new store on Main street are displayed bicycles and jewelry, clocks, etc. The bicycles comprise a full line of Monarchs, the Victor and Victoria and the Rambler, Ideal, Stormer and many other makes.

## Illinois.

Beardstown—C. A. Underwood, a practical machinist who has had much experience in bicycle repairing, has opened the first exclusive repair shop that Beardstown has had. It fills a long felt want.

Chicago—An explosion in a drug store next door to the bicycle shop of W. H. Smith, Thirty-first street and Michigan avenue, shattered the building, causing him a loss of about \$1,000.

Chicago—The George W. Phalin Co. has incorporated with a capital stock of \$10,000. It will manufacture and deal in household goods and bicycles. Incorporators are Claud B. Raynor, Clyde A. Morrison and Herbert H. Howe.

Freeport—Hacket & Lichtenberger will be succeeded by the Hacket Hardware Co.

Harvey—Ranger & Hilbish have dissolved partnership.

Hoopestown—James M. Newton has taken a partner in his hardware business. The firm is now Newton & Lamon. Bicycles are handled.

Rockford—Charles Rapp will open a bicycle store in the Peterson block. He will carry a full line of bicycle parts and sundries.

Sheridan—Condon & Dondanville will open a bicycle repair shop in Dondanville's hall. They will have a new line of the best make of bicycles and bicycle sundries.

Woodstock—Alfred Annis will run a bicycle repair shop for G. S. Adams & Co.

Wm. C. Beindorf will in future conduct the machine shop formerly owned by Beindorf Brothers at Litchfield.

## Indiana.

Anderson—T. C. and Homer Stamper will open a first class repair shop on Tenth street. They are both expert mechanics.

Decatur—J. E. Ellsworth & Co. will soon open a bicycle establishment in North Second street.

Heckland—S. D. Humphrey will hereafter handle a stock of bicycles.

Indianapolis—J. D. Hoss has sold out his bicycle business.

Kokomo—Edgar Apperson has engaged Mr. Schmalholtz, a bicycle repairing expert of Indianapolis, who will do all kinds of difficult repairing at the South Main street store.

Rensselaer—A. L. Willis, the veteran gunsmith and bicycle repairer, is now able to get to his shop again after a long absence on account of a broken hip.

Terre Haute—A. Chaney, a bicycle dealer at the corner of Seventh and Walnut streets, is adding the last touches to an improvement on a fuel oil burner patented by him in August of 1892. The change is the substitution of artificial gas for crude oil. The burner is to be used for welding and bending all kinds of iron metal.

Yountsville—A. C. Yount has moved his bicycle business to Crawfordsville.

## Iowa.

Des Moines—W. J. Riddell, manager of the Des Moines Cycle Co., announced a guessing contest on the number of miles which

a bicycle, propelled by electricity, would run in a given number of hours, the winner to receive a \$40 bicycle free. No less than 11,000 guesses were recorded and they vary from 7½ miles up to 13,000.

Creston—James H. Patt, dealer in hardware, etc., will be succeeded by Geo. W. Craig.

Stanwood—The hardware store of Homer E. Hart has been damaged by fire.

Story—Holm Brothers, dealers in harness and bicycles, have dissolved partnership.

Williams—Ed Ripley has sold his bicycle business to A. W. Ross.

Fred Miller of Epworth has purchased John Eichner's bicycle repair outfit and can be found at T. O'Connor's, where he is prepared to do all kinds of work in this line.

## Kansas.

Salina—Axel Westerlund is planning to start in the bicycle business.

## Kentucky.

Bowling Green—The Kellogg Hardware Co. has been damaged by fire.

Middlesboro—Coleman Hobb has purchased W. A. Cooke's stock of bicycles and will this season run a bicycle livery. He will also employ an expert and do all kinds of repair work.

## Maine.

Winthrop—D. L. Caldwell is fitting up the Chandler store for bicycle repairing.

## Massachusetts.

Somerville—Fred B. Crowell, late of the Iver Johnson company, has opened an agency for the Hunter bicycle at 337 Somerville avenue.

## Michigan.

Bad Axe—H. P. and J. Deno of Saginaw will open a bicycle repair shop.

Bay City—Frank Graves has started a bicycle repair shop at 107 South Henry street and is now prepared to repair machines of all descriptions. Sundries will also be sold.

Beaverton—John T. Harvey has sold out his hardware business.

Grand Marais—Arthur Bryde will soon open a bicycle livery for the season's business and will have in stock a large number of standard makes of bicycles.

Leslie—Annis & Sayers have bought the bicycle interest of M. A. Osborn and the trade will be rushed.

Monroe—F. S. Andrews of Elkhart, Ind., will open a bicycle repair shop.

## Minnesota.

Monticello—Andrews, Brewster & Co. succeed M. B. Bryant in the dry goods, hardware and bicycle business.

## Mississippi.

Lumberton—J. D. Allison has opened a ladies' bicycle repair shop at the Barnes House. He makes punctured tires a specialty.

## Missouri.

Lancaster—S. W. & J. T. Mills have sold their hardware business to F. O. Birney.

Mexico—Mr. Hord has retired from the hardware firm of Hord & King. V. A. P. King will continue the business.

## New Jersey.

Atlantic Highlands—Holmes Quackenbush has resumed his old position as bicycle repairer in T. J. Emery's shops.

## New York.

Cambridge—William Shiland will open a bicycle livery and repair shop in Beach's hall.

Greenwich—Chas. Weston of Keeseville has opened a bicycle repair shop on Main street.

Livonia Station—P. B. Crain & Co. are out of business.

## North Carolina.

Graham—Holt & Wharton have gone out of business.

## North Dakota.

Fargo—Geo. D. Brown has added a new lathe and other machinery to the repair rooms of his bicycle house.

Hope—J. H. McCallon succeeds McCallon & Merriell in the hardware and bicycle business.

Grand Forks—Lyons & Co., bicycle dealers on DeMers avenue, have just added to their already well equipped bicycle store a large

assortment of sporting goods. This company carries the largest lot of bicycles in the state and does a large amount of repairing.

Inkster—Reiton & Scouton, furniture and bicycle dealers, have gone out of business.

## Ohio.

Cedarville—Chas. M. Crouse will continue the hardware business of the firm formerly known as Crouse & Bull.

Dayton—Borderwisch & Krug, bicycle dealers, have dissolved. Edward Borderwisch will continue the business.

Gallipolis—Charles Brown has reopened his bicycle repair shop.

West Alexandria—Mr. Wampler has retired from the firm of Oxer & Wampler. The business will be continued by Oxer & Flander.

Youngstown—Joe Seaburn has opened a bicycle repair shop on Church street.

L. G. Simpson succeeds Powell Brothers in the hardware business at Chesterville.

## Oklahoma Territory.

Oklahoma City—W. W. Storm & Co. have sold out their hardware and bicycle business.

## Pennsylvania.

Corry—The Brigham Hardware Co., Limited, has been succeeded by McCray Brothers.

Erie—The new bicycle store opened by Chambers & Suerkin, 22 West Ninth street, is now fully equipped and the enterprising firm is ready to handle any amount of business. The store has been refitted and the salesroom presents a neat and attractive appearance. The firm is handling the Andrae as a leader, and also the Keating and Remington models. A bicycle livery stocked with new Andrae machines is advertised and a full line of sundries is for sale; also a complete repair department has been established.

Lancaster—Isaac Diller's Sons have gone out of the hardware business. They are succeeded by Herr & Snively.

Smethport—Alex. Clarke will open a bicycle repair shop in the Backus block.

F. A. and N. M. Hendershott have moved their bicycle shop to Wyoming avenue, Kingston.

G. C. Giess' bicycle store at Seigfrieds Bridge has been robbed of \$50 worth of tools and clocks.

The Wrigley Hardware Co. succeeds Miles Wrigley in the wholesale and retail hardware business at Mahaffey.

The new bicycle store of the Williamsport Supply Co., 213 West Fourth street, Williamsport, is made attractive by a row of electric lights around the front window.

It is said that George McBath, the hardware dealer of Kylertown, will open a bicycle repair shop and will be prepared to doctor any old machine.

The hardware store of Bard, Reber & Co., Reading, has been damaged by fire.

## Texas.

Dallas—Boren & Cave, bicycle dealers, have dissolved partnership.

Waco—The vehicle establishment of J. D. Thomas has been damaged by fire.

## Utah.

Richfield—J. M. Peterson, of the firm of J. M. Peterson & Co., is dead.

## Vermont.

Burlington—H. G. Pearson is starting a repair shop at 33 Battery Place.

Milton—M. A. Coon has been fitting up rooms for a bicycle and clothing business.

## Wisconsin.

Ashland—Kuhn & Gregory, bicycle dealers, have gone out of business.

Green Bay—M. Anheuser is moving his tools, etc., from the west side and will open a gun and bicycle repair shop at his old stand in the Duchateau building, Main street.

Milton Junction—T. I. Place has engaged competent help for his bicycle department and will repair machines promptly and properly.

Mount Horeb—Alvah Webber has opened his bicycle shop in the Bokken building.

Stevens Point—The Hoeffler Mfg. Co., has just become settled in an elegant new store which occupies the entire main floor of about 400 square feet in the Atwell block. It is one of the largest and best appointed exclusive bicycle stores in the state. Orders are already booked for about 300 machines. The company wish to call attention to the fact that, buying bicycles in large quantities for cash, they are enabled to give the public closer prices than is possible in handling small lots.

Superior—Tony Lund has opened his bicycle shop at 1716 North Fifth street and is prepared to do anything in the line of cycle work. He will keep a number of machines in stock and expects to manufacture some this season.



# CYCLE AGENTS

Vol. XXII. No. 25.

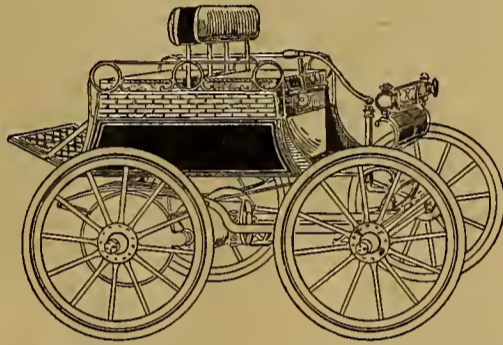
THE CYCLE AGE OFFICE.

April 20, 1899.

## The Cycle Age and The Motor Vehicle Trade

### A Monthly Supplement

Commencing with its issue of May 4, and continuing with the first issue in each succeeding month The Cycle Age will publish a Monthly Supplement, containing exclusively Motor Vehicle matters.



### The Weekly Department

Every issue of The Cycle Age will, as heretofore, contain a Motor Vehicle Department in which will be chronicled the most important commercial and mechanical developments in the same line.

Motor Vehicles are today more easily managed than horses and some day in a not distant future they will also be more generally understood and more generally employed.

Some day, too, the horse on the streets of any great city will be regarded as a curiosity.

That such conditions are desirable from every standpoint is undeniable. Dirt and noise will be largely avoided and transportation will be accelerated. There is no end to the reasons which might be cited for the general adoption of Motor Vehicles. Chief among all is their great economical advantage over horse power.

On the other hand, the greatest obstacle to their general adoption lies in the public's unfamiliarity with the subject and their hesitation to shoulder the first comparatively heavy investment in an article of which they know little.

To remove this obstacle will be the main aim of the Motor Vehicle Department of The Cycle Age, as it has been in the past.

Letters received with great frequency from Cycle Age subscribers, show that CYCLE AGENTS as a class are deeply interested in the development of Motor Vehicles commercially and mechanically.

Fifty-five Thousand houses of that class, some of them, too, buyers of immense quantities of goods scattered all over the world, are readers of The Cycle Age. They will eventually become buyers.

The advantages of properly presenting the merits of complete vehicles and their parts before men of this class is obvious.

Through the Monthly Motor Vehicle Supplement it will be possible to carry out this endeavor more thoroughly than heretofore and to reach not only the merchants who read The Cycle Age, but also all others among

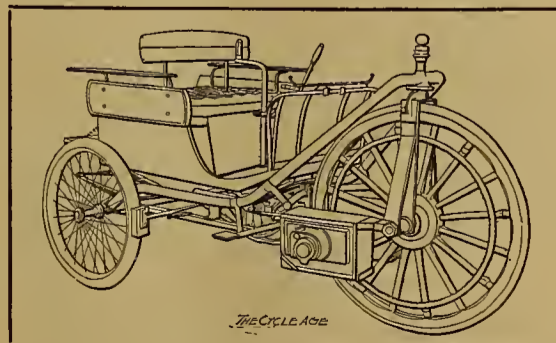
the broader public who are specially interested in Motor Vehicles, but for whom The Cycle Age is not intended.

So long as the public preferences are yet undecided and mechanical progress in Motor Vehicle construction is rapid, there is a large element of risk in manufacturing motor vehicles to carry in stock. Capital therefore holds back and is not invested in the industrial establishments for their manufacture, directly. Yet the industry cannot develop rapidly until it can produce ahead of orders, because orders are not given in great numbers until all who might give them have ready access—wherever they live—to inspect and try vehicles similar to that which they may desire to buy.

To break this deadlock between manufacturers and prospective consumers and set the new trade going will be another aim of The Cycle Age.

Nearly every day commercial companies are being formed to buy and sell or hire motor vehicles. Such companies, while not identified with any one Motor Vehicle manufacturer, relieve in a measure the industry from the need of immediate large capitalization, and form the indispensable link through which the public may become practically acquainted with motor vehicles before investing in them. Such companies are largely composed of

men who have had the opportunity to satisfy themselves of the future awaiting the Motor Vehicle trade. When properly conducted they will reap profits through their enterprise while also accelerating the industry and serving a useful public purpose. To promote the interests of sound and conservative auxiliaries to the Motor Vehicle Industry of this character will also be within the scope of

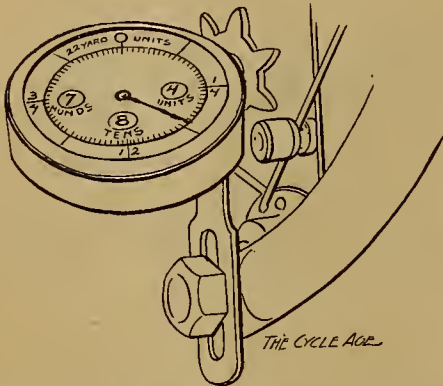


The Cycle Age Motor Vehicle Department and Supplement.

# INFORMATION FOR BUYERS

## TRENTON CYCLOMETERS.

The Trenton Watch Co. of Trenton, N. J., is able to turn out first-class cyclometers in large numbers at moderate prices through the facilities of its large and well equipped watch factory and the many thousand Trenton cyclometers now in use speak well for the reliability of the little recorders. Model E, which is the company's leader, is shown in the illustration herewith. It registers 10,000 miles and repeats. It weighs but one ounce. The case and dial are of aluminum.



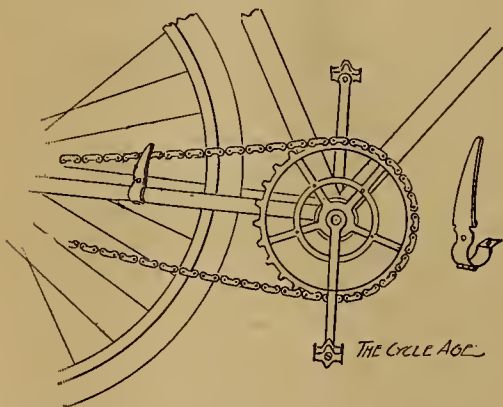
The dial which does not readily break or crack is one of the original features of Trenton cyclometers. The constantly moving hand is plainly visible to the mounted rider, who may watch his progress without difficulty. The cyclometer can be run forward or backward at a high rate of speed without danger to any of its parts. There is a system of interlocking wheels carrying the small registering dials, which prevent jumping or inaccurate registration. The company also manufactures two patterns of different size of its 1,000-mile repeating instrument.

## REMOVAL OF THE FRASSE COMPANY.

The Frasse Co., established in 1806, will move from the present address to 33 Cortlandt street, New York city. Its increase of business demands the removal in order to accommodate the large line of machinery and tools. The location will also bring the company in closer relation with the machinery trade. This house was established in 1806 by Henry F. Frasse, in 1842 carried on by William H. Frasse, and incorporated under the present name in 1892. It is headquarters for Stubs' tools, files and wire; Sterling lathes and Starret's tools and cutters.

## BORDO CHAIN GUIDE.

The accompanying illustration shows the appearance of the Bordo chain guide when attached to a bicycle. The device is simple and inexpensive and prevents a loose chain from swinging out of its correct path and catching the right crank end. The guide is also valuable in preventing chains from overriding sprockets, which occurrence often ends in broken chains and buckled sprockets. It is full nicked and the inner face



against which the chain runs is lined with leather securely attached. The clasp is made in forms to fit round, oval and D shape rear forks. The manufacturer is the Nehoiden Specialty Co., Needham, Mass.

## RUBBER NECK SADDLES STAND SERVICE.

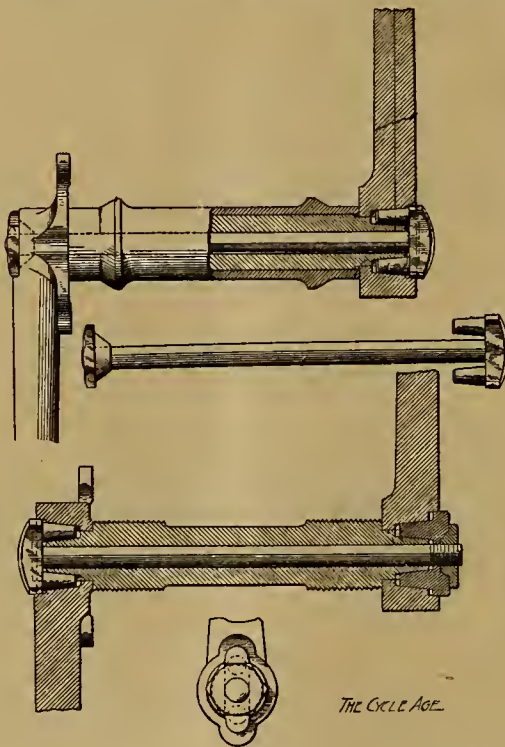
Some doubts seem to have been entertained by competing saddle manufacturers and some dealers regarding the durability of the honeycomb rubber cushion which is a characteristic feature of all Rubber Neck saddles

made by the Bunker Saddle Co. of Chicago. It has been thought that under continued usage the walls of the cells would break down so that the saddle would lose its form and elastic qualities.

That this is a false impression is proved by the condition of many Bunker saddles that have done service for one or more seasons and been ridden thousands of miles without having lost shapeliness. A pair of Rubber Neck saddles which have been used for a season on a tandem belonging to a member of the Cycle Age staff and which have frequently met with perspiration and rain are still in good shape, literally, and perfectly serviceable for this season.

## CRANK SHAFT FOR CHAINLESS MACHINES.

The crank shaft mechanism shown in the accompanying illustration has been patented by J. H. Holak for the Aurora Automatic Machinery Company. Either one or both cranks are detachable. The first drawing shows one detachable and the other fixed with the shaft. The shaft is in this case surrounded with a cone-bearing sleeve abutting against the crank hubs at both ends. In another similar form, not shown, the cones are formed upon the shaft and the sleeve is dispensed with. The second drawing shows both cranks detachable and the shaft threaded for the reception of cones. The shaft is bored for the passage of a bolt, of which the head is formed with two taper pins of circular cross section, which fit into



tapered recesses formed partly in the surface of the tapered shaft-end and partly in the crank hub. A securing-nut which enters into a conical recess in the outer face of the fixed crank is threaded upon the free end of the bolt and serves to draw the taper pins securely into their sets, thereby also drawing the detachable crank onto the tapered shaft end. When both cranks are detachable tapered locking pins form integral parts of a washer which is slipped over the bolt before the securing-nut is applied. By the use of tapered locking pins the inventor attains a method of fastening which affords plenty of binding surface independently of the taper fit of the crank hub upon the shaft. The crank hub may therefore be pressed tightly into a definite position against the shoulder or sleeve on the shaft without danger of lost motion between the parts. The cranks are thus always at the same distance from each other when fastened, and this is deemed to be of especial value in crank shafts for chainless machines in which it is necessary that the gears be maintained in uniform relations to each other.

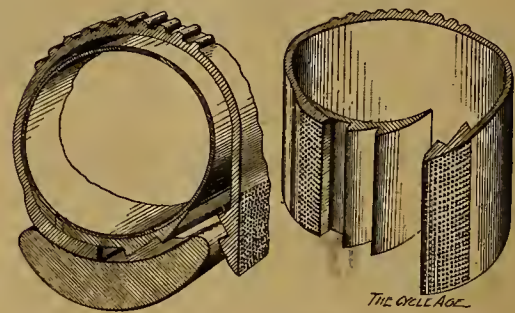
## STEARNS CANADIAN BRANCH TO MOVE.

E. C. Stearns & Co. have under consideration a project to remove their factory at Toronto to some other part of the dominion. The Canadian trade is supplied from the factory at Toronto and the trade has outgrown the capacity of the present plant. It is said that there is no chance to enlarge it and the firm finds it necessary to remove to some city, where larger quarters can be ob-

tained. The company has several places in view, but it will be some time before any definite decision is reached. The plan is to move in July so as to prepare for the 1900 trade. At the Toronto factory about 150 men are employed.

## IMPROVED RUSH TIRE.

W. I. Dreisbach of Williamsport, Pa., has secured patent for the improvements in construction of Rush tires which are indicated in the accompanying illustration. The locking flap which is made with fabric cut bias and is vulcanized to the tire sheath, has its



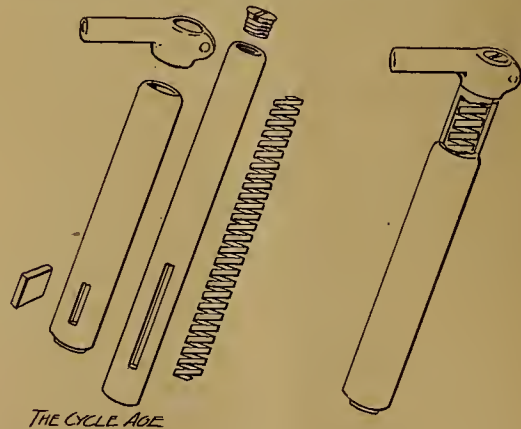
corrugations so proportioned in their diameters as to conform closely to the curvature of an ordinary crescent wheel rim when brought in interaction with the corrugations on the free edge of the tire casing, which are also correctly proportioned, and the result of this provision is that the joined edge will hug the rim closely without any tendency to warp away at any point. The patentee reserves the right to apply his construction to tires in which no inner air tube is employed, making his tire "tubeless." In such case the inner wall of the tire is to be coated with a thin film of rubber and the corrugated meeting surfaces of the locking-flaps are to be provided with sealing-layers of soft rubber.

## MAKE DEFINITE CLAIMS.

Glittering generalities will not as effectively advertise a mechanical article as they will a new brand of pills. The bicycle buyer is more anxious to know legitimate reasons for deciding than the ordinary advertiser seems to give them. R. H. Wolff & Co., New York city, are taking advantage of this laxity by constantly hammering away with distinct and positive claims for their eccentric chain adjustment, self-oiling bearings and button-hole hubs.

## THE REEVES IDEAL SEAT POST.

O. F. Reeves of Saginaw, Mich., states that he is prepared to furnish samples of his Reeves' Ideal spring seat post to the trade and can make deliveries in quantity by May 1. This post has been on the market since 1896 and is not an untried invention, as 7,000 of them are in use among riders scattered all over the globe. This year's product is constructed exactly like that of last year which is giving perfect



satisfaction and which the inventor thinks can hardly be improved.

The construction of the post is made plain by the drawing. It consists of two telescoping tubes with an inclosed compression coil spring made by one of the oldest and most reliable spring manufacturers in the United States. The ell is reversible for either forward or backward position. The tension of the spring can be regulated to varying weights by means of the screw at the top. The Reeves post can be applied to any bicycle having binder bolt or internal



Peerless No. 80

# "Neat, Not Gaudy,"

IS OUR AIM IN DESIGNING  
ORNAMENTAL BICYCLE BELLS.

Special Designs or Ornamentation Furnished  
and Estimates Given on Application.

WE ORIGINATED HAND-CHASED BELLS AND L. A. W. BELLS.



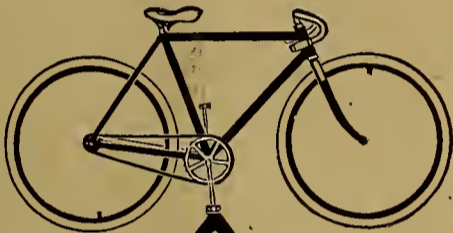
Corbin No. 5 P

THE BRISTOL BELL CO.

Bristol, Conn., U. S. A.

## Catalogue Now Ready!

CONTAINS  
EVERYTHING  
IMAGIN-  
ABLE  
IN BICYCLE  
LINE....



60 PAGES  
OF WONDERFUL  
BARGAINS

WE HAVE  
A BEAUTIFUL  
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THAT CAN BE  
LISTED  
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THE BEST, MOST HANDSOME  
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EASY TO ASSEMBLE  
FRAME SETS  
5 STYLES

FINISH SUPERB

SUNDRIES  
ALL KINDS

SEND FOR CATALOGUE. LOWEST PRICES ON EARTH

## SNELL WHEELS

ARE

Swell  
Wheels



Don't  
You  
Believe It



THEN GET OUR CATALOGUE  
AND BE CONVINCED ❁❁❁

The Snell Cycle Fittings Company  
TOLEDO, OHIO.

We know there are some  
towns in which the.....

Write us for catalogue and particulars re-  
garding the \_\_\_\_\_

# UNION

Union Whitehead  
At \$65.00

Union Redhead  
At \$50.00

Mr. Dealer:

THAT IS YOUR FAULT,  
NOT OURS.....

\_\_\_\_\_ is not sold. ❁❁❁

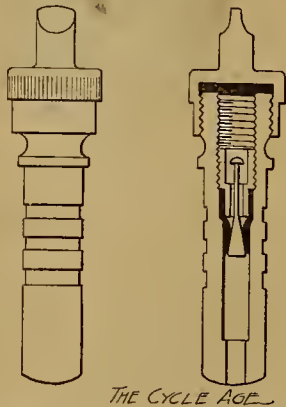
AND OTHERS

UNION CYCLE MFG. CO., Highlandville, Mass.

expander adjustment for screwing the post with 7-8 or larger seat mast. It is made in two regular sizes—7-8 and 1 inch. Bushings are furnished for masts of other sizes.

#### THE CLARK AUTOMATIC VALVE.

The valve whose construction is shown in the accompanying drawings is exceedingly simple, has few parts, no springs to drop out and no rubber washers. It consists of but three parts—cap, body and check. The



THE CYCLE AGE

check is effective and absolutely air tight, operating by means of a cone-shaped plunger entering the end of a section of small rubber tube and expanding it against the inner side of the body. The entire check arrangement can be readily removed from the body by unscrewing, as shown at the left. It has a universal thread for pump connection and the cap is provided with the usual projection for deflating the tires. The parts of the valve are made of non-rusting metals, and it is furnished with either plain or metal base. The Clark Automatic valve is the product of the Clark Novelty Co. of Rochester, N. Y., which also manufactures the Clark rotary bicycle alarm and contracts to make metal goods of all description and special tools and light machinery.

#### ELDRIDGE AND BELVIDERE CYCLES.

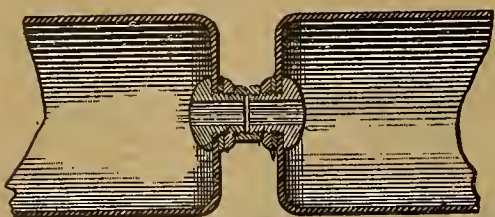
The standard finish on all the different models of Eldredge bicycles made by the National Sewing Machine Co. of Belvidere, Ill., is a lustrous ebony black with rims enameled in royal purple. The ladies' little diamond frame machine is, however, regularly enameled in robin's egg blue throughout. The two patterns of Belvidere machines, which sell each at \$40, are enameled in maroon with white rims unless otherwise ordered. The leaders of the Eldredge line are a pair of 30-inch wheel machines, the list price of which is \$60 each. This concern is one of the few companies listing a ladies' machine with 30-inch wheels.

The standard men's and women's patterns of the Eldredge sell for \$55 each. In general design and constructional detail they resemble the 30-inch wheel models, the only vital difference being the change in frame lines to suit the wheel size requirements.

The Eldredge Lady Diamond is a neat little 22-inch frame machine designed to suit the fancy and answer the needs of the lady rider preferring the rational type of woman's mount. It has the same construction and flush joint frame used on the other patterns. The Eldredge racer has 1-inch tubing in the frame and carefully machined light outside joints. It was on this machine that C. W. Miller made all of his long distance records and winnings. The Eldredge tandem has a simple, staunch frame with parallel diagonal tubes and is especially adaptable for fast riding. The handsomely illustrated catalogue issued by the company gives detailed descriptions of all of the models and presents clearly the various original features of Eldredge and Belvidere construction.

#### INNER TUBE JOINTS FOR AIR TIRES.

With a view to avoiding the difficulties incidental to splicing together the ends of rubber tubes F. R. Chamberlain of Newton,



THE CYCLE AGE

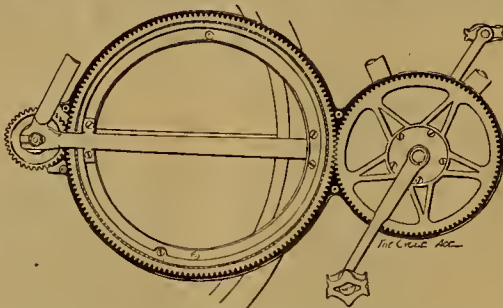
Mass., has devised and patented for the Newton Rubber Works the method shown in the accompanying illustration. Each end of the tube is in the molding drawn together so that the edges form a smaller opening than the diameter of the tire and is provided with a metal coupling member consisting of a head and a screw-threaded nip-

ple. A nut is screwed upon the nipple and against the gathered-in edge of the tube end so as to clamp the edge between the flat inner surface of the head and the nut. A washer or packing ring is interposed between the nut and the rubber. A coupling ring with right and left thread is screwed upon the two nipples which are threaded to correspond. The nipples are preferably hollow to allow air communication through them. By inflation the tube ends bulge sufficiently to abut against each other closing the gap between them, which is smaller than shown in the illustration.

#### VINDEX CHAINLESS BICYCLES.

The Reading Cycle Mfg. Co. of Reading, Pa., has been quietly at work during several months past, developing the Gentry gear mechanism for chainless bicycles, and has now reached the point where it can offer these machines to the trade with every assurance that the gear is a success.

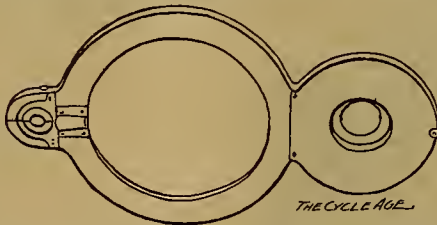
The front and rear gears are attached to the crank flange and rear hub in the same manner that sprockets are attached to a chain wheel. These gears mesh with the intermediate gear, which is comprised of two forged rings, one within the other, accurately machined; the inner ring is fastened with screws to lugs brazed on to the rear fork. The outer surface of this ring is grooved, forming a track for the balls, upon which the rear gear ring revolves, the latter being similarly grooved on its inner periphery. These gears are all machined as light as is consistent with strength, so that



there is not an ounce of metal more than is necessary to insure safety. The total weight of the bicycle with complete equipment is 27 pounds.

One of the principal points about the Vindex chainless bicycle is the ease enclosing the gears. This case is dust and water proof, all of the openings being protected by felt washers, making it impossible for the weather to affect in the slightest degree the running qualities of the machine.

In adapting the Gentry gear to the Vindex bicycles, provision has been made for the perfect interchangeability of the chainless model to the regular light roadster chain



machine. If for any reason the rider wishes to change his mount to a chain model, he has only to remove the gear and case, substituting Vindex light roadster front and rear sprockets. Provision has also been made for the simple adjustment of the gears so that they can be brought into closer contact with one another if necessary.

#### BRASS LINED TUBING.

The Wilmot & Hobbs Mfg. Co., makers of Clincher tubing, have issued the following letter to bicycle jobbers:

"You undoubtedly have noticed the numerous articles in the trade journals and daily papers of recent issue relative to the new process of brass lined bicycle tubes. This is the process of The Wilmot & Hobbs Mfg. Co., and consists of the application of molten brass to the interior of tubes, either seamless or Clincher, thoroughly uniting with the interior surface of the steel in a layer of brass less than one-half a thousandth of an inch thick, thus causing no material difference in weight.

"The advantages of this process you will readily appreciate, for it not only insures a perfectly brazed connection, but it entirely prevents the interior rust of tubes, which is almost invariably the cause of frame breakages; and it also prevents sympathetic rust from forming on the exterior of the tubes, under the enamel, which, as you know, causes the enamel to peel or chip off.

"In fact, the merits of brass lined tubes are so apparent that we feel sure you will fully appreciate them, the matter having

been brought to your attention; and as we have brass lined hundreds of thousands of tubes for prominent manufacturers this past year, we have no doubt but that many of the factories from whom you purchase wheels are already furnishing you with this brass lining throughout the tubes of their frames. We would suggest your corresponding with them to ascertain just which ones are using the process, for where you already have bicycles with brass lined tubes you should not overlook the advantages you can obtain in pointing out the feature to your customers in disposing of your goods.

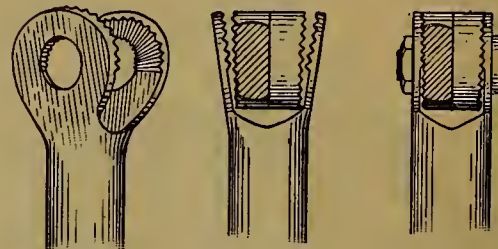
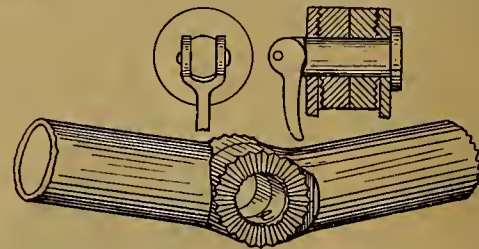
"We will send you on request a sample of this brass lined tubing for your inspection, and if you would like any further information on the subject we will be pleased to have you write us or see our Chicago representatives, Fred. W. Colson & Co., Manhattan building, or George Damarel, room 807 Postal Telegraph building, New York."

#### CARRIER TO FIT ANY FRAME.

The new package carrier of the Aetna Mfg. Co., 225 Dearborn street, Chicago, is designed to attach to rear stays of any shape as shown in the advertisement on another page of this issue. It is provided with clips at the top which are adjustable with the entire frame to any desired width apart, for attachment to either straight or cranked stays.

#### PATENT ALLOWED ON KELLY BAR.

Letters patent were recently granted to W. E. Kelly of the Kelly Handle Bar Co. of Cleveland, O., and assignor of one-half to Katherine J. Weed, of the same place, on the construction herewith illustrated. The principles of construction and operation are already well known through the advertising and sale of the Kelly bar for the past year. The claim covers "the combination of a bar stem provided with eyes spread outward at a slight angle and hav-



THE CYCLE AGE

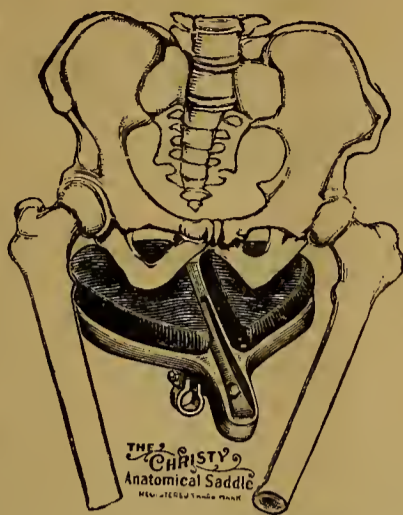
ing a segmental row of radial corrugations on their inside faces, handle bars having offset eyes provided with a continuous circle of radial corrugations on their outer faces, and a bolt and nut through said eyes for springing the stem eyes onto the bar eyes and clamping them together." The inventor states, however, that the bar adjustment may be locked by means of a small cam lever in place of the nut on the clamping bolt, which makes it possible to change the angles of the grips more quickly.

#### CANADIAN SUNDRIES CATALOGUE.

The Yarmouth Cycle Co. of Yarmouth, Nova Scotia, is supplying both the wholesale and the retail trade in its territory with sundries and cycle supplies of various standard makes. A plain, neat catalogue illustrating and describing the well assorted line of goods handled has been recently issued by the company. The majority of the articles listed are of United States manufacture. The company is also agent for the Massey-Harris, Stearns, Cleveland, Rambler and several cheaper lines of bicycles. The sale of these machines is carried on locally in a well equipped cyclery which includes repair and renting departments and facilities for handling all sorts of nickeling and enameling work.

#### LOZIER'S CANADIAN FACTORY.

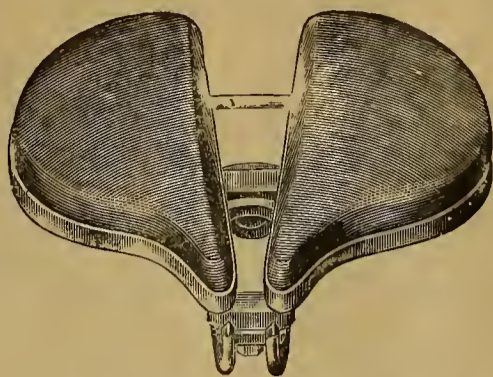
The Toronto Daily World of March 25 devotes two columns to a detailed description, with illustrations, of the Canadian factory of H. A. Lozier & Co. at Toronto Junction, Ont. Methods of manufacture and the distinctive features of Cleveland bicycles are given especial attention and the enterprise of the Lozier company is brought vividly before the reader. The Canadian factory was established in 1898 and in it Cleveland bicycles are produced for the trade in that



## DIFFERENCE IN SADDLES

Leather saddles can be bought at from 50 cents to \$1.00. That's why some makers equip their wheels with them. Christy Saddles cannot be bought at that price. The selling price is \$2.00 no more and no less—and they are worth it. Insist that your wheel be fitted with the Christy Saddle. No dealer will lose a sale on account of your preference.

The Christy Saddle has received the endorsement of 5,000 physicians.....



The New Christy Adjustable Saddle. Price \$3.00

ONE PRICE—THE SAME PRICE—TO MANUFACTURERS AND DEALERS

**A. G. SPALDING & BROS.** NEW YORK CHICAGO  
DENVER

## ELFIN JUVENILES

### Leg Reach... ..

Parents are deterred from buying wheels for their youngsters fearing that they will be outgrown in a year or two. We meet and solve this difficulty by means of the reversible crank bracket (the distinctive Elfin mark) which allows a variation of three inches in the leg reach irrespective of seat post, which when added thereto, makes a total of six inches

...IT'S A SELLING ARGUMENT...



WM. SOMERVILLE'S SONS  
66 W. Broadway, New York City  
Agents for Greater New York and Foreign Distribution

E. G. EAGER & Co.  
Toledo, Ohio  
Distributing Agents for Ohio, Michigan and Indiana



**FRAZER & JONES CO.**

353 W. Fayette Street.

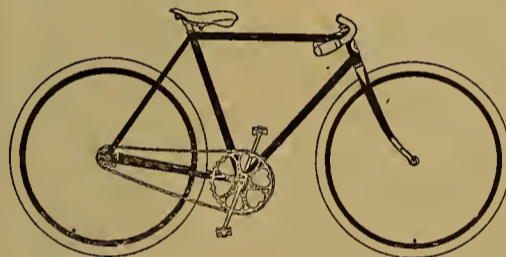
SYRACUSE, N. Y.

Ride a  
*WOW*

# FANNING..

AND KEEP KOOL.

We guarantee to make all of our parts, which insures quality and workmanship.



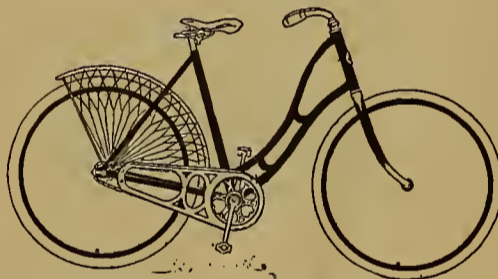
Shelby Seamless Tubing...  
Excelsior Needle Co.'s Spokes...  
Flush Joints...  
Trilby Sprockets.  
Our own Hanger.

Indianapolis Chain.

B. G. I. Pedals.

Adjustable Handlebars..

Our Own Hubs, Turned from Solid Steel Bar...



OUR CATALOGUE TELLS EVERYTHING.

**Fanning Cycle Mfg. Co.,**

194, 202 Clinton Street,

CHICAGO.

## "The Tapered Plug and the Double Lug"

Absolutely prevent the bar from giving way as others do.

ALWAYS SAFE AND RELIABLE \* \* \* \* \*

## FREDRICK ADJUSTABLE HANDLE BARS

All Jobbers, or FREDRICK MANUFACTURING CO., 220 Broadway, New York City

territory by exactly the same shop methods which have given the Cleveland such a widespread reputation for excellence in this country.

**REWARD FOR STOLEN CYCLE.**

John Gillen, sheriff, Ann Arbor, Mich., is advertising \$5 reward for the recovery of a Record bicycle made by the Butler Co. of Butler, Ind., and \$10 for the arrest or information leading to the arrest and conviction of the thief. The machine has a 22-inch frame, is enameled green, fitted with 1 1/2-inch Palmer track tires, ramshorn handle bars, B. & W. saddle, Record pedals and nicked Stahl chain. The front forks are nicked on crown and tip and the wheels have yellow sunbeam spokes. Number of machine is 12,480, to be found on under side of crank bracket.

The Milwaukee Mfg. Co. writes that it has already shipped, this season, nearly 15,000 machines.

The John Lonn & Sons Co. of LaPorte, Ind., recently made a shipment to Paris, France, of a number of bicycles. They were the regular Crown models and good results are expected from the consignment.

A four-story addition is being built to the works of the Joseph Dixon Crucible Company, Jersey City, N. J. The building will be used for the manufacture of pencils. The company expects to build a very large addition to its crucible plant during the summer.

**MISCELLANEOUS.**

Advertisements under this head 5 cents per word first insertion; 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders or stamps received.

**WANTED.**

**A LIVE AGENT WANTED** in every unoccupied town for Referee bicycles—reliable, guaranteed goods. Five Models. Prompt shipments. REFEE CYCLE Co., 56 Fifth Ave., Chicago.

**BICYCLE AGENCY WANTED**—Prosperous repairman in a Connecticut City would like bicycle agency on consignment. Best references. Address REPAIRMAN, care Cycle Age, 150 Nassau St., New York.

**WANTED**—Traveling men in the bicycle and hardware trade, to sell a fine sundry as a side line on good commission. Address W., care Cycle Age.

**INDIA, BURMA, AND THE EAST**—Henderson & Co., Rangoon, English Watchmakers, Opticians, Cycle Engineers, Agents and Repairers, are prepared to correspond with responsible manufacturers and agents in novelties pertaining to any of the branches of trade above enumerated. Samples (where possible) and prices to be submitted. Splendid area for trade. Highest London and American references. Address HENDERSON & Co., 63 Phayre st., Rangoon, Burma, India.

**SIDE LINE**—Salesmen in the bicycle and hardware trades wanted to sell standard bicycle sundry on commission. Quick seller and liberal commission. Samples carried in vest pocket. B. H. DIVINE, Utica, New York.

**FOR SALE.**

**FOR SALE**—Morgan & Wright Vulcanizer and Cement Kettle for \$12.00. No use for them. Address S. O. CUMMINS, 3340 Belmont st., Bellaire, Ohio.

**"PERFECT" OILER**



25 CTS.

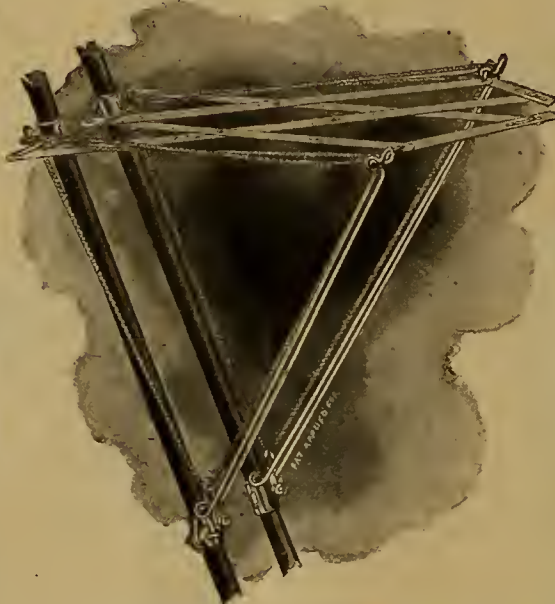
CUSHMAN & DENISON, Mfrs., 159 Ninth Ave., New York.

**AETNA  
Combination Bicycle Parcel  
Carrier AND Mud Guard**

EASILY attached to any bicycle. This device is so arranged as to be quickly adjusted to large or small packages weighing from ONE TO FIFTY POUNDS, HOLDING SAME SECURELY.



This Parcel Carrier is constructed of cold rolled steel, nickel plated, and weighs less than one pound.



EASILY ATTACHED . . . SELF-ADJUSTING

When not in use as a Carrier, it serves as a perfect Mud-Guard.

**PRICE \$10.80 PER DOZEN.**

Special Rates to Jobbers. Write at once.



**AETNA MFG. CO.**  
225 DEARBORN ST. - CHICAGO

- Rims
- Spokes
- Hubs
- Hangers
- Handle Bars
- Grips
- Cyclometers
- Enamels
- Cements
- Saddles
- Pedals
- Chains
- Tires
- Rear Stays
- Rear Forks
- Frame Sets
- Etc., Etc.

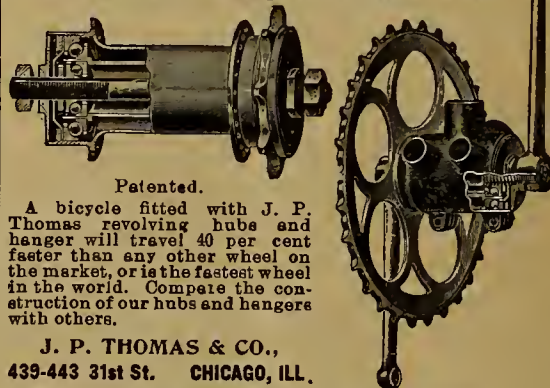
To Repair }  
To Make } With  
To Equip }

For Material and Sundries, write us. Special prices.

**Chicago  
Tube Co.**

217 Washington St.  
CHICAGO

**J. P. THOMAS** Double Ball Bearings with Inner Sleeves Increased the Speed 40 per cent



Patented.  
A bicycle fitted with J. P. Thomas revolving hubs and hanger will travel 40 per cent faster than any other wheel on the market, or is the fastest wheel in the world. Compare the construction of our hubs and hangers with others.

J. P. THOMAS & CO.,  
439-443 31st St. CHICAGO, ILL.

**A NEW PROPOSITION:  
WHEELS BUILT \$12  
TO ORDER.**

upwards from high-grade material and fittings of your own selection. Send for illustrated catalogue of the famous TEMPLE'S CROWN FRAMES and all standard makes of bicycle parts and fittings, "make your selection," we build the wheel accordingly. Lowest Prices—Guaranteed. Write today. RALPH TEMPLE CO., 81 Lake St., Chicago



**ORIENTS LEAD THE LEADERS**  
Waltham Mfg. Co., Waltham, Mass.

Hamilton 3 Crown } HIGH GRADE  
Wellington 1 Crown } BICYCLES  
Greenwood 1 Crown }

Secure agency at once. Write for Special Prices; they will interest you.

**WELLINGTON WHEEL WORKS,**  
35 Randolph Street, Chicago, Ill.

IF DEFECTIVE PARTS ARE FOUND IN  
**THE MANSON BICYCLE**  
WE WILL REPLACE FREE AND PAY ALL EXPRESS CHARGES  
MANSON CYCLE CO. 153-5 W. JACKSON ST. CHICAGO.

**WORLD CYCLES**  
THE WORLD  
ADRIAN SCHWIND & CO. CHICAGO.

**ADLAKE BICYCLES**  
THE WHEELS OF HIGH DEGREE.  
THE ADAMS & WESTLAKE CO. MAKERS. CHICAGO.

# THE CYCLE AGE

VOL. XXII—No 26

CHICAGO, APRIL 27, 1899.

NEW SERIES No. 74.

## REPAIRMEN ARE VERY SCARCE

**Quaker City Trade Brisk—Factory Tandems in Strong Demand—Large Wheels Are Very Popular.**

Philadelphia, April 24.—Never since the advent of the pneumatic tire, when so many solid and cushion-tired bicycles were made over, have the repairmen of this city been so busy as during the past six weeks. Good bicycle mechanics are at a premium, and even the poorest of them can command \$2.50 a day for their services. And even this inducement falls in some cases to attract the men. The fact of the matter is that all branches of the machinists' trade are well supplied with orders, and good workmen with a prospect ahead of ultimate work at a fair remuneration cannot see the wisdom of leaving their jobs for others which, although they pay better, cannot be guaranteed to last throughout the summer. Many of the local repairmen are away behind in their work; some of them, in an effort to catch up, are working overtime.

### Strong Retail Business.

The pleasant spring weather has given an added impetus to the already brisk sale of new bicycles, and many of the denizens of "the row," as a result of liberal advertising expenditures, have found it necessary to keep their places open three or four evenings a week till 10 o'clock. While the bulk of the new business, naturally, is in chain models, all those concerns handling chainless models report many sales. One local concern which does not handle a chainless warns the public against investing \$75 in a "coffee mill" when for \$41.50 their wheel, fitted with the Morse chain ("an adaptation of which George Westinghouse—having discontinued the use of bevel gears—is now using on his trolley motors"), may be purchased.

### Tandems Find Ready Sale.

The market for tandems was never better. The local manufacturers claim to have no difficulty in disposing of all the standard double-seated models they turn out. In this connection it should be stated that the repairmen, who not so many moons ago had an apparent monopoly of the tandem business, are "not in it" with the larger manufacturers, whose up-to-date models, light and cheap, seem to fill the requirements much better than the heavier patterns of a year or two ago, when nothing short of a made-to-measure machine would satisfy the demands of the tandemites. Combination tandems are a drug on the market, owing to the advent of the divided skirt, and that edict of Dame Fashion which demands that the lady occupy the rear seat.

### Thirty-Two Inch Wheels.

While the majority of local manufacturers and dealers are a unit in declaring that 30-inch wheels are a "delusion and a snare," and exhibit their sales books as

evidence that there is absolutely no demand for bicycles so equipped, one company, which goes to extremes by turning out bicycles with 30-inch front and 32-inch rear wheels, is out with an announcement that they will "discontinue making 28-inch bicycles as soon as their present stock of the material is used up." This concern claims that history will repeat itself in a year or two, when all up-to-date bicycles will be equipped with large wheels. They at present turn out five combinations of wheels—32 and 30, 30 and 30, 30 and 28, 28 and 28, 28 and 26—and the majority of bicycles with large wheels seen on the streets here are of their manufacture.

### Enticing Bargain Seekers.

As was to have been expected after last week's exposure, the American Flyer Co. has discontinued the sale of Spaldings at \$13.50. A similar firm farther up the street, however, is selling Spaldings at \$12.50. These machines are, or are claimed to be, made by the Spaulding Machine Screw Co., of Buffalo, but many people will buy these machines thinking that they are of Spalding manufacture. The American Flyer advertisements last week read: "All leading wheels at one-fourth regular prices." They have changed their tune considerably this week, the announcements reading: "Every leading make of bicycle at one-half regular prices." But they're doing a rushing business, thanks to the American love for anything resembling a bargain.

### The Usual Story.

Milwaukee, April 24.—During the week bright weather induced buyers to turn out in numbers. The result is that those dealers who have been holding back their factory orders are kicking because they cannot obtain goods. A little more confidence would have put several hundred dollars in their pockets. It is the threatened loss of trade that is causing the trouble. The men who were sufficiently long-headed to stock up early are the ones who are prospering.

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## COLEMAN'S OPTION WITHDRAWN

**It is Emphatically Stated That Despite Secessions the Scheme of Consolidation Will Succeed.**

Firms which have given options upon their plants to the eastern financiers who are endeavoring to consolidate the manufacturers engaged in the bicycle business took alarm toward the close of last week when it became known that R. L. Coleman had withdrawn his option, having refused to extend it longer than April 8. The option on the Western Wheel Works plant extended only from March 9 to April 8, all other options running to June 1.

### Spalding Asks for an Extension.

The following letter was sent by Mr. Spalding to Mr. Coleman:

In looking over the various options I have received from the different manufacturers, I find that they all terminate on the same date—June 1, 1899—except yours, which terminates thirty days from March 9, which would make it April 8. That we may have uniformity in all these options, may I attach to your proposition a statement to the effect that the termination of the same is extended to June 1, 1899? A few of the first options we received, including that of Ames & Frost, terminated on May 1, but, since they have all been extended to June 1, I would like very much to have yours conform with the others. The appraisers and accountants are now on the road and they promise to have their work completed in a very short time.

New York, April 24.

A. G. SPALDING.

### Coleman Declines.

To this letter Mr. Coleman made reply as follows:

We will not renew the option which we gave you on March 9 which expired April 8. I have today written to the auditor, Mr. Simpson, requesting him to return to me all papers and memoranda which were delivered to him as auditor of the supposed syndicate.

New York.

R. L. COLEMAN.

For four or five days after this correspondence had become known to a great many people in the trade it was found impossible to get Mr. Spalding to make a statement which would definitely set at rest the rumors which immediately became rife to the effect that the project for consolidating the industry was at an end. Eventually, however, he made the following declaration:

### Cash Will be Paid, Says Spalding.

The motive for the publication of the clipping which I enclose you from the New York Tribune of April 23 is known. The source of information is apparent and the action has been discounted by me. I have more than 80 signed options, including all the principal parts makers, and they all run to June 1 or longer. When I received Mr. Coleman's option I had his positive word that the time would be extended to June 1. The project is too far advanced to be affected by his action. The options were all obtained on a cash basis, and will be dealt with to the finish on that basis, inspired newspaper reports to the contrary notwithstanding.

New York, April 24.

A. G. SPALDING.

A copy of the above letter has been

mailed to all the manufacturers interested in the proposed consolidation.

#### What the Tribune Said.

The publication in the New York Tribune was as follows:

Several bicycle manufacturers seen yesterday said they were convinced that the proposed bicycle trust, with its capital of \$30,000,000, was a thing of the past, and that the scheme could not now be carried out.

It was said yesterday that one of the makers had learned that the original proposal to pay cash for the plants would not be lived up to, and that in consequence, when he was asked to continue the option further, he absolutely refused, and some people, after reading the correspondence, might think refused rather curtly. The proposed trust did not include the tire and automobile end of the industry. When the scheme was first suggested it was said that the syndicate was prepared to pay cash for the plants. Subsequently those who managed the arrangements decided to pay for the plants with stock in the trust, it was said. This did not meet the indorsement of at least some of the makers, and that is the reason given for the bursting of the proposed trust.

R. Lindsay Coleman and A. Featherstone have been in the city for several days, and it is said that they have been in consultation frequently regarding the proposed trust. The time originally asked by the representatives of the syndicate for an option was from March 9 to April 8. It was said last night that if the Coleman and Featherstone interests had decided not to enter the trust its consummation would be an impossibility.

#### English Makers Are Worried.

In England they are narrowly watching the progress of events in this country. This view of the situation is taken by the Cycle Trauer:

The information to hand on the proposed combination of American cycle manufacturers is so meagre, and the views of the Americans are given in so guarded a fashion, that it is impossible to estimate properly the precise effect of the movement on the English trade and on the cycle trade of the world. One thing is certain, it would be madness to pretend that this critical situation in the American trade has not also for us a vital interest. Anything that tends to bring about a radical change in the basis of the American trade is worthy of our keenest attention, for, after all, the "American invasion," once so much talked of, was no visionary affair. It was an actuality, and though our own troubles have for the time allowed it to take a less prominent place in our minds, it is with us now, and there is but little indication of its departure.

#### Crippled Exporters.

Our manufacturers who strive after an export trade are even more affected by the competition of Yankee-built machines than are the manufacturers catering solely for the home market. Our interest, then, in the doings of Cousin Jonathan being of such an essential nature, it is natural that the sensation should resolve itself into the question: Will the combination affect the present selling prices of American machines?

#### Looking for a Rise in Prices.

If the trust becomes a reality, we imagine the effect will be chiefly felt in the States, for immediately a rise in prices will take place. It is certain that the formation of the trust will be abandoned if there is not an indication that when once formed it will absolutely control the trade. For a trust controlling only a part of the trade would be useless for the purpose for which it had been promulgated; outside firms would find no difficulty in obtaining materials and labor, and they would be able to place machines on the market at prices which would at once make it imperative for the trust to lower its prices and so defeat its own ends. The effect, then, on the home market would be a rise in prices, with, perhaps, a proportional improvement in quality. But we think the effect on the foreign market would be less noticeable. The bigger profits American manufacturers would gain on their home trade would enable them to carry on the foreign trade on practically the present basis, and yet without the suicidal tendencies which previously had characterized their business methods.

#### The Home Market is Safe.

In other words, we do not think the English makers who do a foreign trade are to look for a very radical change in the conditions of American competition they have had to fight against, while for the English market one effect, at least, will be that English buyers, with their rooted hatred of all industrial trusts, will have yet another prejudice against American-built machines.

## ENGLISH MACHINES HUNG UP DAYS OF HIGH PRICES GONE

### Britons Undersold by Americans in Australia, Where Good Machines Are Demanded at \$100.

Sydney, March 25.—The demand in Australia is for a medium priced bicycle. Australians will not now pay the exorbitant prices that were charged by agents a short time ago. All the cycle firms, both large and small, have recognized this fact and are catering to the demands of the public. Very little business is done with any machine that is listed at more than \$110. Australians think that \$110 is a fair amount to pay for any bicycle and still leave a fair margin of profit for the cycle agent. Two or three years ago bicycles like the Rover, the Raleigh and the Humber were sold at \$130 and \$140 almost as soon as they were landed, but times have changed since then, and these three makes are almost at a standstill now compared with the sales of the moderate priced models, yet they are still listed at the same price. The only machines that are moving at all are listed at from \$66 to \$110. A good machine will always fetch \$100 in Australia. The agents for the best English makes claim, however, that they cannot sell under the exorbitant prices charged by them. This question naturally arises: "If the American highest grade chain wheel can be sold at a good profit for \$100 and less, why cannot the English?" If it is as the agents claim, that it costs them such a considerable sum to land the English machines in Australia, then the English manufacturers of the Humber, Rover, Raleigh, Osmond and other such makes evidently believe in keeping huge profits to themselves.

#### Big Melbourne Firm Retires.

Messrs. Sutton & Company, one of the largest cycle firms in Melbourne, is retiring from the cycle trade. The firm has sold a great number of bicycles during the few years it has been in the cycle trade. It is one of the wealthiest concerns in Victoria, but made its money principally out of the sale of pianos, to which line it intends to stick in the future. When the firm announced its intention of retiring from the cycle trade, genuine surprise was evinced by the many Victorian agents. The company is holding auction sales to clear its stock. It has already held two sales. The first was only fairly successful, the machines averaging about \$40, and the second sale was less successful than its predecessor.

The Austral Cycle Agency is still alive. It is holding auctions almost every week in Melbourne. The manager of the Sydney depot expects to receive word at any moment from the head office in Melbourne to close the local branch here, where trade is at a standstill with the firm, while it is almost as bad in Melbourne.

#### American Machines More Pleasing.

Whether it is that American manufacturers have taken the hint from the Cycle Age or not, the fact remains that some of the American machines now landed in Australia are fitted with more attractive handle bars than formerly, and are also made more attractive otherwise.

It is announced that it is the intention of a large Canadian cycle firm to shortly open in a big way throughout the Australian colonies. American machines will be handled by the newcomers, who promise to stir things up upon their arrival.

F. A. Peters, of 117 Clarence street, Sydney, has purchased the entire stock and business of F. W. France & Company and is disposing of the stock taken over

at exceptionally low prices. Some American machines are being sold at prices ranging from \$38.40 to \$50.40, while a few tandems of American manufacture are listed at \$48. They are up-to-date machines fitted with the tires which are most in demand in Australia.

#### Constitutes a Light Roadster.

The following is a specification of what is called a light roadster machine in Australia:

	Lbs.	Ozs.
Frame, 24 inches .....	6	..
Front forks .....	1	15
Tires, 1 $\frac{1}{2}$ x28 inches .....	3	13
Rims .....	3	2
Saddle .....	1	7
Chain .....	1	1
Gear case, leather .....	15	8
Mud guards and stays .....	1	8
Seat pillar, plain .....	1	3
Handle bar, fixed .....	1	3
Foot rests .....	1	3
Brake, complete .....	1	2
Gear wheels, 9 and 22 teeth .....	1	3
Crank and cotters .....	1	4
Balls and lubricators .....	1	2
Chain adjustments, nuts, step, lamp bracket, etc. ....	5	
Spokes and nipples, per set .....	10	
Hubs, complete, per pair .....	1	4
Head, lug and bolt .....	1	4
Crank axle, cones and cups .....	10	
Rat-trap pedals .....	1	3
Total weight .....	29	10

#### "Traveling Agent" Working Ohio.

A man giving his name as S. M. Goldie is going through Ohio claiming to be traveling agent for twenty-five bicycle companies and to have authority to sell their machines at very close to half the price charged by local dealers. He recently spent a week in Marion, where he sold a number of machines of various makes on the basis of \$1 cash down and one-half of the balance in two months and the other half in four months. He was careful, however, it is reported, to collect the first payment of \$1 "as a guarantee of good faith," promising to make deliveries as soon as the machines could be shipped from the factories. A lawyer of the town was made his agent and was to get a commission for making the collections.

Suddenly the traveling agent left town, jumping his hotel bill, it is said, and taking with him many good dollars from purchasers of his bicycles, several of whom call every day on the local lawyer asking when their machines will arrive, only to be told that they were swindled.

The "traveling agent" is a fine looking young fellow, who approaches his victims, gives them a short talk and then introduces himself.

#### To Suppress Cycle Thievery.

The judiciary committee of the Connecticut legislature has reported a substitute bill regarding dealers in second-hand bicycles. The bill provides that selectmen may license such dealers, who shall keep books which shall contain details of purchase, open to inspection. Each dealer is to make sworn weekly returns to chief of police, under a penalty of \$100. Purchasers of second-hand bicycles must not buy of a minor under a penalty of \$100. Any dealer removing a name plate or number from a bicycle within thirty days shall be fined \$100 or imprisoned six months, or both. All persons purchasing second hand bicycles shall keep a record thereof, open to inspection.

#### New Tire Company Expanding.

The Goodyear Rubber Tire Company, which began manufacturing operations in Akron, O., six months ago, has increased its capital stock from \$100,000 to \$200,000 and will build several large additions to its plant.

Budapest, Hungary, imposes a yearly tax of \$2 upon cyclists.



**TRADE OPENS WELL IN IOWA****PURCHASERS BUYING FOR CASH****Traveling Salesmen Act the Role of Local Demonstrators—Repair Shop Made An Attraction.**

Des Moines, April 24.—Bicycle business is exceedingly good here now, on account of weather having been excellent for riding during the past ten days. There will doubtless be 3,000 new machines sold in Des Moines this season. Dealers generally are having much difficulty in getting their stock from the factories, which are in many instances behind in their orders. A few of the larger dealers have had bicycle openings, which have been well attended by prospective purchasers. These openings have resulted in few sales at the time, but in some instances the people have come back and had their selected mounts laid aside for them.

**Salesmen as Demonstrators.**

Some of the manufacturers are sending their traveling salesmen to different cities and towns in this vicinity where their machines are represented, giving one or two days' show. Each salesman is carrying a full line of models and parts and advises the agent a week ahead of the days when the opening is to take place in his store. This creates considerable interest and small crowds of people visit these openings, which have proved very beneficial for the sale of machines. In the largest cities of this state some manufacturers are having their salesmen remain with their agents a week or ten days.

**Visitors Attracted by Repair Work.**

The Des Moines Cycle Company had its opening last week and thousands of people attended. They were shown through the repair department and the making of cones and repairing of different parts of bicycles was explained, as well as how vulcanizing, brazing, enameling and repairing different kinds of tires was done. This proved to be very interesting, as was shown by the large crowds that witnessed the work. The machinery was kept running in the repair department while the workmen showed the different methods of bicycle repairing.

**Large Sales Anticipated.**

A greater number of people are paying cash for their mounts than in years previous, because of the reduction of list prices, and also because agents are making a concession for spot cash. The indications are that the sale of bicycles will be larger in this city and state this year than ever before. The sale of sundries is large and people are purchasing more gas lamps by fifty per cent than heretofore. New things are in demand in the way of specialties and are sought for by purchasers, who always want the best in the market.

Cameras are being handled by more stores than formerly, dealers finding them a very convenient side line.

**DEALERS SHOW WEAKNESS****The Policy of Selling Second-Hand Machines for Customers is Not Meeting With Success.**

Buffalo, April 24.—The plan recently put in operation by several of the more reputable stores to take second-hand machines from customers, place them on sale and either remit the amount realized to the customer or credit the same to his account, is not meeting with favor at the hands of the public, and it is feared that the policy will have to be abandoned, for the time being, at least.

"If all of the dealers would adopt the plan and religiously adhere to it," said a

dealer prominent in the movement, "there is no question but that it would eventually prove successful, but many of them are so averse to the chance of losing a sale that they will yield at the very first opportunity to the arguments of prospective buyers and give in.

"The same is true with respect to the schedule of prices to be allowed on old machines taken as part payment for new ones. The prices set on last year's makes are so extremely low that buyers do not take kindly to them, and much argument and looking around follows, with the result, usually, that the dealer gives in to the prospective buyer, and those who as a matter of principle desire to see so worthy a cause succeed, are sufferers through the loss of business which, under different conditions, would come to them."

**DELAYED FOR MATERIAL****Parts Makers Have Trouble Getting Steel—Good Workmen Are All Employed.**

Cleveland, April 24.—Retailers say that last week was the best in the history of the business in this city. All the riding public seemed to want machines at once and the stores have been constantly crowded, with the result that stocks have been cleaned out, and hardly an establishment in town is in position to deliver at once. Several concerns are far behind on orders and are losing sales daily because after a long, cold spring the riders decline to be kept waiting and go elsewhere if they can not get bicycles right out of stock.

The manufacturers are now working double time in an attempt to keep up with orders. Many concerns in this section report serious difficulty in securing certain lines of material caused by the inability of the material makers to get special raw material. According to a prominent parts maker of this city, the difficulty of getting steel may cause a shortage of bicycles later on. The ball makers and the stampings manufacturers have the same complaint to make. One local concern has a specialty which it has been preparing for some weeks to place on the market. The article is completed and would be ready to ship, except that the makers can not secure the special steel required to make a certain part. The manager of this concern, after spending several weeks in useless writing and telegraphing, is at present in Pittsburg trying to secure what he requires to finish his goods.

The shortage of material is not the only hindrance with which local manufacturers are obliged to contend, as there is a decided scarcity of skilled workmen. This is being felt throughout this section in all lines of manufacturing industry. The manager of a prominent bicycle factory located in a neighboring small city stated the other day that it was only with the greatest difficulty he could keep his factory up to the desired output because of the inability to hire good workmen. He remarked that at this time of year a factory located in a small town is at a decided disadvantage, because the good workmen go to the larger cities and find employment. He stated that he would willingly give a considerable bonus to anyone who would locate a bicycle factory in his city, as it would have a tendency to bring more laboring men and make the factory less liable to embarrassment for this reason.

**Queen City Cycle Co. Dissolves.**

The Queen City Cycle Company, of Buffalo, which has been in the hands of H. Weil as receiver for two months, has been dissolved by order of the court, confirming the referee's report.

**M. & W. ARE SUED FOR SLANDER****"BOB" ABBOTT THE PLAINTIFF****The Southern Bicycle Dealer Says a Lawyer for the Tire House Defamed His Character.**

New Orleans, April 19.—Suit was filed yesterday by Robert W. Abbott, president of the Abbott Cycle Company, of this city, against Ambrose A. Worseley, of Chicago, and Morgan & Wright, for \$5,000 damages, for slander and defamation of character. Mr. Abbott is one of the best known and most highly respected merchants in the city, as well as a man whose integrity and honesty have never been questioned.

**Origin of the Trouble.**

Some time ago the Abbott Cycle Company stockholders held a meeting, at which it was decided that because of the fact that the business was not paying well the firm should go into dissolution. Immediately Mr. Abbott and others applied to have themselves made receivers of the company to liquidate its affairs and were duly appointed, subsequently taking charge of the effects of said company and administering same under orders of the court under sufficient bond.

**What the Petition Alleges.**

The petition alleges that on or about the 5th of April Worseley, alleging himself to be an attorney at law licensed to practice by the courts of Illinois, and also representing himself to be the delegated representative of Morgan & Wright of Chicago, went to various persons in this city and stated to them that Abbott was acting dishonestly; that he was taking the assets of said company and placing them beyond the reach of the creditors, and handling the business of the firm in such a manner as would result in loss to the creditors, and was actually committing acts of dishonesty, and said statements were made by said Worseley willfully, maliciously, and with intent to damage and ruin the character and reputation of the petitioner.

**Wanted to Seize Goods.**

Worseley took out a rule on Thursday last to have the Abbott Cycle Company show cause why Morgan & Wright's goods, which are held by the Abbott Cycle Company, or were before the dissolution of the firm was begun, on consignment, should not be turned over to M. & W. As Mr. Abbott was under a heavy bond, he refused to turn over the goods without due process of law. The law requires that the defendant in an application for a rule such as that applied for shall have one week's notice; despite this fact Worseley went into court the day after making the application, and tried to force the matter to trial. Judge King, before whom it was heard, of course refused this, and stated that it would come up for a hearing later.

The goods are now in the keeping of a sheriff.

**Heavy Business for Buffalo.**

Buffalo, April 24.—The genuine spring weather of the past week made its presence felt in the cycle stores in the increased business that has followed. The volume of business transacted up to date eclipses by a large margin that done during the same period last year. One store claims to have sold close to one hundred bicycles in one day. The number covers three grades, viz., \$50, \$25 and \$18, the \$25 predominating.

A large order has been received by an American manufacturer for bicycles to be used by the postoffice employes of Japan.

# CRESCENT FACILITY

To say that Crescents are the best bicycles ever made proves nothing to those who want evidence and not phraseology.



We submit a point in evidence. The Crescent plant is the largest factory in the world devoted exclusively to the making of bicycles. We are able to complete 1,000 machines each working day. The acres of machinery can turn out 325,000 parts daily. Nothing but actual sales of Crescent

Bicycles could keep busy a plant of this magnitude, and no less a factory could supply the demand for these well known wheels. These facts prove that Crescent Bicycles are the best.

Adults' Chain Models, \$35.00

Bevel Gear Chainless Models, \$60.00

CATALOGUE NO. 2—FREE

...CHICAGO—**WESTERN WHEEL WORKS**—NEW YORK

NEW TESTIMONIALS EACH WEEK.

# MILWAUKEE TIRES

PUNCTURE PROOF

Pneumatic



Single Tube



Resilient



Easy Riding

COPYRIGHT 1898 BY MILWAUKEE PATENT PUNCTURE PROOF TIRE CO.

PRESENTING TESTIMONIALS.

JOHN VAN ROO,  
Architect and Superintendent.

MILWAUKEE, WIS., December 10, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen: Replying to your favor of the 9th inst., will say that last April I purchased a pair of your Patent Puncture-Proof Tires and have ridden them about 3,000 miles to date. My experience with the tires has been most satisfactory. They are, in my opinion, the best tire on the market to-day for every day service.

(Signed)

JOHN VAN ROO.

GEORGE C. EHLERS,  
Architect.

MILWAUKEE, WIS., December 1, 1898.

MILWAUKEE PATENT PUNCTURE-PROOF TIRE Co., Milwaukee, Wis.  
Gentlemen: I rode your tires the entire past season, and must say that they gave me perfect satisfaction. They are as good to-day as the day they were put on, and will undoubtedly do me for several more seasons.

Yours truly, (Signed) GEO. C. EHLERS.

Representatives Wanted. Write for prices and other information.

**MILWAUKEE PATENT PUNCTURE-PROOF TIRE CO., MILWAUKEE, WIS., U. S. A.**

# THE CYCLE AGE

ENTERED AT THE CHICAGO POSTOFFICE AS SECOND-CLASS MATTER.

Published every Thursday at 324 Dearborn Street, Chicago.  
Eastern Offices, American Tract Building, New York City.

Subscription price in the United States, Canada and Mexico, \$2.00 per year; in foreign countries \$6.00 per year.

ALL remittances should be made to THE CYCLE AGE COMPANY.

## COMPLETE BICYCLES FOR TEN DOLLARS

Though lacking proof, it has long been suspected that there was engaged in the traffic of bicycles a class of brokers who paid little heed to the safety of life and limb of riders so long as they were enabled to handle machines which could be sold at very low prices. One of this gentry, rasher than the rest, recently earned a well merited rebuke at the hands of a manufacturer to whom he submitted the following proposition:

Will you be in position to make for us during the coming year 15,000 complete bicycles, delivered f. o. b. New York, at \$10 each. We have received an inquiry regarding the above, and as they are a very large concern and in position to take as many more, I would like to have you give us your ideas regarding it. My customers do not care what material or stock these wheels consist of, or how they are put together, as long as they are in complete form, parts, tires, fittings, etc., resembling a wheel. They will also advance a certain amount of money to manufacture same and will pay for the goods, draft against bill of lading when same are delivered.

Smarting under the insinuation that they were willing to engage in any form of perilous manufacture so long as there was money to be made out of it, the maker addressed made the following reply:

We have your letter of recent date and in reply would say, that we are surprised that a house of your kind composed of men who have been in the bicycle business for such a long time as you have, both as manufacturers and merchants, should ask any bicycle manufacturer to build complete bicycles for \$10 each, when you know that if you were to make the bicycle out of junk, use hose-pipe for tires, and furnish a chromo to give it the resemblance of a bicycle, it could not be made for any such price as you name. You further state that "your customers do not care what material or stock these wheels consist of, or how they are put together as long as they are in complete form, parts, tires, fittings, etc., to resemble a wheel."

Any concern manufacturing and selling wheels of that kind would be a detriment to the bicycle business. It seems that you do not care whether men, women or children break their necks or not, as long as you make a few dollars by the transaction. An act of this kind is a criminal offense and any person responsible for it ought to be punished to the full extent of the law.

If a letter of this kind ever comes to this concern again, we shall most assuredly have a cut made of it and publish it in the cycle papers.

Apart from the fact that it would be altogether impossible to make machines at the price named in the first of the foregoing communications, it is evident that there are some people who believe there is no moral obligation connected with the manufacture of bicycles. It will need but a few more instances of this kind—possibly the execution of such an order—to warrant legislatures in passing laws which will amply protect the public against knavery in manufacture. Signs are not wanting that such measures are already in contemplation in the eastern states.

## ADS THAT TALK TO THE READER

During the course of a season agents expend upwards of a million dollars in advertising bicycles. So vast an outlay should at least show a high average in skilled work. But it doesn't. And it is likely that the general tone of retail cycle advertising will remain low until there is brought to the work of its preparation a knowledge of the value of style, which is the very essence of modern publicity.

Distinctive and original advertising was never in so great vogue as now. Obviously, nothing is more original or distinct than one's natural way of talking about his goods, and if he can succeed in impressing those very qualities into his advertising, in the correct and logical way, he has found a source of profitable publicity. The vehicle for the expression of such

thought is the conversational advertisement, of which an excellent example appeared in a recent issue of the Cycle Age.

This style, which "talks to the reader," was originated some years ago by a man who was employed to write the advertisements for Wanamaker's great bazaar in Philadelphia. What is now popularly called the "Wanamaker style" has since been largely adopted by merchants, big and little, all over the world. Many of the examples in current use are brilliant and fetching to a degree; and the advent of this style certainly marked a distinct advance over the entirely formal presentations in vogue before its coming. But it needs to be used with exceeding great skill, else it can easily descend into offensive familiarity, slang and vulgarity. "I have seen," says an observer, "advertisements which slapped the reader on the back, put its feet on his table, and spat upon his carpet. I have read others which assumed that the reader needed to be taught his A B C's—patronizing, school-teachery, you're-an-ignorant-ignoramus in its tone." To a person of any sensitiveness, these methods conspire to their own defeat. Rather the plain business card in the advertising space, with a negative and pointless message, than a style that holds offense.

The conversational advertisement seems as though it could be reeled off by the yard as rapidly as a stenographer could take it down; but woe to the tradesman who acts on such a belief. As a matter of fact, this "easy" style is probably the most difficult to write with a view to results, involving as it does the finest study of human nature and the most careful consideration of the springs underlying action. The conversational advertisement should be as nearly as possible a repetition of the actual speech of a tradesman, such as he would be likely to utter to the average citizen in his salesroom. The only actual difference should be in the choice of words and the polish of diction, for the reason that when conversation hardens into printed words it is to be expected that slips in speech, ill-formed sentences and faulty grammatical construction will be absent.

## EXTENDING CREDIT TO AGENTS

The restriction of credit giving from makers to dealers has carried its force into the operations of the latter, and served to compel a closer and keener supervision of their own accounts than would have generally resulted from continued laxity exhibited toward them by the manufacturers. As a body of business men the dealers would not back up their ten, thirty or sixty-day obligations with their reputations and resources, and then dissipate their own assets along a road several months in length. As a result, they have been compelled, perhaps sometimes unwillingly, to adapt the revised policy of the makers to their own necessities and conditions, and introduce and enforce it with their customers. Following this has been a betterment which few of agents will debate, or would wish to recoll.

But the credit problem is not entirely solved with the mere shortening of the periods for which credits are extended. It would be useless to deny that the limited opportunities agents have had for obtaining credit of late have bothered them now and then in securing enough stocks to prepare for expanding trade in the most thorough manner. Some loss of good custom can be traced to that cause. In many cases bicycles that might be displayed with good effect in February and March, for April and May sales, are not ordered until the requirements of good business finally demand them—which delay helps to pile up stocks at the cycle factories, keeps the makers guessing about what future orders will be, and interferes with prompt shipments, if it does not even hinder manufacture and assembling.

It would be nicely in keeping with the reciprocal tendencies now current if one branch of the industry could offer every possible advantage and favor to every other branch without in the least jeopardizing its own interests. The burden is in connection with the establishing and cementing of such relations and knowing positively what agents are soundly and firmly fixed. For the evidence necessary to establish credit there are but two absolutely reliable sources of information, and they are, as already intimated, inventories of stocks and abstracts of book accounts.

If such a system should be popularized, it would mean an indirect benefit to the retailer, corresponding in kind if not in degree to that accruing to the makers through examination by expert accountants of their plants and books, stocks, etc.

## HOW TO DISPLAY GOODS

### Dispensing Information by Catchy Cards—Window Decoration in Red—Elevated Display Stand

Value  
of Printed  
Announcement

The fact is often overlooked that passersby glancing into a store window are more apt to afterward come into the store to investigate and purchase if the window contains definite announcements of an attractive nature than if the display is merely one of a general character, simply denoting that the store it fronts is a bicycle salesroom. People generally prefer information which is absorbed unconsciously to that thrust upon them by a glib talking salesman. Some dealers take advantage of this condition and place in the show windows, together with the models displayed, tastily lettered cards bearing a few well worded facts which are intended to attract favorable remark from those who notice them in passing. The majority of cycle dealers have not as yet, however, realized the value of this sort of advertising as fully as have the managers of dry goods stores in large cities.

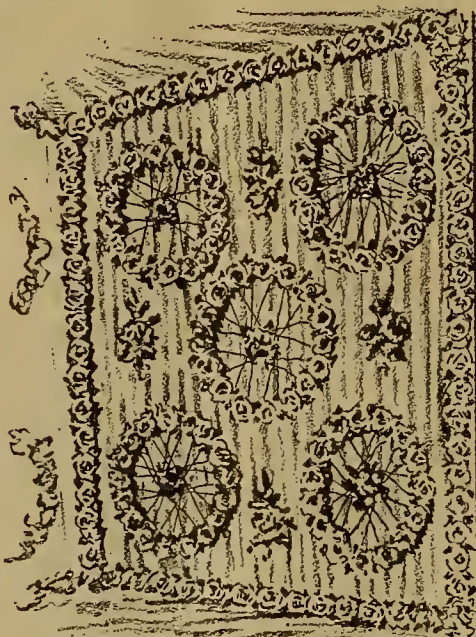
That the public may learn, without asking, the respective equipments of machines displayed in his window, a Chicago dealer has had printed cards upon each of which is given the number of the model, the options in tires, pedals, saddles and handle bars offered with it, and has placed one of these in front of every machine shown in the window. The inexperienced person who cannot distinguish readily the grade of a machine, but who knows by reputation the comparative popularity of various fittings, is thus acquainted with the range and character of the options offered by the dealer. Were there no trade reasons against displaying the selling price of each bicycle handled, the addition of the price to these cards would make them still more valuable.

The same dealer gives it as his experience in selling that many people who enter a store to look around with a view to

the front wheel of each bicycle mounted on a display stand, a card similar to those in the window. The card is secured by passing it under two spokes and over intervening spokes, after the fashion shown in the accompanying illustration, and is thus plainly in view and does not disturb the rotation of the wheel to which it is fastened.

Red Poppies  
and  
Sunbeam Spokes

Dealers handling bicycles with sunbeam spokes and favoring window trimmings attractive because gorgeous, may with but little expense decorate the side and back of a window space in red or some other substantial solid color after the idea presented in the accompanying sketch. The wall surface is first covered with red cloth—if red be the color chosen—arranged in loose vertical folds. A border is then made of paper poppies of a shade of



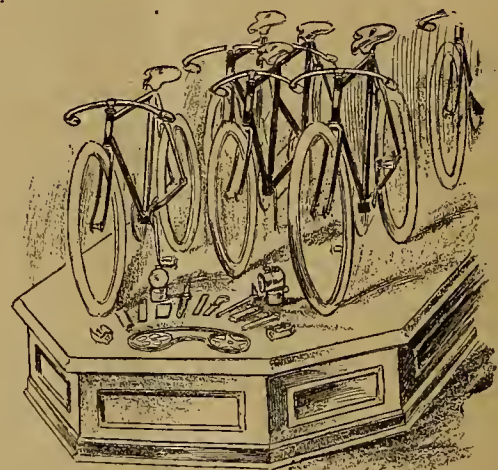
red somewhat deeper than the background. The tires of several bicycle wheels are next covered with poppies, and a bunch of these is placed at each hub. By securing the wheels to the wall in some symmetrical fashion, and placing festoons or bunches of the paper poppies here and there, an exceedingly rich effect in red, set off by the sunbeam spokes, is obtained.

Such an effect should only be used in a comparatively small window and the floor and ceiling of the window space must be draped with red cloth to match that used as a background on the walls. One bicycle enameled to contrast properly with the trimming color is sufficient to complete the window. Such decorations are ruined in their effect by the introduction of a large number of bicycles, or piles of sundries, which form an unpleasant contrast between the artistic and commercial styles of window dressing.

Platform  
Displaying  
Several Models

The most common type of store arrangement is doubtless that in which the machines on display are arranged in rows along the side walls of the store. The center space is sometimes left entirely open, but where there is sufficient width

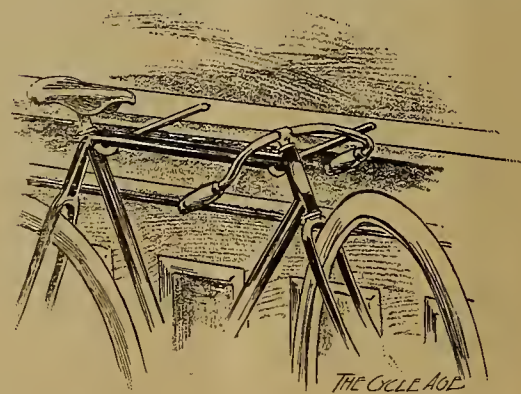
to the store room, groups of machines on exhibition stands are placed in the exact center of the open space. Where such grouping is possible, the idea presented in the accompanying illustration will prove effective. An oblong stand about eighteen inches high and built from the same wood as used in the finishing of the store room is erected in the center of the floor. It is best made large enough to hold five machines, each supported on some sort of exhibition rack which allows the wheels to be revolved. The height gained by the platform makes unnecessary the use of elevated stands to bring the bicycles to an approximate level with



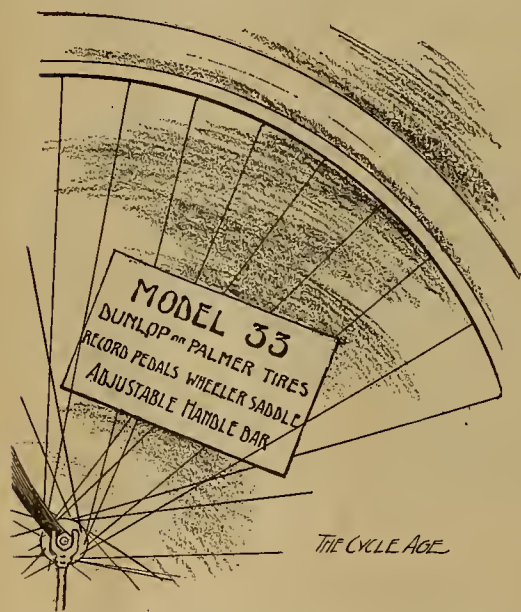
the view of the visitor. A rich Brussels carpet, or linoleum covering, is used on the platform, according to the prevailing style in the furnishings of the store. Various equipments and parts used in the construction and outfitting of the bicycles displayed can be laid around the sides and front of the platform in unconventional groups, and, if desired, a stack of catalogues may be placed in a conspicuous place. Floor room is gained and the general effectiveness of the platform enhanced by cutting off each of the front corners on an angle of forty-five degrees.

If floor space be limited and it is desired to display more bicycles than can be accommodated without crowding, several machines may be shown on each side wall of the store by securing to the walls projecting hooks arranged in pairs, so that a bicycle may be caught under the top rail at the steering head and seat cluster. The hooks should be high enough to allow the models supported to swing free from the machines on the floor be-

Hanging Cycles  
Along  
Store Walls



low. Rubber tubing drawn over the round iron hooks will prevent the enamel from being marred. This scheme is especially adapted to the display of juvenile patterns. In some stores a high wainscoting runs around the wall, and in such a case the hooks may be very readily attached to the molding which covers its upper edge. Where there is no such molding the hook supports must be fashioned so that they may be screwed directly to the wall.



learning as much as possible in order to buy well later on, are better satisfied to be let alone and to make their own observations than to be immediately, upon entering the store, captured by some salesman and given a long lecture upon the merits of some particular model. That such people may be aided in their quiet search for information, and at the same time be insinuatingly told the merits of the machines inspected, there is placed in



TRADE MARK



# AN AID TO FOREIGN BUSINESS!



THAT'S WHAT THE DUNLOP  
DETACHABLE TIRE IS



*Read what an Australian dealer says:*



"We would advise the English manufacturers not to content themselves with the present condition of affairs, or to think too lightly of the American competition in the Colonies, as we find them building their bicycles with all the popular English ideas, Westwood Rims, Dunlop Tires, brakes, mud-guards, etc. Our experience in the trade convinces us that the weight of the English lady's bicycle is a great drawback to its sale. The light, stylish American article is growing in favor every day."



## THE AMERICAN DUNLOP TIRE COMPANY



BELLEVILLE, N. J.

CHICAGO, ILL.



TRADE MARK



# ...Decalcomania Transfers...

Anything for bicycles and dealers in the way of decalcomania transfers and decorations, name plates or special designs can be had from us or our jobbers

The bicycle repair man who has not yet put in a line of bicycle decorations misses an opportunity of a nice little field for the extension of his business—that of decorating the frames given him to enamel. We are willing to give any man in the bicycle business our catalogues and samples for the asking. Our instructions for applying a transfer are thorough and enable any novice to make a success after a few trials. Our product is guaranteed satisfactory. Write us for catalogues, samples and prices. Remember we are the largest manufacturers of transfer ornaments in the world, have exclusive automatic machinery, are American makers of guaranteed quality, can deliver on short notice, are exempt from heavy customs tariff and treat our trade courteously at all times.



## The Meyercord Company, Inc.

American Manufacturers Guaranteed Decalcomania Transfers,

NEW YORK OFFICE:  
805 St. James Building.

MAIN OFFICE: CHAMBER OF COMMERCE BUILDING, CHICAGO, ILL.

ST. LOUIS OFFICE:  
610 Fullerton Building.

## CURRENT SHOP PRACTICE

### Inexpensive Spanner of Great Utility—Tied Spokes Unpopular—Ingenious Method of Drawing Temper

#### Remedy for Tarnished Nickel

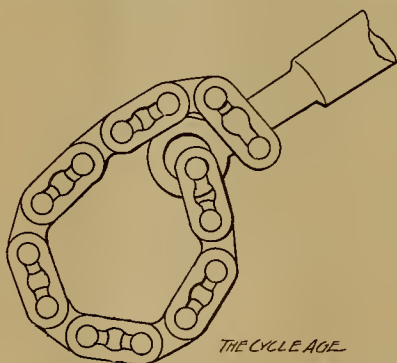
Many of the bicycles which come back into the assembling room of factories for repair or overhauling look dingy because the nickel plated parts are no longer bright. In most of such instances the nickel is not rusted, but has merely lost its brilliancy. If the job is such that it will merit the expense, the parts are commonly renickeled. Unless, however, the machine is in such condition otherwise that its owner will willingly stand the nickeling expense, the parts are best put in a satisfactory condition by polishing them on an ordinary soft buffing wheel.

Repairers in factories and in repair shops have not generally recognized the great change that can be wrought in tarnished nickel by the buffing wheel. Any nickel plated part, so long as it is not rusted clear through the nickel coating, may be rubbed on a buffing wheel treated with any of the reliable standard forms of nickel polish till its original luster has been restored. Even thin rust, which has not penetrated the nickel, can be removed so completely that no signs of its previous existence will remain. While a machine is undergoing other repairs the nickel plated pieces can be conveniently treated to the buffing operation and but little time and no capital spent on the job. Such work always pleases the customer, who generally believes that new plating throughout is the only remedy for tarnished bright parts.

#### Easily Made Universal Spanner

In all factories and repair shops there are many needs for some sort of a wrench or spanner which will fit various sizes of round screw-threaded attached parts, and which will unscrew the same no matter how tightly they may be bound in place and without marring the finish. The Stilson wrench has enjoyed more or less popularity for this purpose, but it falls short of answering all needs because it ruins easily marred finishes and because even the smallest size is often too bulky to accommodate itself to many parts which it is desired to remove.

A workman recently constructed the wrench or spanner shown in the illustration,



using as his materials a piece of old chain and an old bicycle crank. The hub end of the crank used for this purpose is cut off just above the enlargement and the extremity of the long portion remaining is filed down so that it will slip between the blocks of a chain link. By slipping the end link of a short stretch of chain over the crank end in this fashion and riveting the other end of the chain loosely to the extremity of the crank, the spanner is completed. A span-

ner made with seven attached chain links will accommodate round parts to be turned, varying in size from about one and one-eighth to one and three-fourths inches in diameter, and the pull which may be obtained with it is never failing in its effectiveness. By using a few more chain links of a pattern in which the side links are detachable without tools, so that any link in the stretch of chain employed may be slipped over the crank according to the size of stock to be turned, the adaptability of the spanner is made almost unlimited. It will be readily understood that the range of sizes which may be accommodated by a certain number of chain links is due to the fact that the parts to be turned may be caught in different positions relative to the lever arm, according to their respective diameters.

#### Tied Spokes Passing Out of Use

It is a noticeable fact this year that in by far the greatest number of new bicycles the spokes are not tied together in pairs. The custom of tying spokes has existed with varying popularity ever since the introduction of the tangent spoke, and during several recent years became a widespread practice. But now, for some reason, the tied spoke seems to be in disfavor.

Just why manufacturers ever began the practice of tying spokes cannot be readily explained on any other ground than that the wheel with tied spokes is stiffer than one in which the spokes are left free. The extremely stiff wheel has its advantages, but the experience of most repairmen will bear out the statement that broken spokes occur more commonly in stiff wheels with tied spokes than in well laced and trued wheels with untied spokes.

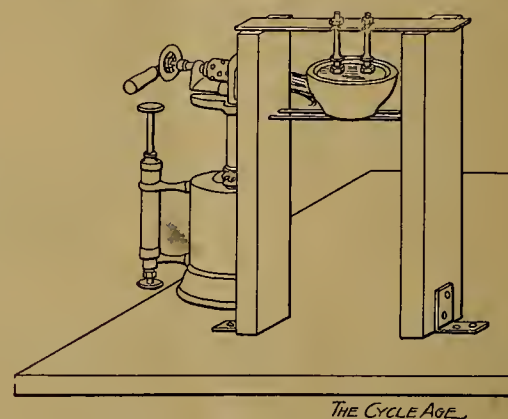
If, after a wheel has been laced up and trued, the crossing spokes are tied together in pairs by means of wire wrappings and solder, or stamped clasps, each spoke will have been pulled from one-sixteenth to one-eighth inch out of a straight line, according to the thickness of the hub flange and the manner in which the spokes are crossed in lacing. This range of distance is calculated from the fact that in untied wheels the crossing spokes pass each other with a clearance of from one-eighth to one-fourth inch.

The primary strain on a bicycle wheel spoke is tensional, and it is perfectly reasonable to suppose that no spoke, wire or bar of any sort is able to resist as much tensional strain when bent from a straight line as when perfectly true and straight. Wheels with tied spokes are doubtless stiffer laterally than those with untied spokes. When a rim, through the twisting strains thrown upon it in jerking into and out of ruts, etc., is thrown over to one side, the spokes on the side toward which the rim is thrust tend to loosen, and if the spokes be tied the combined stiffness of a pair of spokes running in different directions and tied together between their ends is naturally greater than that of a single spoke acting as a unit. It must be remembered, however, that the wheel with the untied spokes, while it may not possess the lateral rigidity of the other type, is possessed of a longer life, for the very reason that its spokes, instead of resisting

each little lateral strain, yield beneath it and spring back to their true line as soon as the strain is removed. During the miles and miles of riding when extreme lateral stiffness is not required of a wheel, and when the load borne by the spokes is one of a strictly tensional nature, each spoke in the untied wheel is straight from end to end and able to bear the full burden within the limit of its strength, and is not held from exerting a straight resistance to tensional strains by being pulled over that it may be tied to some other spoke running in a different direction.

#### Drawing Temper on Finished Parts

In a western pedal factory the following interesting and original method of drawing the temper on certain portions of hardened and finished pedal pins or spindles was recently employed. A large lot of spindles had been finished and nickel plated before it was discovered that the threaded shank which screws into the bicycle crank was too hard on each of the lot. The ill was such a small one that it



did not warrant any temper drawing process which would ruin the nickel or finish on the pins, so an apparatus like that shown in the illustration herewith was arranged. A small graphite crucible was supported on cross rods between two standards from the table at which the operator was working, and in this crucible was placed sufficient lead to nearly fill it when melted. The heating was accomplished by an ordinary gasoline hand torch supported on blocks by the side of the crucible. The flame was directed at the side of the crucible and maintained at a pressure sufficient to keep the lead well melted. By means of a piece of strap iron with a couple of button-hole apertures in its central portion, two pedal pins could be suspended above the crucible at a time, each being immersed in the lead to a depth that just covered the threading on the lower end.

The operator would place two pins in the strap iron jig, rest the holder on the upper extremities of the crucible supporting standards, and, after the pin ends had been immersed in the lead for 20 seconds, remove the holder and pins and dip the latter in a basin of water. The operation was rapid, and as the workman kept an open watch on the table before him by which to time the immersions, was accurate and uniform in its results. The nickeling on the pins was, of course, uninjured, and the temper of the pin was unaltered except at the threaded shank. The scheme, with slight changes in the manner of holding the parts, might be well employed in drawing the temper on portions of any small fittings.

#### English Exports Still Declining.

The English cycle exports for the month of March were valued at \$303,145, as compared with \$482,245 for the same month of last year. For the first three months of 1899 the exports amounted to \$934,235, comparing with \$1,436,935 for the corresponding period of last year.

Garford

Hunt

The Wheeler  
EXTRA

Brown

Gilliam

P &amp; F

## Permanency of Types

Compare the present Standard Types of Saddles with the impracticable affairs that have, from time to time, been pushed into more or less notoriety and after a brief existence have disappeared. The inventors of the latter were no doubt honest in their efforts to produce something novel and useful—but, all the more credit is due to those far-seeing men who have steadfastly refused to be misled, and have devoted their brains, energy and money to the betterment of the *Standard Type*—the plain every-day, unfrilled type, which, in its numerous variations of size and style has proved itself the *fittest*, which has survived, and will survive indefinitely.

Every one of these permanent types was originated by us. Not one of the impracticable novelties ever had the endorsement or support of any of our Companies.

It follows that it is safe, shrewd and profitable, and assures permanency in trade to handle only the goods stamped with the familiar trademarks here shown.

We cordially invite you to write us for any information you may desire, and respectfully solicit your business.



**American  
Saddle Company**

AMERICAN TRUST BLDG.

Cleveland, Ohio

## RELATIVE SIZES OF WHEELS

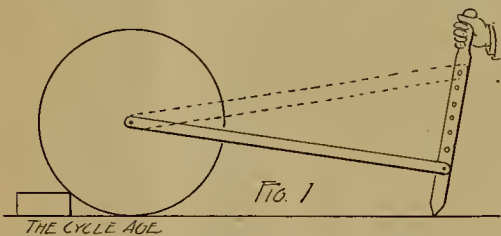
### Varying Opinions on the Most Suitable Sizes of Front and Rear Wheels in Bicycles

To the Editor.—A few words as to "direction of drive thrust," which I claim is from axle to axle, the ground contact being merely a fulcrum. To illustrate this claim of axle to axle thrust, attach a wheel to the end of a pole and roll it over an obstruction by connecting the other end of the pole to another held upright, with lower end resting on ground, applying power at any point of upright as desired. Vary the connecting point of lever with the pole and notice the difference in power required at varying heights. With the lever connected near the ground the wheel may be pushed over an obstruction as high even as the axle itself, which can not be done with the lever connection at or above the axle level. In my opinion, this connection of the lever with the pole corresponds with the rear wheel axle, the ground contact being the fulcrum.

Another illustration is the rolling of the rear wheel of the old style bicycle backward over an obstruction. It rolls forward easy enough, but not backward—a poor argument for the upward thrust, but a good one for the axle to axle theory.

There is no thrust from the ground contact of rear wheel to front axle, no more than from a man's feet to the axle of the barrow he pushes; otherwise he would not instinctively lower his hands to force the barrow over an obstruction; his feet would do it. Yours truly. J. I. BURNHAM.

Mr. Burnham's experiment proves only that the front wheel will pass over an obstacle most readily when the thrust is



delivered in an upwardly slanting direction—which may be taken for granted—but not that the thrust is not so delivered when a bicycle is propelled by its rider.

#### The Test Is Misleading.

Perhaps Mr. Burnham also overlooks that when his beam is attached at a point low on his upright, it naturally requires less power to move the wheel than with high attachment, because his leverage for moving it is increased. With a small rear wheel the leverage would be reduced in proportion. But it may be freely admitted that the low thrust in Mr. Burnham's experiment would be most effective quite apart from the leverage gained for the hand. The objection to the experiment so far as indicating the direction of thrust upon front wheel axle is only that it does not represent parallel conditions.

#### The Direction of Thrust.

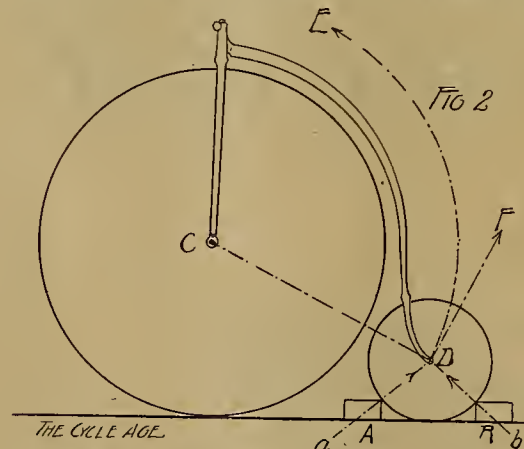
On a well-greased floor it is easily possible to make the rear wheel revolve without imparting any forward movement to the bicycle, if there is an obstacle before the front wheel, and this may show to anybody who requires this demonstration, that the thrust which makes the bicycle, including the front wheel, move, is delivered against the ground. It could not be delivered against anything else. As the ground does not move, the bicycle must move. Now, this thrust which the rider causes to be exerted tangentially to the ground by revolving the rear wheel around the only point which is fixed in relation to the power and which therefore is the only fulcrum in the case, namely, the rear axle, operates, like all other thrusts, in a straight line. It reacts upon the bicycle in a direction opposite to its own, and it takes effect in the direction in which there is least resistance to mo-

tion. But it does not start off in one direction, toward the axle of the rear wheel, and then change its mind and shoot off at right angles to the front wheel axle. It is transmitted to the front wheel at its axle. If the front wheel were rigidly fixed, or a skate substituted as in ice-bicycles, it would be transmitted at the ground. If a bar were placed in the way of the steering head, obstructing the forward movement of the bicycle, it would be delivered against the bar. But under all circumstances, when the rear wheel is driven it starts from the point where power is exerted against an object outside of the bicycle, viz., the point of ground contact of the rear wheel.

#### Backward Driving of Ordinary.

Mr. Burnham refers to the old Ordinary and the difficulty experienced in driving the small wheel backward over an obstruction. This is easily explained. First, when pedalling backward the rider's weight is shifted considerably to the rear; secondly, the frame is not very rigid; thirdly, there is an important difference between a pull and a push. When the driving wheel of an Ordinary is driven forwardly and an obstacle must be surmounted by the small wheel, the latter has a ready escape by simply turning frame, rider and all upward around the driving wheel axle (the crank shaft). On the other hand, if the small wheel is pushed backward over an obstruction—which, by the way, is likely to be large in comparison with a small wheel—the tendency is the opposite one by pressing the small wheel into the ground. This is only another way of stating that in pulling a wheel after a driving wheel, you pull it from the axle of the latter; but in pushing it in front, you push it from the ground contact.

Fig. 2 shows graphically the difference which exists and which explains why the Ordinary cannot readily be driven backward over an obstruction. When the small wheel is driven backward against B—and B is immovable—the resistance



takes the direction b D, while the only possible direction of motion for the small wheel, so far as overcoming the obstruction is concerned, is D F, tangential to a circle around the center of the large wheel. When, on the other hand, the small wheel is pulled forwardly over obstruction A, the resistance follows the direction a D and the small wheel readily escapes this resistance because the possible motion is nearly in the same direction.

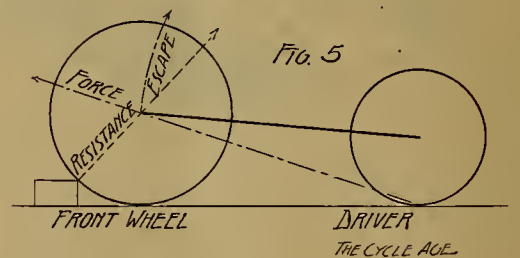
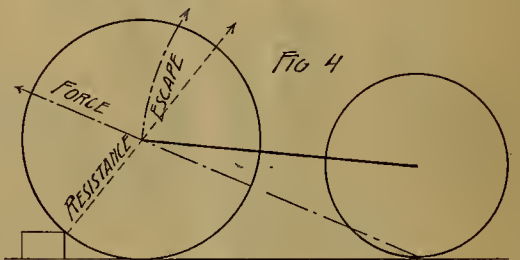
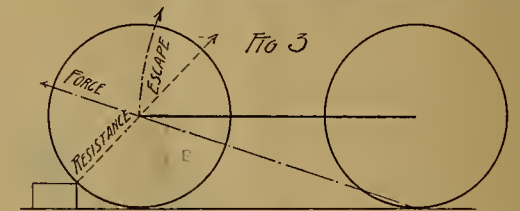
In the comparison with the barrow, it is the hands of the workman which take the place of the rear wheel tire, while the

shoulder joints represent the rear wheel axle, but the comparison is one of those in which the points of similarity are not as important as those of dissimilitude. The whole element of rigid connection is absent, and it is not the feet which drive, but the weight of the workman leaned against the barrow.

#### How an Obstacle is Surmounted.

The whole subject would hardly be worth extensive comment except for the inference which has been erroneously drawn in favor of small driving wheels.

In connection with the question of front drivers or rear drivers in motor vehicles, a number of construction features depend more or less upon obtaining the best direction of the thrust by which the carrying wheels are propelled. In bicycles of the type now universally used, being rear driven, the whole matter is best shown graphically as in Figs. 3, 4 and 5, representing three different combinations of wheel sizes, and indicating the chances which the front wheel has for overcoming an obstacle in each case. In Fig. 4 the front wheel is shown as much increased in diameter as in Fig. 5 the rear wheel diameter is reduced. It will be noticed that the driving force operates at



the same angle in Fig. 3 as in Fig. 5, while the angle indicating the escape of the front wheel from impact with the obstacle is in favor of the small rear wheel. In Fig. 4, however, the driving force operates at a more advantageous angle than in either of the other cases, and the angle of escape is also smaller. When hereto comes that an obstacle which is to be overcome by the front wheel must also be overcome by the rear wheel, it is readily seen that a much greater advantage is gained by increasing the size of the front wheel than by a corresponding reduction of the size of the rear wheel.

#### Making Connecticut Dealers Liable.

Inquiries are being instituted by the state insurance inspector of Connecticut regarding the business being done in that state by the Travelers' Bicycle Casualty Company of Washington, D. C., which is not licensed to do business in that state. It is understood by the inspector that the company is trying to get dealers to take hold of its policies and give them as inducements to purchase bicycles. But anyone selling its policies is liable to a fine of \$100, while the general agent in the state is liable to a fine of \$500.

The company claims to insure wheelmen against accidents while riding, but according to the inspector, the policies



are so written that the company can in almost every case elude settling claims for injuries. As an extra inducement to wheelmen a policy for \$1,000 in the United States Casualty Company of New York is thrown in at the same price, \$5 per thousand, for the bicycle accident policy.

**REPAIR PRICE SCHEDULES**

**Evils Caused by Existing Irregularities Can be Overcome by Wide Adoption of Uniform Scale.**

(Reprinted from The Cycle Age.)

On another page there is presented a list of the repair prices in various towns. In looking over the list it is at once apparent that great irregularities in prices prevail; that the same piece of work is estimated as being worth very much more in one town than in another. In several instances some towns in which greatly varying prices are charged, are so close together on the map that it must happen frequently that cyclists from one of the towns visit the other town and have occasion to become acquainted with the variation in charges.

The moral effect of this condition is, of course, to prime the public thoroughly with the idea that all repair prices are arbitrary and extravagant, and thereby bring about a general suspiciousness and ultimately force prices all over to the lowest notch. When that point has been reached the ambition to do good work, on the part of the repairman, must gradually vanish and give way to a desire to do as little as is absolutely required for obtaining the depressed price which the customer grudgingly pays.

If a somewhat uniform scale of prices could be adhered to the downward tendency which has already gone too far, might perhaps be arrested and a higher standard of workmanship would eventually follow.

The experience with uniform price schedules has, however, not been altogether successful except in places far removed from the centers of the bicycle and parts-making industries, and before any attempt is made to reach a general and fair estimate of what each of the most common repair jobs is worth, the cause of previous failures should be looked into.

A repair price schedule should be flexible enough to suit existing conditions, and it should not be plainly inimical to the interests of the public who are expected to pay the charges.

Better results may be expected from a schedule which gives maximum prices for the information and protection of the public while leaving the repairman all the latitude which he may desire for showing special favors to customers by lower quotations when circumstances warrant them.

**Reckless With His Plunder.**

Milwaukee, April 24.—A large leak in the Andrae factory was discovered a few days ago, and in consequence Steven Kunkel, one of the trusted employes, is now an inmate of the penitentiary. For a long time bicycle parts have disappeared from the factory, and while others were suspected, no thought was attached to Kunkel, as he was supposed to be a man of exemplary character. This belief was dispelled, however, when city detectives made a private examination of his room, with the result that more than \$500 of stolen property was recovered. Kunkel was doing quite an extensive business manufacturing bicycles, but he became reckless, and it was the low price at which he was selling that attracted attention and suspicion. Wholesale robberies are complained of by local manufacturers, but up to the present time the investigations of the detectives have been successful in the Andrae factory alone.

**PHILADELPHIA REPAIR PRICES**

**TIME WORK MADE THE BASIS**

**No Regular Schedule Has Been Adopted But Charges Are Uniform—"Cheap Johns" Ignored.**

Philadelphia, April 24.—While no fixed schedule of charges has been adopted by the bicycle dealers and repairmen of this city, a canvass of the principal houses develops the fact that there is a remarkable unanimity existing as to the prices charged for repair work of all descriptions. The subjoined list is made up by averaging the charges of each of several firms for the varieties of work mentioned, and is not to be considered as the repair schedule of any particular house. In making up the list no cognizance was taken of those firms which knock down a bicycle, cut down the frame to fashionable proportions, re-nickel, re-enamel, re-stripe and re-assemble "all for the small sum of \$3," for it is credibly asserted that some of these fellows put in the drop with a mallet after heating the frame and that there are noticeable bends in some of the tubes after the operation of painting with tar paint has rendered the abused machine, in the advertised words of the proprietors, "as good as new." In this connection it cannot be said that the competition of these ridiculously low-priced repairmen has in any way hurt the business of the "legitimate" dealers and repairmen. It has been noticed that in many instances these cheaply repaired machines have eventually found their way into the shops of the "legitimates" for a thorough overhauling at regular rates.

**Time Work the Basis of Charges.**

The average cost of time work, which is the basis on which repair charges are made in this city, is 50 cents per hour. Some firms charge as much as 60, some as little as 40, but 50 cents is a fair average.

The larger houses, some of which have facilities for turning out great quantities of work, often do considerable repairing for the smaller dealers, and in these cases it is the usual custom to allow the latter a 25 per cent discount, and in those instances where the charge is made up wholly of time work it is put in at about 40 cents an hour instead of 50.

The appended list is based on the assumption that the bicycles needing repairs are comparatively up-to-date. Antiquated patterns needing new parts (which are often difficult of access) are subject to special rates. An effort has been made to itemize the cost in many of the repairs mentioned in order to assist the reader to a knowledge of the different operations necessary before such repairs are completed, and the cost of each. Here is the list:

**Repairs to Frames.**

- (When received separately.)
- Head lug, each .....\$ .30
- Fitting, brazing and finishing, 2 hours at .50 .....
- Enameling, plain ..... 1.50
- Putting in two lugs, 1 hour additional time.
- (Estimates made when tubing is required.)
- (When not received separately.)
- For taking down and assembling, 2 hours at .50 .....
- Taking out a tube and inserting new one, 2 hours at .50 .....
- Aligning frame, ½ hour at .50 .....
- Flush joint frames:
- Putting in new head, heads, each... .50
- Labor, 4 hours at .50 (when not necessary to put in new upper and lower tubes) .....
- When upper and lower tubes are necessary, 6 hours' time at .50 .....
- Tubes, upper .....
- Tubes, lower .....
- Other frames:
- In case of broken lower tube, putting in new tube and plain re-enameling frame .....

- Putting collar around tube, under the brace, including plain enameling..... 3.00
- Both tubes replaced, including plain enameling .....
- (One dollar is deducted from above charged when frame alone is brought in for repairs.)
- Cutting down frame:
- Bicycles with external fittings, including putting in of new lower center tube .....
- (This does not include taking down and assembling bicycles for dealers.)
- Changing models with external fittings to flush joint at head, in connection with cutting down frames, additional cost .....
- Cutting down bicycles with internal fittings .....
- (These charges include enameling plain black.)

**Repairs to Front Forks.**

- Putting in fork ends:
- One pair fork end forgings .....
- Fitting and brazing, 2 hours at .50..... 1.00
- Enameling, black, .50; colors, .65; white, 85.
- Striping, plain .....
- Striping, with ornamentations .....
- Taking out front fork and inserting new one, ½ hour at .50 .....
- Aligning fork, ¼ to ½ hour at .50
- Putting in fork sides (when forks are received separately):
- Sides, each, .20 to \$1, according to grade of machine.
- Labor on one side, 1 hour .....
- Putting in fork crown (when received separately):
- Crowns, each, .25 to .60, according to the grade of wheel.
- Labor, from 3 to 3½ hours at .50.
- Refinishing extra.
- Putting in fork stem:
- Stems, each, .55 to \$1, according to the grade of bicycle.
- Labor, 2 hours at .50 .....
- Refinishing extra.

**Seat Post Repairs.**

- One stamping .....
- Fitting, brazing and finishing, 1 hour. .50
- Nickel-plating ..

**Handle Bar Repairs.**

- One handle bar shaft head, fitting, brazing and finishing, 1 hour .....
- Nickel plating ..
- (Additional charges are made for grips broken in removing from handle bar, and for supplying missing parts—grips, each, .10; key, .15; bolt, .10.)

**Repairs to Wheels.**

- Re-spoking (or inserting new hub):
- Spokes, each .....
- Nipples, each .....
- Taking down and assembling, 2½ hours ..
- (Above charge includes cementing tire.)
- Putting in single spokes:
- Cost of spoke, .02; nipple, .01..... .03
- Time charge on one spoke .....
- Truing wheel, extra, according to time.
- (When several spokes are put in, time is charged at .50 per hour.)
- Putting in new rims:
- Rims, each, from .30 to .90 .....
- Two hours' time on each wheel .....
- Cementing one tire to rim, ½ hour... .25
- Varnishing one rim, ½ hour .....

**Crank Repairs.**

The charges for repairing broken cranks vary from \$1.30 to \$2.50 according to grade of machine and whether right or left crank. These charges include time consumed and cost of part.

**Enameling.**

- Frames:
- Single frames, plain black ..
- Single frames, plain colors ..
- Single frames, plain white ..
- Tandem frames, plain black ..
- Tandem frames, plain colors ..
- Tandem frames, plain white ..
- Heads, extra, plain colors or white... .50
- Front forks:
- Plain black ..
- Plain colors ..
- Plain white ..
- Rims only, black, colors or white, including striping, each .....
- Rims, with hubs and spokes inserted, black, white or colors, including striping ..
- Chain guards, black, colors or white, striped ..
- Dress guards, black, colors or white, striped ..
- Taking tire from rim and re-cementing ..
- Cementing tire to rim .....

**Striping.**

- Frames, single striping, gold or silver.. .40
- Frames, double striping, gold or silver.. .60
- Frames single striping, decalcomania corners ..

Frames, double striping, decalcomania corners ..	.75
Frames single striping, decalcomania corners and centers ..	.75
Frames, double striping, decalcomania corners and centers ..	1.10
(These charges include frame and fork, and are in addition to charges for plain enameling.)	
Lettering, per name ..	15

**Overhauling.**

Including cleaning, oiling and adjusting bearings, single bicycle ..	1.25
Tandem ..	1.50

**Tire Repairs.**

Plugging, per plug, 1/2 hour at .50 ..	.25
Vulcanizing, from 1 to 1 1/2 hours at .50 ..	.50
Vulcanizing in valve stems, cost of stem ..	.10
Time, 1 to 1 1/2 hours at .50 ..	

**Lacing Guards.**

Chain guard, including cord, not netted ..	.25
Wheel guard, including cord, not netted ..	.25

**Nickel Plating.**

Handle bar ..	1.00
Sprocket wheel, according to size, .25 to .65 ..	.25 to .65
Front forks at crown and tip ..	.50
Crank ..	.40
Pedal ..	.50
Hub ..	.40
Crank ..	.25
Seat post ..	.25

**WHY PRICES ARE HIGH****Freight Charges, Duties and Cost of Extra Equipment Accountable for Australian Prices.**

To the Editor:—In a recent issue of your paper I notice a paragraph evidently forwarded to you by a correspondent from Sydney, New South Wales, stating that bicycles sell in Australia at a large margin over English and American prices. This is a mistake, as we can purchase in New Zealand and Australia bicycles at the same prices as in England and America, plus freight and duty.

Your correspondent states that the Gould Bicycle Company, Ltd., sells its machines at \$140. In New Zealand there is a duty of 20 percent and 10 percent on the ordinary market value of the goods, which means that you must pay duty on the prices at which anyone can purchase the same machine in America. Notwithstanding this, the Gould Bicycle Company lists its \$75 Canadian model in New Zealand at £16 10s, and its \$100 model at £21.

Considering the expensive methods adopted by the trade throughout Australia in disposing of their machines by consigning to country agents on sale or return, I do not think the prices charged are excessive.

Any number of American and English model bicycles can be purchased in Australia at prices varying from \$15 to \$75. The chief objection against American bicycles in this country is on account of their being fitted with light tires, round cranks, etc., which do not meet with approval. The popular roadster in Australia is a machine fitted with serviceable detachable tires, steel rims, and mud guards. At the present time the Australian market is flooded with bicycles, which are being disposed of through the auctions at what they will bring.

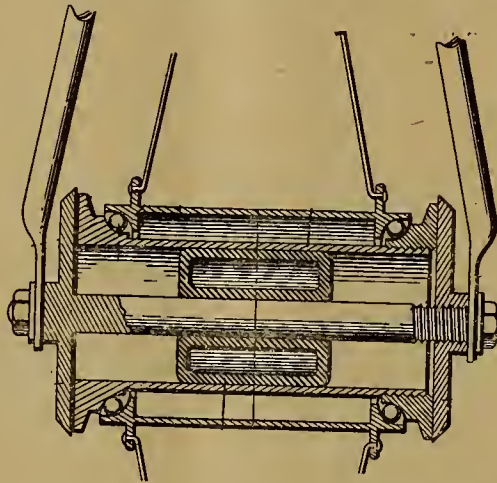
The bicycle which sells best in Australia and New Zealand is an altogether different machine from that sold at home, on account of special items which have to be fitted; for example, single tube tires are popular in the States and utterly useless out here; then again such items as brakes, mud guards, gear cases, special styles of saddles are all extras which have to be added to the price of the standard model in America. You will thus observe that the prices at which the machines mentioned are retailed are reasonable when the very heavy charges are debited against them. Freight alone by the 'Frisco route is about \$17.50 per ton measurement.

Hundreds of bicycles which have been forwarded to these markets in the hope

of ready sale have at last been forced into the auction market and slaughtered. Wellington, N. Z. M. GEORGE PHELAN.

**Saussure's Cushion Hub.**

The invention as illustrated presents really a compound axle consisting of two concentric members separated by a rubber cushion, filled with air or solid; to the outer member the cones are secured in the usual manner. The inner member looks like an ordinary axle without cones and is secured to the frame in the usual manner. Rigid plates secured to this axle and rubbing against the ends of the outer axle-cylinder prevent the latter from wob-

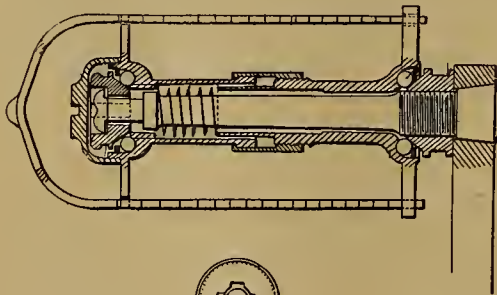


THE CYCLE AGE

bling. The large diameter of the ball bearing in a device of this sort would probably increase the friction at this point considerably, and the chain tension would of course prevent the cushion from operating in any direction except one approximately vertical. The same chain tension would make a strong effort to warp the end plates and in connection with a good wrench a jolt might succeed in buckling the front sprocket. The inventor is R. de Saussure, of Brookland, District of Columbia.

**Readily Detachable Pedal.**

The pedal illustrated is the invention of Eugene Germaine, of Paris, France, and has been patented in this country. His object has been to produce a pedal which is positively fastened in the crank eye and which may be very readily stripped and cleaned. The first object is attained by tapering the inner crank end and locking the taper fit by means of the inner cone which acts as a lock-nut. The spindle at the outer end is formed with a cross piece or T over which the outer cone



THE CYCLE AGE

may pass. This cone on its outer face has two notches quartering with the slot that allows it to pass over the T. When passed it is given a quarter turn, bringing the notches in engagement with the T, and it is held in this position simply through the pressure exerted upon cup and balls by means of a spring bearing against the outer half of the telescoping sleeve surrounding the spindle. A cap protects the outer bearing. The pressure of the spring upon the bearing parts will evidently not make this pedal a free-

spinning one, but when foot pressure is applied the small additional friction produced by the spring is probably a factor of small consequence. In the way of strength the pedal would probably leave much to be desired, but it contains a hint or two that in some other form might be available for our pedal or bicycle manufacturers.

**Cycle Company President Indicted.**

A grand jury in Cincinnati has returned an indictment for grand larceny against M. A. Barringer, said to be president of the Capital City Watch & Cycle Company, and a bench warrant for his arrest is in the hands of the sheriff, but Barringer has left the city. It is alleged that several gentlemen living in the country invested small amounts of money in the company and now claim that the company is not what it was represented to be. The indictment against Mr. Barringer has been kept secret and the specific charge against him is not announced.

**Old Officers Re-Elected.**

The annual meeting of the stockholders of the Joseph Dixon Crucible Company was held at the company's main office, Jersey City, N. J., April 17, and re-elected the old board, consisting of Edward F. C. Young, John A. Walker, Daniel T. Hoag, Richard Butler, William Murray, Alexander T. McGill, and Joseph D. Bedle. President E. F. C. Young, Vice-President and Treasurer John A. Walker and Secretary George E. Long were re-elected by the directors. Judge Joseph D. Bedle was also re-elected as counsel.

**Union Company Increases Wages.**

The Union Cycle Manufacturing Company, Highlandville, Mass., has increased the wages in its polishing department from 5 to 20 per cent, the wage limit also being increased from \$3 to \$3.50. This more than restores the several cut-downs made during 1897 and 1898, and gives the polishers higher wages than they have received for more than five years. The number of hands affected is twenty-five.

**Fire Damages Frames and Parts.**

The Speedwell Bicycle Manufacturing Company of Buffalo sustained a loss of between \$3,000 and \$4,000 on its stock of uncompleted bicycles by a fire which started in the office of the plant last Friday. The machinery room was uninjured. A large number of nameplates were also destroyed. The loss on stock is fully covered by insurance.

**Rochester Supply Co.'s New Officers.**

At a meeting of the directors of the Rochester Bicycle Supply Company, of Rochester, N. Y., recently, the following officers were elected: President, George C. Crippen; vice-president, William Hawley; treasurer, George W. Aldridge; secretary and manager, Thomas Leahy.

**Sale of Punnett Company Accounts.**

Frank J. Hone, as receiver of the Punnett Cycle Manufacturing Company, of Rochester, by order of court will sell uncollected accounts at public sale April 29. The receiver reports: Receipts, \$10,335.91; paid out, \$1,232.04; claims filed, \$20,711.58.

**Cement Makers Burned Out.**

The building occupied by the Michigan Bicycle Cement Company, in Niles, Mich., was recently gutted by fire at a loss of \$3,000; fully insured. The fire threatened the whole business portion of the city.

# COMMERCE IN FOREIGN MARKETS

**Influence of American Design**

The influence and increasing popularity of American models in England are strikingly shown in the new Rover models.

The tread is narrower, the crank bracket is dropped fully 2½ inches, the steering head is shorter, and the finish to the outward details is equal to the finest American productions. The enameling is finer, the nickeling of a higher quality, the hubs are barrel pattern, and the chain half-inch pitch; and altogether the general effect and equipment is vastly superior to anything yet turned out by one of the oldest firms in the English cycle industry.

**Value of New Zealand Trade**

In spite of the fact that the native Maoris do not take kindly to the bicycle, the volume of cycle trade transacted by New Zealand dealers is very extensive. Moreover, the country buys cycle material and parts in considerable quantities, and the small maker does a thriving business.

In the eyes of the Maoris, the bicycle is the latest instance of the white man's folly. The leading medicine man of a large Maori township has declared with unanswerable logic that "the man who rides a horse and shoves it along with his foot is a fool, and might as well walk." The saying is accepted as wisdom by the tribes, for the Maori holds that exertion of all kinds is an abomination, and that exertion which is not necessary for the primal needs of existence is self-exposed folly.

To illustrate the value of New Zealand as a foreign market, it may be stated that during the first three months of last year 1,955 bicycles were imported, valued at \$97,815. This, however, shows a considerable decrease from the corresponding period for 1897, for during that period 3,438 machines were imported, having a total valuation of \$194,190.

The four leading ports of entry are Wellington, Dunedin, Lyttelton and Auckland. Throughout the year 1897 there were 11,496 machines imported. Since 1894 New Zealand has taken upwards of \$2,000,000 worth of cycle goods from England and America.

**Assemblers Busy in Victoria**

Bicycle assembling is practiced on a large scale in Victoria, Australia. In Melbourne and its suburbs there are between

sixty and seventy small manufacturers who make up their machines principally from English parts and construct their models on English lines. There are other local builders in such important country centers as Castlemaine, Geelong and Ballarat, the population of which towns is, respectively, 6,500, 20,000 and 21,053. These machines are sold to a class of riders who have an inherent prejudice against paying high prices. They want something cheap and, like a similar class in America, have their own peculiar ideas of design in detail and equipment.

Some of the higher priced machines made in large factories are selling in Victoria for more money than the same models of two years ago. Well informed tradesmen say that there is a lot of nonsense written concerning the decay of the cycle trade in Victoria, and support their statements by drawing attention to the climate, which is particularly well adapted to the pastime. There is a marked depression felt in the Victorian cycle trade, however, which, in the opin-

ion of experts, will not last for any lengthy period. The number of auction sales recently held have in no small degree contributed to the prevailing dullness, but it is the expectation that as soon as some of the overstocked and financially crippled firms have come to the end of their tether business will right itself. The wage earning class in Victoria is soon expected to heavily augment the ranks of riders.

The time payment system has been reduced to a fine art by one large Melbourne establishment. In spite of the necessarily heavy expense of collection, interest, wear and tear and guarantee, this firm has found the time payment system to work satisfactorily. It gives a two years' guarantee to city riders. Its time payments are adjusted to suit the pocketbook of the humble and encourage them to purchase, and, in spite of the fact that recruits are largely drawn from poor people, losses are few. The practice of this firm is to deliver machines at a cost not to exceed that which the rider, under ordinary circumstances, would expend for car fare in a month.

In the opinion of the cycle trade, racing has seen its best days in Victoria. Tourists and people who ride to and from business more than make up for what public interest has been lost through the decay of the sport. Society people, as in other quarters of the world where cycling has attained a more or less matured growth, have resorted to other pleasures than that which the bicycle affords.

**Discounts in South America**

European concerns still find it difficult to deal directly with the Spanish-American buyer in merchandise exclusive of

staples unless a term of from three to six months' credit is allowed. The question of dating or time, or whatever else it may be called in the export trade, is one of far more importance than discount, and in many instances overbalances all other particulars of sale. It is useless to think that any volume of business can be done on cash terms; there are too many who are ready to take commissions from reliable houses on a credit understanding.

European manufacturers and merchants have demoralized the export trade datings and discounts from an American point of view. With American business men the effort is to turn over capital as often as possible, the profits of manufacturing being greater than those derived from interest, and as a consequence inducements are offered for prompt settlements, but with European merchants it is exactly the opposite. They aim to credit only those who are known to be reliable, and with such trade it is a question of how long the debtor can be persuaded to keep possession of the money, when it is drawing from 1 to 2 per cent per month.

Money lent in this manner at from 12 to 24 per cent per annum is a profitable investment for the European capitalist, who cannot get more than 3½ per cent if securely invested at home. Foreign manufacturers have, therefore, encouraged slow payments with substantial, reliable houses, but during late years there has been a perceptible change in the methods of buying.

South American merchants realize more and more the advantages and extra profit to be derived from prompt payments, and many such houses have increased their

capital so as to be able to take the full advantage of discounts.

On the other hand, it should be remembered that an allowance of 6 per cent per annum is no inducement to offer South American merchants for prompt payments. Capital is worth much more in their own trading negotiations. It is nothing unusual to see good commercial paper sold at an equivalent discount of 15 per cent. Considering the methods still in vogue of extending long terms of credit to the inland traders and the natural scarcity of ready funds, three-quarters of one per cent is more of an inducement for prompt payment among South American buyers than ½ per cent per month is among the American trade.

**Exhibiting for Foreign Buyers**

In the probable event of the materialization of the plans of the directors of the Exposition of American Manufacturers,

which opens in this city on September 15 next, there will be held in connection therewith an exhibition of cycles and accessories which promises to fall little short, in point of attractiveness and importance, of the annual shows of the erstwhile National Cycle Board of Trade.

President William M. Brewster, of the Philadelphia Cycle Board of Trade, has been appointed chairman of the sub-committee to which this project has been referred, and he and his assistants are hard at work perfecting the details thereof. On Wednesday last a circular letter from this sub-committee, signed by Mr. Brewster, was sent to the leading bicycle manufacturers throughout the country, calling their attention to the coming exposition as being directly in their interests, and soliciting their co-operation in making the bicycle portion of the exhibition a success. The letter urges the manufacturers to apply at once for spaces.

The undoubted benefit to be derived by exhibitors of bicycles from the presence at the exposition of the many foreign merchants who will attend is pointed out, the annual increase in the exports of bicycles and accessories to foreign countries being evidence of the rapid popularization of American models abroad.

**Exports for One Week**

Exports of bicycles and bicycle materials from the port of New York for the week ending April 18 are recorded as follows:

	Bicycles	Materials
	cycles.	rials.
England . . . . .	\$10,478	\$14,932
France . . . . .	13,715	4,024
Germany . . . . .	915	13,157
Africa . . . . .	11,279	108
Argentine Republic . . . . .	3,391	268
Denmark . . . . .	4,392	3,525
Russia . . . . .	4,646	1,377
British East Indies . . . . .	4,005	.....
Sweden . . . . .	2,847	1,417
Belgium . . . . .	1,982	1,458
Mexico . . . . .	2,146	181
Austria . . . . .	2,188	.....
Holland . . . . .	.....	1,546
Switzerland . . . . .	850	99
Brazil . . . . .	766	43
Finland . . . . .	775	.....
Norway . . . . .	350	50
British West Indies . . . . .	218	97
Arabia . . . . .	132	.....
British Guiana . . . . .	.....	126
Ireland . . . . .	100	.....
Ecuador . . . . .	98	.....
Hong Kong . . . . .	70	.....
Porto Rico . . . . .	60	.....
Scotland . . . . .	50	.....
Central America . . . . .	32	19
U. S. of Colombia . . . . .	40	.....
Italy . . . . .	.....	26
Totals . . . . .	\$70,525	\$42,453

## SUBJECTS OF GENERAL INTEREST

### The Attorney General on Trusts

In reply to a letter from a Philadelphia citizen, who has interests in New Jersey, to Attorney-General Griggs, saying that he finds among the people great opposition to combinations in restraint of trade, and as a republican hopes the party will meet the issue by beginning prosecution under the Sherman act, the attorney-general writes:

I have your letter of the 7th inst., and because it is evident that you are under serious misapprehensions as to the force and effect of the federal law relating to trusts, called the Sherman act, passed in 1890, I deem it proper to call your attention to some aspects of this matter which you are obviously ignorant of.

In the first place, the constitutionality of this matter was not affirmed last fall, but was affirmed almost immediately after the passage of the act, in the first case which arose, and has been regarded as settled, so far as the constitutionality is concerned, for many years. In the next place, the Sherman trust act does not give to the federal courts jurisdiction over any combination constituting a restraint and monopoly of trade unless such trade is what is known as interstate or international trade and commerce.

A combination or trust for the purpose of maintaining a monopoly in the manufacture of a necessary of life is not within the scope of the Sherman act, and can not be suppressed by the federal courts. This was decided in 1894 in the case of the United States against the combination of sugar companies.

As a matter of fact, all the companies which you refer to as now organizing for the purpose of securing complete or partial monopoly of different branches of manufacture are similar to the sugar combination, and are not within the jurisdiction of the federal courts. If amenable to any law they are amenable to the laws of the respective states.

This department never hesitates to prosecute unlawful combinations which affect interstate commerce, and if you will examine the reports of the federal courts you will find very many cases of such prosecution, some effective and some ineffective.

It is a popular error to assert that the attorney-general of the United States has control of the corporations or combinations which engage in manufacture in the various states. This is entirely a matter of state control, and unless the functions of interstate commerce are interfered with, I would be superfluous to attempt a crusade against affairs with which I have no business.

With reference to these large combinations of capital which are now forming, my own judgment is that the danger is not so much to the community at large as it is to the people who are induced to put their money into the purchase of the stock.

### Cables and American Possessions

Stupendous as have been the political results of the Spanish war, they bid fair to be rivaled in magnitude by the economic and industrial. To dig a canal from ocean to ocean, to build a fleet of merchant vessels that will put us once more in our rightful place as a leading maritime nation, to hold the position we are already winning of primacy in the world's commerce, are inseparable concomitants in the sudden and great transformation of our foreign relations and policy. Money, time, labor, thought, must be lavished upon the new works to which the nation has set her hand.

Among those works one of the most urgent is the establishment of cable communication between all the American possessions. If Hawaii and Luzon are to be controlled from Washington, they must be joined thereto by direct lines of intelligence. The transmission of messages from Manila to New York across thousands of miles of foreign lands may answer very well while we are on terms of at least outward amity with their rulers, but the bursting of a very small war cloud over the wrong spot would leave our Asiatic colonies as effectually

shut off from us as if buried under the ice cap of the south pole.

The political argument in favor of a trans-Pacific cable is perhaps secondary to the economic one, which can graphically be presented in a few figures. While the trade of the countries commercially adjacent to the Philippines now amounts to more than \$2,000,000,000 annually, \$1,200,000,000 of this consisting of imports, the United States, notwithstanding the wares she offers are largely of the kinds in demand, receives not six per cent of the total amount. The volume of business awaiting diversion to our shores is therefore enormous. That direct cable connection, a canal through Nicaragua, and a larger fleet of merchant vessels would do much to turn the Far Eastern commerce in this direction, is almost axiomatic.

The United States government is keenly alive to these facts. Although the appropriation for a cable to Hawaii, which is to constitute the first link in a chain reaching westward to the Far East, failed in the late Congress, there is little doubt that the money will be voted at an early session in the future.

### Overcrowding in the Large Cities

One of the nation's senators has said that everybody is flocking to the cities and overcrowding them, while the broad acres that should support the population are being neglected; and he adds that if he were a young man he would jump right out into the country and become a farmer. The senator's idea reminds one of the committee of Chicagoans who, after the world's fair and during the hard times following, felt it their duty to gather in the many stranded attendants at the fair and the unemployed of the city and prevail upon them to go to the country where, as they were assured, they could get farms, or employment on farms, and enjoy the blessings of agricultural life. The result was that the country surrounding Chicago was overrun with tramps, many of whom were earnestly trying to get work but couldn't, because farmers were discharging instead of taking on hands on account of the agricultural depression that had been caused by overproduction and the consequent low and declining prices of farm products. Though there has been some improvement in agricultural conditions since, farming is not yet a profitable business because the broad acres under cultivation produce more than enough to support our population and to supply demands from abroad and prices consequently are still too low to give good profit.

Manufacturers are consolidating for the purpose of reducing expenses and preventing overproduction. The hordes of official and other employes they are discharging increase the number of the unemployed in the cities and reduce the number of the consumers able to buy, and if they could jump right out into the country and become farmers, as the senator urges, by so much the more would agricultural products be increased and buyers thereof decreased and farming made less profitable.

But they cannot jump right out into the country and become farmers, because they have not the necessary means or knowledge. Lands that are sufficiently good and well located to yield fair returns at prevailing prices of products, are costly, and it takes a good deal of

money to provide the necessary stock and machinery for successfully operating a modern farm. Even the renter must have considerable means. In short, most of those who might go out from the cities and undertake farming would not improve their condition, for those who had means to buy and operate a farm would fail through lack of knowledge of the business, those who had only enough to become renters would be still more likely to fail and for the same reason, while those who had no means could do nothing better than take places as hired men and would have much difficulty in getting such places for the same reason also. There is but one class of those who are overcrowding the cities that might better go to the country—the young men raised on the farm who have gone to the city with the hope of bettering their condition but have failed to get into paying business or permanent situations.

### Powerful Incandescent Light

According to English chemists, Prof. Nernst's incandescent light is one of the greatest discoveries of the age. That

Professor Nernst had discovered a new light has been known for some time, although the general details of the invention, or more properly speaking, discovery, were not made public until quite recently. That the incandescent electric lamp now in general use is by no means an ideal one has been fully appreciated by scientists for some time, but in lieu of something better it has been almost universally adopted.

The principal objection urged against the incandescent lamp in its present form is that it requires a considerable amount of current to raise the carbon filament to the point of incandescence, and further requires, though less, still a large expenditure of energy to maintain that incandescence. In other words, the proportion of the luminous radiation to the total radiation is very small. The experiments which Professor Nernst has been carrying on for some time were apparently with a view to overcoming these defects, and how well he has succeeded may be gathered from the fact that his new incandescent light is said to require but approximately one-third the amount of energy of an ordinary incandescent lamp.

The light recently discovered by the Gottingen professor differs materially from the ordinary form of lamp in that no vacuum and no fragile filament are required. In the place of the filament a rod composed of magnesia or other rare earth is made use of, which Professor Nernst discovered could be kept in an intensely luminous condition by a very weak current under certain circumstances. The essential point of the invention is that the rod must first be heated above 6,000 degrees Fahr. before it becomes a good electrical conductor. Other inventors have from time to time endeavored to adapt metallic oxides, such as alumina, magnesia, lime, etc., to incandescent lamps, but have invariably failed, owing principally to these substances being such poor conductors of electricity at ordinary temperatures.

Of late Professor Nernst has been developing and perfecting his invention, and apparently the principal difficulty yet to be overcome before the invention can be placed upon the market is the procuring of suitable appliances for heating the rod of magnesia to the necessary temperature.

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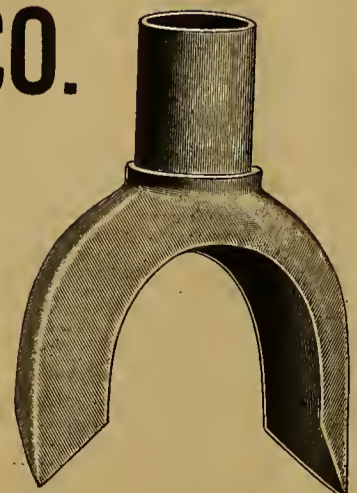
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# IRREGULAR REPAIR PRICES.

	MASSACHUSETTS.					OREGON.				
	E. Weym'th (Pop. 11,300)	Peabody (Pop. 10,500)	Natick (Pop. 8,900)	Monson (Pop. 3,650)	Salem (Pop. 34,500)	Portland (Pop. 81,000)	Silverton (Pop. 511)	Woodburn (Pop. 405)	Baker City (Pop. 2,600)	Grant's Pass (Pop. 1,450)
<b>Frame Repairs.</b>										
Replacing top tube	\$2.00	\$3.50	\$3.00	\$2.50	\$3.50	\$2.50	\$3.00	\$3.00	\$3.50	....
" lower tube	2.00	3.50	3.00	2.75	3.50	2.50	4.00	3.00	3.50	....
" top and bottom tubes	3.50	6.00	4.50	5.00	....	4.50	6.00	5.00	5.00	....
" one rear fork side	2.00	3.00	3.00	2.50	3.00	2.00	3.00	1.25	2.50	....
" two rear fork sides	1.50	6.00	4.50	5.00	5.00	3.50	5.00	2.25	3.00	....
" seat post mast	2.00	3.50	3.50	3.50	3.50	3.00	4.00	3.00	3.50	....
" head	2.00	3.50	2.50	3.00	....	3.00	4.00	2.50	2.50	....
" head frame connection	....	2.50	2.00	3.50	....	2.00	2.50	1.00-2.00	....	....
" seat post connection	....	2.50	2.50	3.75	....	2.50	3.00	1.00-2.00	....	....
" crank hanger bracket	....	4.50	4.50	4.00	....	4.50	5.00	4.00-7.00	....	....
" one rear fork end	....	1.50	2.00	1.00	....	1.00	1.25	.50-1.00	1.50	....
" two rear fork ends	....	2.00	3.00	2.75	....	1.75	2.00	.50-1.00	3.00	....
Repairing unbrazed joint	....	1.50	2.00	1.50 up	....	1.00	.75-1.50	.50-1.50	1.00	....
Lining up frames	.50	1.00	1.00	1.00 up	....	1.50	.50-2.00	1.00-2.50	1.00	....
Splicing tube	....	1.50	1.50	1.00 up	....	1.50	1.00	.75-1.50	2.00	....
Repairing dents, each	....	....	....	....	....	....	....	....	....	....
<b>Rims and Spokes.</b>										
Wood rim, common, 1 1/2 to 1 3/4 inches.	1.75	2.00	1.75	.80	2.00	.75	2.00	1.50	3.00	2.50
" extra quality	2.00	2.50	2.00	1.00	....	1.00	2.25	2.00	3.50	3.00
" racing or tandem	....	2.50	2.00	1.50	....	1.00	2.50	....	3.50	3.00
" detachable tires	2.00	3.00	2.25	1.50	2.50	1.00	2.50	2.50-3.00	3.50	3.00
Metal rim	....	2.00	....	1.00	....	1.50	....	....	5.00	....
Truing wheels, each	.50	.35	.25	.25 up	....	.25	.15-.50	.20-.75	.50 up	.25-.50
Wood rim and spokes	3.75	2.50	2.75	2.00	2.50	1.50	3.25	3.00-5.00	5.00	4.00
Respeaking without rim	2.00	2.00	1.75	1.25	2.00	2.00	2.00	2.00	2.50	1.50
One spoke	.25	.25	.15	....	.25	.05	.25	.10	.25	.05-.25
Two spokes	.35	.50	.25	....	.50	.10	.35	.20	.50	.10-.35
Each additional spoke	.10	.15	.05	....	.15	.05	.05	.05	.15	....
<b>Chain and Mud Guards.</b>										
Silk lacing on mud or chain guard	.25-.50	.35	.25-.50	.50	.25-.50	1.00	.50	.40	.50	.25-.50
" on both guards	.75	.50	.75	.75	....	1.50	.75	.80-1.00	.75	.75
Wood mud guard on ladies' bicycle	1.50	.50	1.25	.75	.75	.75	.75	1.00	.50	1.50
" chain guard on ladies' bicycle	1.00	.35	1.00	.75	.75	.75	.75	1.50	1.00	1.00
<b>Nickel Plating.</b>										
Frame and forks	6.00-8.00	....	6.00	....	....	10.00	....	....	....	....
Handle bar	.50	....	1.00	....	....	1.25	....	....	....	....
Large sprocket	.50	....	.75	....	....	.75	....	....	....	....
Medium sprocket	.40	....	.50	....	....	.50	....	....	....	....
Small sprocket	.25	....	.25	....	....	.40	....	....	....	....
Fork crown and tips	.75	....	1.00	....	....	1.50	....	....	....	....
" only	.50	....	.75	....	....	1.00	....	....	....	....
Spider crank	.25	....	....	....	....	.50	....	....	....	....
Pedal	.30	....	....	....	....	.50	....	....	....	....
Hub	.30	....	....	....	....	.50	....	....	....	....
Crank	.25	....	.25	....	....	.25	....	....	....	....
Seat post	.25	....	.35	....	....	.25	....	....	....	....
Small parts and fittings, each	.02	....	.05	....	....	.10 up	....	....	....	....
<b>Enameling.</b>										
Frame and forks, any dark color	3.00	3.50	2.50	2.50	3.50	2.50	....	3.00	4.00	1.50
" any light color	3.25	4.00	3.50	3.00	5.00	3.00	....	....	4.00	2.00
" white	4.00	4.25	6.00	4.00	....	3.50	....	....	....	2.00
Front forks	.75	.75	....	.50	....	.25	....	....	1.00	.50
Striping frame, plain, extra	.50	.50-1.00	.75	.50	....	1.00	....	....	....	.50
" and decorating, extra	.75	....	1.50	1.00	....	1.50	....	....	....	1.00
Enameling rims, each	.25	.75	.25	1.00	....	.50	....	.25	....	.50
" two rims	.50	1.25	.50	1.75	....	1.00	....	.50	....	.75
Air drying frame and fork	....	....	....	....	....	....	....	....	....	....
<b>Tire Repairs.</b>										
Punctures, single tube tires, each	.25	.25	.25	.25	.25	.25	.25	.15-.25	.50	.25
" double tube tires, each	.50	.50	.50	.50	.50	.50	.40	.25	.50	.25
Vulcanizing, small patches	.50	.75	.75	.75	.75	.75	....	.75	.75	....
" large patches	.75	.75	.75	1.00	1.00	1.50	....	1.00	1.00	....
Cementing on tires, each	.25	.25	.25	.15	.25	.15	.15 up	.10-.15	.25	.10
New valve	.25	.25	.25	.25	....	.35	.25	.25	.35	.35
" and stem	.75	.75	.50 up	.50	.75	.65	.40	.35	.50	.50
" stem	.60	.50	.50	.25	.50	.65	.25	.10	.25	.25
<b>General Repairs.</b>										
Front axles, each	.25	.25	.50	.50	.50 up	.50	.50	.50	.50	.35-.75
" wheel cones, each	.50-1.25	.50	.75	.75 up	.50 up	.75	.75 up	.25-.75	.50 up	.25-.75
" wheel cups	.50-1.50	.50	.75	.75 up	.75 up	1.00	.75 up	.25-1.00	.50 up	....
Front or rear wheel nuts, each	.10	.10	.15	.15	.10 up	.15	....	.10-.15	.25	....
Rear axles, each	.25	.35	.75	.75 up	.50 up	.50	.50	.50-.75	1.00	.50-1.00
" wheel cones	.50-1.25	.50	.75	.75 up	.50 up	.75	1.00 up	.50-1.00	.50 up	.25-.75
" wheel cups	.50-1.50	.75	.75	.75 up	.75 up	1.00	1.00 up	.50-1.00	.50 up	....
Crank hanger cones	1.00-1.50	.75	1.00	1.00 up	.75 up	.75	1.00 up	.50-1.00	.75 up	....
" cups	1.00-1.50	1.00	1.25	1.00 up	.75 up	1.00	1.00 up	.50-1.00	.75 up	....
" axles	2.00-2.75	1.50	1.50	1.00 up	2.00 up	2.00	2.00 up	1.25-2.50	2.00	.50-1.00
Straightening crank	.15	.25	....	.25 up	.25 up	.50	.25 up	.20-.40	.50	.25-.50
Straightening pedal pin	.15	.25	....	.25	....	.50	.25	.15-.35	.50	.25
Cleaning bicycle inside and out	1.00	1.50	1.50	1.50	1.50	1.50	1.00	1.00-1.25	1.50	1.00
Cleaning bearings	....	....	....	....	....	....	....	....	....	....
Cleaning crank hanger	....	....	....	....	....	....	....	....	....	....
Pedal rubbers, set	....	....	....	....	....	....	....	....	....	....
Cementing grips	....	....	....	....	....	....	....	....	....	....
Handle bar expander	....	....	....	....	....	....	....	....	....	....
<b>Front Fork Repairs.</b>										
Lining up forks	....	.75	.50	.50	....	.50	.50	.25-.50	1.00	.50-1.50
One new side	1.50	1.50	1.50	1.50 up	1.50-2.50	1.50	1.50	1.25	2.50	2.00
Two new sides	2.50	2.50	2.50	2.75	....	2.50	2.50	2.25	3.50	3.00
New stem	2.00	2.00	1.50	1.00 up	2.00	1.50	2.50	1.00	2.00	2.50
New arched crown	....	2.50	2.25	1.50 up	2.50	3.00	2.00	1.75-2.50	2.50	3.00
One fork end tip	.75	1.00	1.00	1.00	1.00	1.00	1.00	.50	1.00	1.00
Two fork end tips	1.25	1.50	1.50	1.75	1.50	1.75	1.50	.75	2.00	1.50
Complete forks, arched crown	....	5.00	4.00	3.75	5.00	5.00	4.00	4.00	5.00	....
<b>Sprocket and Crank Repairs.</b>										
Making rear sprocket, 7-8-9-10 teeth	1.00	2.00	1.00 up	2.50	1.50 up	1.50	....	1.50	....	....
New front sprocket	1.50 up	....	....	....	2.50 up	....	....	....	....	....
Truing front sprocket	.50	.25	.25	.25 up	....	.50	....	.25-.75	....	....
Crank	....	....	....	....	1.00 up	....	....	....	....	....
Crank pin	....	....	....	....	.25	....	....	....	....	....
<b>Chain Repairs.</b>										
Putting in one link	.25	.25	.25	.25	.25	.25	.15	.15-.25	.25	.25
Cleaning and lubricating	.15	.25	.25	.25	....	.25	.25	.25	.25	.10
Taking out one link	.15	.25	.25	.25	....	.25	.10	.10	.25	.10

IRREGULAR REPAIR PRICES.

CALIFORNIA.

TEXAS.

	Hollister (Pop. 1,250)	Pacific Grove (Pop. 1,350)	Riverside (Pop. 4,700)	Napa (Pop. 4,400)	Los Gatos (Pop. 1,650)	San Antonio (Pop. 37,700)	Paris (Pop. 8,250)	Liberty Hill (Pop. 309)	Taylor (Pop. 2,500)	Pittsburg (Pop. 1,250)
<b>Frame Repairs.</b>										
Replacing top tube .....	\$3.00	\$3.00	\$4.00	\$3.00	\$2.00	\$2.50	\$6.00	\$1.50	\$4.00	....
“ lower tube .....	3.00	3.00	4.00	3.00	2.00	2.50	6.00	1.50	4.00	....
“ top and bottom tubes.....	5.00	5.00	6.50	5.00	3.00	4.00	10.00	3.00	5.00	....
“ one rear fork side.....	3.00	3.00	3.00	2.50	1.50	2.00	5.00	1.75	2.00	....
“ two rear fork sides.....	5.00	5.00	5.00	4.00	2.50	3.50	6.00	3.50	2.75	....
“ seat post mast .....	3.50	3.00	4.50	4.00	2.50	2.50	6.00	1.50	4.00	....
“ head .....	4.00	3.00	3.50	3.00	2.50	2.50	6.00	1.25	4.00	....
“ head frame connection .....	2.50	2.50	2.50	2.50	1.50	2.00	4.00	....	2.50	....
“ seat post connection .....	2.50	3.00	....	3.00	....	3.00	5.00	1.75	2.50	....
“ crank hanger bracket .....	5.00	4.50 up	4.00	6.00	....	4.50	9.00	2.00	3.50	....
“ one rear fork end.....	1.50	1.50 up	2.00	1.50	....	1.50	2.00	.75	1.50	....
“ two rear fork ends.....	2.50	2.00 up	3.50	2.50	....	2.00	3.50	1.25	2.00	....
Repairing unbrazed joint .....	1.00	1.00 up	1.00	1.00	....	1.00	3.00	.75	1.50	....
Lining up frames .....	1.00	1.00 up	1.00	1.00	1.00	1.50	1.00	1.00	1.00	\$1.50
Splicing tube .....	1.50	2.00	2.00	1.00	1.25	1.50	2.00	1.00	1.50	....
Repairing dents, each .....	....	....	....	....	....	....	....	....	....	....
<b>Rims and Spokes.</b>										
Wood rim, common, 1½ to 1¾ inches..	2.50	2.50	2.50	2.50	1.25	.75	3.00	2.00	1.50	1.75
“ “ extra quality .....	3.00	3.00	3.00	3.00	....	3.00	3.25	2.75	2.00	2.00
“ “ racing or tandem .....	3.00	3.00	2.50-3.00	3.00	....	3.50	3.25	3.00	2.25	....
“ “ detachable tires .....	3.00-4.00	3.00	2.50-3.00	3.00	1.50	3.00	3.00	3.00	2.25	2.50
Metal rim .....	2.50	....	2.50	2.75	....	3.50	2.50	....	2.00	....
Truing wheels, each .....	.25	.25 up	.25	.25	.25 up	.25	.50	.50	.75	.25-.50
Wood rim and spokes.....	....	3.50	3.50-4.00	5.00	2.25	4.50	4.00	3.75	3.00	3.50
Respoking without rim .....	2.50	2.50	2.75	3.00	1.75	3.50	3.00	1.75	2.00	2.00
One spoke .....	.25	.25	.20-.25	.25	.15	.25	.25	.10	.25	.25
Two spokes .....	.40	.40	.40	.50	.25	.45	.50	.10	.35	.35
Each additional spoke .....	.10	.10	.15	.10	.07	.20	.10	.07	.10	.10
<b>Chain and Mud Guards.</b>										
Silk lacing on mud or chain guard.....	.50-.75	.25	.25-.50	.75	....	.50	....	....	.50	.50
“ “ on both guards .....	1.00	.75	.75	1.00	....	.75	....	....	.75	.75
Wood mud guard on ladies' bicycle .....	1.50	.75	2.00	1.50	....	.75	....	....	1.00	.75
“ chain guard on ladies' bicycle.....	1.50	.75	1.50	1.50	....	.75	....	....	1.50	.75
<b>Nickel Plating.</b>										
Frame and forks .....	....	....	....	8.00	....	12.00	....	....	....	....
Handle bar .....	....	....	....	1.00	....	.75	....	....	....	....
Large sprocket .....	....	....	....	.75	....	.35	....	....	....	....
Medium sprocket .....	....	....	....	.50	....	.25	....	....	....	....
Small sprocket .....	....	....	....	.50	....	.25	....	....	....	....
Fork crown and tips.....	....	....	....	1.50	....	.65	....	....	....	....
“ “ only .....	....	....	....	1.00	....	.35	....	....	....	....
Spider crank .....	....	....	....	.50	....	.25	....	....	....	....
Pedal .....	....	....	....	.50	....	.50	....	....	....	....
Hub .....	....	....	....	.50	....	.40	....	....	....	....
Crank .....	....	....	....	.35	....	.25	....	....	....	....
Seat post .....	....	....	....	.50	....	.25	....	....	....	....
Small parts and fittings, each.....	....	....	....	.05-.15	....	.10-.25	....	....	....	....
<b>Enameling.</b>										
Frame and forks, any dark color .....	3.00	....	....	1.50	2.00	4.50	4.00	....	2.50	....
“ “ any light color .....	3.50	....	....	2.00	....	5.00	5.00	....	3.00	....
“ “ white .....	5.00	....	....	2.50	....	5.50	....	....	3.75	....
Front forks.....	1.00	....	....	.50	....	.75	1.00	....	1.25	....
Striping frame, plain, extra .....	1.00	....	....	.50	....	.75	1.00	....	.50	....
“ and decorating, extra .....	1.50	....	....	.75	....	1.50	1.50	....	1.00	....
Enameling rims, each .....	.50	....	....	.50	....	.25	.75	.50	.50	....
“ two rims .....	1.00	....	....	.75	....	.50	1.50	.75	.75	....
Air drying frame and fork.....	....	....	....	....	....	....	....	....	....	....
<b>Tire Repairs.</b>										
Punctures, single tube tires, each.....	.25	.25	.25	.25	.20	.25	.50	....	.50	.25 up
“ double tube tires, each.....	.25	.50	.50	.50	.20-.25	.50	.50	.25	.40	.40
Vulcanizing, small patches .....	.50	.75	.50	.75	....	.75	.75	.50	.75	.50
“ large patches .....	.75	.75 up	.75	1.00	....	1.25	1.00	1.00	1.00	.75 up
Cementing on tires, each.....	.10-.25	.25	.15	.25	.15	.25	.25	.25	.15	.25
New valve.....	.25	.25	.35	.25	.20	.25	.25	.15	.25	.25
“ and stem .....	.50	.50	.50	.75	.40	.50	.25	.40	.50	.50
“ stem .....	.35	.50	.25	.50	.30	.25	.50	.25	.25	.40
<b>General Repairs.</b>										
Front axles, each .....	.50	.50	.50	.75	.35	.25	.75	.50	.75	.50
“ wheel cones, each .....	.75	.75	.25-.75	1.00	....	.40-.75	.75-1.25	.50-1.00	.50	.50 up
“ wheel cups .....	.75	.75	.25-.75	1.25	....	.75-1.50	.50-1.00	....	.50	.75 up
Front or rear wheel nuts, each.....	.15	.10	.10	.25	.15	.10	.25	.10	.25	....
Rear axles, each .....	.50	.75	.75	.75	.50	.50	1.00	.50	.75	.75
“ wheel cones .....	.75	.75	.50-1.00	1.00	....	.40-1.00	.75-1.00	.50-1.00	.50	.50 up
“ wheel cups .....	.75	.75	.50-1.00	1.25	....	.75-1.50	.75-1.00	....	.50	.50 up
Crank hanger cones .....	1.00	1.00	.75-1.50	1.00	....	.75-1.25	1.00-1.25	.75-1.25	.75	.50 up
“ cups .....	1.00	1.00	.50-1.50	1.50	....	1.00-1.75	1.00	.50-1.00	.75	.50 up
“ axles .....	2.50	1.75	2.00-3.00	2.50	1.50 up	1.00-2.50	1.00-2.00	.50-1.00	1.25	1.50
Straightening crank .....	.25	.25	.25	.25	.15	.25	.25	.25	.50	.25
Straightening pedal pin .....	.25	.25	.25	.25	....	.25	.25	.15	.40	....
Cleaning bicycle inside and out.....	1.00	1.50	1.00	1.00	....	.75	1.50	1.50	.75	1.00-1.50
Cleaning bearings .....	....	....	....	....	....	....	....	....	....	....
Cleaning crank hanger .....	....	....	....	....	....	....	....	....	....	....
Pedal rubbers, set .....	....	....	....	....	....	....	....	....	....	....
Cementing grips .....	....	....	....	....	....	....	....	....	....	....
Handle bar expander .....	....	....	....	....	....	....	....	....	....	....
<b>Front Fork Repairs.</b>										
Lining up forks .....	.50-.75	.75	.50	.50	.25-.50	.75	.75	.50	.50	.50
One new side .....	2.00	1.50 up	1.50	2.00	1.50	1.50	1.50	1.00	1.00	....
Two new sides .....	3.00	2.00 up	3.00	3.00	2.00	3.00	2.00	1.75	1.50	....
New stem .....	2.00	1.50 up	2.50-3.00	2.50	2.00	1.50	1.50	1.00	1.00	1.50
New arched crown .....	2.50	2.50 up	2.50	3.00	2.00	3.00	2.00	1.75	1.50	....
One fork end tip .....	1.00	1.25	1.00	1.25	.75	1.00	1.50	.75	1.50	.75
Two fork end tips .....	1.50	2.00	2.00	2.00	1.00	1.50	2.50	1.50	2.00	1.50
Complete forks, arched crown .....	5.00	5.00	4.50	4.00	....	5.00	4.50	2.00	3.00	....
<b>Sprocket and Crank Repairs.</b>										
Making rear sprocket, 7-8-9-10 teeth	1.00	2.00	1.50	2.00	.75-1.00	1.50-3.00	2.50	....	1.50	....
New front sprocket .....	....	....	....	....	1.25 up	....	....	....	....	....
Truing front sprocket .....	.50	.25 up	.25	.25	....	.50	.50	.25-.50	.50	....
Crank .....	....	....	....	....	....	....	....	....	....	....
Crank pin .....	....	....	....	....	....	....	....	....	....	....
<b>Chain Repairs.</b>										
Putting in one link .....	.25	.25	.15	.25	.15	.25	.25	.20	.50	....
Cleaning and lubricating .....	.25	.25	.25	.25	....	.25	....	.10	.15	....
Taking out one link .....	.25	.20	.15	.15	.10	.20	.25	.10	.20	....

## TWO-WHEEL MOTOR VEHICLE

### Independence of Bicycle Design Desirable in Motor Bicycles and Tricycles—A Swiss Machine

It is believed by a great many that the motor bicycle and the motor tricycle have a bright future in the United States, and that the development of this form of motocyling depends solely on making a happy hit in the way of a suitable construction.

So far those who have given their attention to the construction of these light vehicles have apparently been handicapped in their conception of design by a too servile fidelity to the accepted forms of bicycles and tricycles. They have hung their motors on the conventional bicycle or tricycle frame, loading the tubing with burdens which such tubing was never intended to support, and have produced vehicles which created the distinct impression of makeshift work.

#### Tubing or Other Material.

In bicycle frames all stresses are as nearly as practicable compressive or tensile, in either case operating essentially lengthwise of each tubular frame member. The motor bicycle constructors have added numerous and severe break-

ing it clean and in working order. For such frame construction bicycle tubing is probably as poorly adapted as possible. Nothing heavier than a toolbag should be suspended from individual bicycle tubes, however excellent this material is fitted to resist compressive and tensile stresses. Its place is in truss-work, where weight is supported at the angular connections, as in a bicycle at the saddle and rear axle and, in a less perfect degree, at the steering head and the crank hanger.

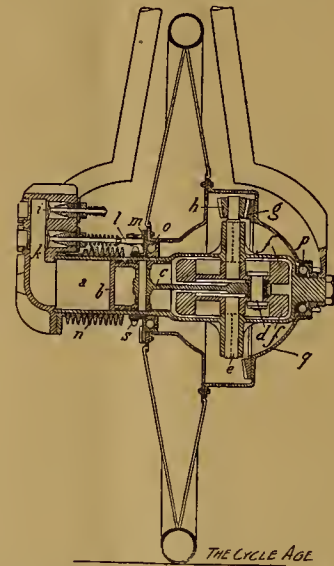
#### A Rational Beginning.

According to this reasoning the first step to a successful motor bicycle must consist in dismissing the idea of "attaching a motor to a bicycle" and tackling de novo the problem of building a "two-wheeled motor vehicle to be straddled and balanced by its occupant and adapted to be propelled by this occupant instead of by the motive power, at his option."

In regard to motor tricycles the problem might be similarly worded, but in

cle in which the cylinder, Ottocycle, serves as axle for the rear wheel. The design and operation of the mechanism is readily understood by reference to the second illustration, which presents a sectional rear view.

The piston b through the rod c and the crank d rotates the fly-wheels f. Upon the axle of these fly-wheels is keyed a pinion h, which meshes with a gear g secured upon the box q, to which the spokes of the wheel are attached, this



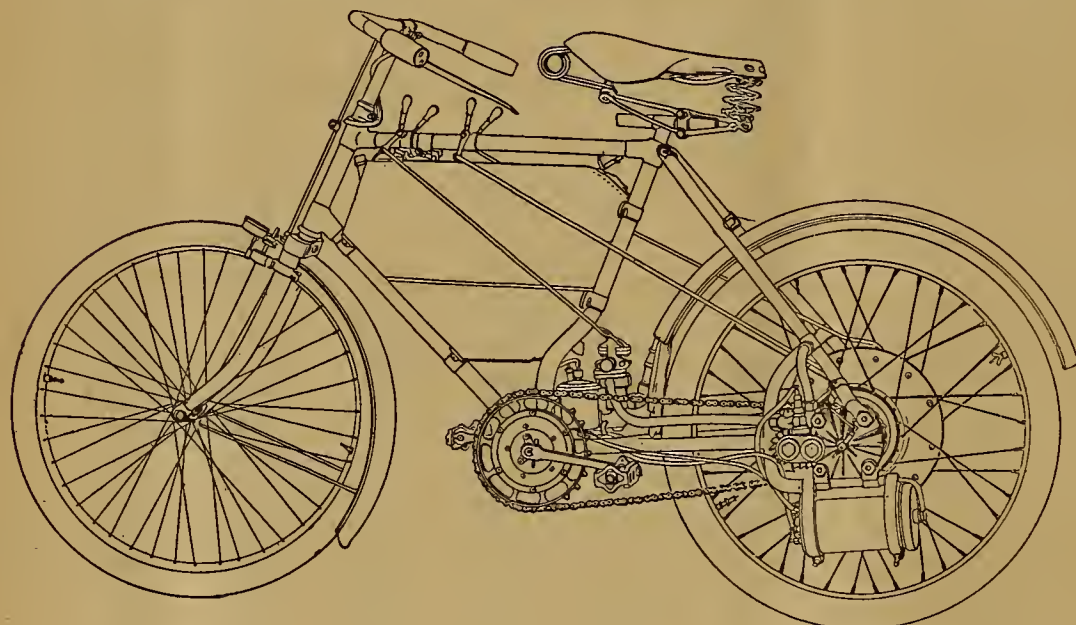
box forming the hub of the wheel and revolving on the ball-bearings o and p. The box is provided at its left extremity with a sprocket wheel over which passes the sprocket chain, through which the engine is started. It carries also four cams m, through which the exhaust valve is operated. At i is shown the automatic air-suction valve. The ignition is by tube or electricity at option. A casing incloses the entire mechanism.

#### GAS ENGINES OSTRACIZED

Chicago Policemen Are Instructed to Keep Gasoline Motor Vehicles Off the Boulevards.

A nicely upholstered gasoline motor run-about, nickel-trimmed, spick and span, came down Monroe street, Chicago, occupied and conducted by a person whose dress and demeanor would denote plenty of leisure and a large share of worldly goods. He turned the vehicle at the corner of Michigan avenue, intending to take this thoroughfare, but was immediately stopped by the boulevard policeman with the curt remark that traffic vehicles were not allowed on the boulevard. Protests were of no avail. The guardian of law and order pulled out his printed regulations and demonstrated, black on white, that the City of Chicago is bound by its own enactments to insist that any wagon which shares the general characteristics of motor vehicles other than electric, is to be classed as a traffic vehicle, and as such must be denied the freedom of the boulevards. The driver of the now de-classed carriage turned sadly around as he was ordered to do, and wondered if the policeman's instructions were a link in that chain of events by which the stocks of electric motor vehicle companies are to be sent sky-high, or the incident was simply a sign indicating that Chicago authorities are still unaware of the existence of steam and gas-engine vehicles and the purposes for which they are built.

Rigal, in the motorcycle class, made a surprising race and broke all records, road and track, until Bayonne. He covered the distance from Pan to Bayonne, 64½ miles, in 1:58, which breaks Lemaitre's record, from Pan to Bayonne, by 18 seconds. Owing to indisposition Rigal gave the race up.



THE CYCLE AGE

ing stresses applied to one or more of the frame tubes individually, and by doing so have been compelled to add extra material and weight to the tubular frame besides the weight of the motor and driving mechanism.

The accompanying illustration of a new motor bicycle constructed by E. Butikofer of Bienne, Switzerland, though in many respects an advance over previous patterns, affords a very good example of this fatal loyalty to bicycle design.

Decided progress in motor bicycles and tricycles will probably not be made until the material entering into the construction of the engine and driving gear is utilized as an integral part of the vehicle frame, so that strength may be derived from such material, which now is a dead load supported in a thoroughly unmechanical and irrational manner. At all events the vehicle frame should afford a suitable casing for the motive power, etc., so that the prospective purchaser of a motor bicycle would not be confronted with a forbidding display of machinery details or clumsy forms which insult the eye and threaten the imagination with dire prospects of irksome work in keep-

reality it approaches much more closely the more general problem of constructing light, small and inexpensive motor vehicles for one or two persons—a problem to the solution of which French, English and German engineers are now devoting so much of their ingenuity.

In United States the motor tricycle problem is being approached in this sense by the builders of motor vehicles generally with a commendable and promising disregard of ordinary tricycle traditions, but the motor bicycle problem is open for all. Nothing has yet been done to produce an acceptable motor bicycle, motor tandem or mechanical pacing machine, and the differences in the requirements of motor and running gear for two-wheeled machines on one side and motor vehicles generally on the other side, are sufficiently pronounced to make success in the two lines of construction entirely distinct and independent of one another.

#### Motor Is the Axle.

The Butikofer motor bicycle above referred to presents several original features, which may be worthy of study. It is the first explosion-engine driven bicy-





**T**HE rider of a National is always proud of his machine.

It's handsome and well made.

Like a good horse well groomed it adds to its owner's pleasure in simply being "all right."

The real satisfaction in the purchase of a National comes when the buyer finds that his first expenditure is his last. No repair charges or delays later to reduce his cash or spoil his pleasure.

One season on a National and he says—  
*A National Rider Never Changes His Mount.*  
Better join the procession.

**National Cycle Manufacturing Co.**  
BAY CITY, MICH.

## The Racing Man's Trade

The only reason racing men ride certain machines is because they get them for nothing.

The reason most "amateurs" ride Andraes is because Andraes help them win.

A fast rider may win a race on a machine he gets for nothing, but common judgment is in favor of the wheel he pays for because it will help him win.

Whose trade would you rather have?

The man who pays list price for the wheel or the man who pays you nothing or the next thing to it?

## The ANDRAE Racer

will bring you list price every time.

It is the fastest machine made.

Racing men know it and are willing to pay for it.

More Andrae racers were sold in '98 than any other make.

More races were won on the Andrae than on any other wheel.

If such publicity will do you any good and if you want to SELL your racing machines write us for trade prices and our monthly epitomist, "The Andrae Agent."

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Milwaukee, Wisconsin.

"IT FITS THE RIDER"

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THE LIGHTEST SADDLE MADE.



Note the New Unbreakable Wood Cantle....

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**COOL HANDSOME COMFORTABLE**

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which ever it is. The Olive red crown racer will be there and give a good account of itself.

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The most attractive wheel on the market—one of the reasons for its remarkable sale in the trade this season. OLIVE agents everywhere are enthusiastic. Join hands with us in success and represent the popular wheel.

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**The Olive Wheel Company**  
SYRACUSE, N. Y.

## TRIP WITH ALCOHOL MOTORS

### Cost of Explosive Mixture Formed from Alcohol Vapors Depends on Taxation—Operates Successfully

There is a wet blanket ready for any enthusiasm for alcohol motors for vehicles that might spring up in either France or the United States on account of the excessive taxation to which the production of alcohol is subject by law. In France, however, there is a certain patriotic motive in favoring alcohol which partly offsets the present exorbitant cost.

The gasoline or petrole-essence which is now so generally employed to form the explosive mixture in motor vehicles is derived from American or Russian petroleum, while wood alcohol may be produced in France in unlimited quantity and may be sold at an exceedingly low price when once legal restrictions shall have been removed. Fully convinced that all internal revenue considerations will promptly be set aside by the French government as soon as it shall have been demonstrated that an enormous, economical and harmless consumption of wood alcohol awaits such a step, a number of French engineers have interested themselves deeply in devising such reconstruction of the carburetors in gasoline engines as would adapt them to be driven by the explosion of alcohol vapors mixed with air instead of gasoline vapors similarly mixed.

These gentlemen, under the auspices of the Parisian cycle daily, *Le Velo*, recently appointed a course for vehicles built for the use of alcohol, and eleven vehicles were announced to take part in the event. It was set for Tuesday, April 11, and several of the vehicles made their appearance in spite of copious rains, which had turned the road to Chantilly into a condition which promised badly for the poorly protected vehicles. One vehicle started, however, and it is the history of its trip which, in the opinion of the French devotees of alcohol—for motor purposes—completely changes the complexion of motor vehicle matters, turning the tables against the imported gasoline and in favor of the home-produced alcohol.

#### Work by Alcohol per Litre.

The vehicle was one designed by Messrs. Briest and Armand, of the small town Villers-Cotteret. It braved the rain and mud with Mr. Briest as conductor and one passenger.

The data of the trip are given as follows: The wagon weighs 840 pounds. The motor is simple and of inferior workmanship. The transmission is by belt and the construction admits of thirteen different speeds, blending one into the next higher or lower speed without abrupt changes. The full distance of 68 kilometers was covered in 4 hours 8 minutes, without renewal of cooling water and with a consumption of 19 litres of alcohol. The vehicle started with nine litres of 90 strength and took in 10 litres on the way, nearly all of which was used.

In the afternoon the vehicle returned over the same roads to Paris, this time covering the distance in 4 h. 0 m. 10 s. and again consuming 19 litres of alcohol.

#### Where Alcohol is Cheap.

The price of alcohol is 85 centimes per litre in France. This makes the cost of driving 68 kilometers 16 francs 15 centimes.

According to estimates of the observers the same vehicle could have covered the same distance under the same road con-

ditions with a consumption of 11 litres of gasoline costing 37 to 50 centimes per litre, making a maximum total of only 5 francs 50 centimes. With the utmost reduction in price of alcohol at which it may be sold at present in France, the cost of the alcohol would still amount to 10 francs 45 c., or nearly double that of the gasoline capable of doing the same amount of work.

But, on the other hand, these discouraging figures would immediately be reversed if the event had taken place in Germany, where alcohol is not taxed so highly. There alcohol for industrial purposes costs 25 pfennig, or 30 centimes, per litre, while benzine or gasoline costs 60 pfennig. At these figures the cost of the trip would be 5 francs 70 c. with alcohol, and about 8 francs 40 c. with gasoline.

The inference is drawn from these figures that in all likelihood alcohol motors have an immediate future before them in the Fatherland, and that its possibilities for other countries are such as should not be neglected by motor vehicle constructors.

### LIQUID AIR WASTEFUL

Scientific Authority Says Tripler Is Mistaken—The Cold Liquid Not Economical for Power.

Some years ago I was called upon to examine an engine operated with liquid carbonic acid, which was said to have ten times the efficiency of an ordinary steam engine, says President Henry Morton, of the Stevens Institute of Technology. I, of course, told the applicant that such a thing was physically impossible, and did not deserve investigation, but, finding that a number of substantial people had been so impressed by what had been shown them that they would not be satisfied without an investigation. I consented to make one. This proved an easy piece of work. I found that the promoters and others were under the impression that a horse-power was measured by the raising of 33,000 pounds one foot high, irrespective of time, and in their demonstrations were contented with showing that their engine did this amount of work in ten minutes. As, however, a horse-power involves the raising of 33,000 pounds one foot high in one minute, it was obvious that the power shown by the carbonic acid engine was one-tenth of a horse-power, and not one horse-power, as those exhibiting the engine claimed. This, of course, explained the situation. An engine developing one-tenth of a horse-power might easily require only one-tenth as much fuel as an ordinary steam engine developing one horse-power, without violating any of the established laws bearing on this subject. The curious thing was that such people as were concerned in this matter should have been misled on such a simple and elementary subject; but if they were, as I personally know, so misled, why may not Mr. Tripler and his friends be in a similar case?

I could give from my own personal experience many like examples, but have said enough for the present to make it evident that what is claimed as a new source of "power which costs nothing" is not founded on fact, but is probably the result of some oversight in observation or

calculation not inconsistent with honesty of intention.

It is stated that Mr. Tripler makes his liquid air at a cost of 20 cents a gallon. It is readily shown that the maximum power obtainable from this liquid air, by heating it to ordinary atmospheric temperature, is three-quarters of a horse-power-hour. This, at 20 cents, would be vastly more expensive than power derived from an ordinary steam engine, whose cost ranges from less than 1 cent per horse-power-hour under the best conditions to 3 or 4 cents, where a profit is included, or the conditions are less favorable.

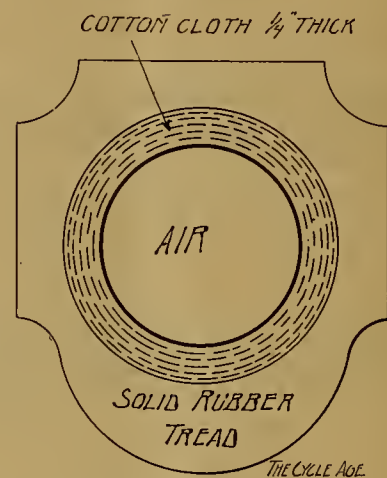
### TIRE COMPANIES COMBINED

Chase, Newton and American Companies Consolidated—Blaurock Tires for Motor Vehicles.

The International Automobile and Vehicle Tire Company is the name of a new three million dollar organization in which it is stated that L. C. Chase & Co., of Boston and Chelsea, Mass., the Newton Rubber Works, of Newton, Mass., and the American Tire Company, of New York, which controls the patents for Apex tires, will be absorbed.

One of the principal productions of the new organization is to be the Blaurock tire, of which a cross-section view is shown in the accompanying illustration. This tire is based upon the Apex patents and has been evolved by Charles Munger.

Mr. Munger, who is well known to the bicycle trade, undertook some time ago to remodel the Apex tire so as to adapt it for motor vehicles and at the same time obviate the liability to puncture, under which the New York Electric Cab Company has been suffering with the tires



heretofore in use. Having arrived at the design illustrated, Mr. Munger had the Chase company make the tire for him, and it was tested on an electric cab over a considerable mileage. Another pattern intended for road wagons was also turned out.

J. A. Blaurock is the individual owner of Apex tire patents and has consummated the large deal involved in the organization. He is closely associated with Richard Croker, Jr., who is to be vice-president of the company and general manager.

The company is to have close business relations with the New York Auto-Truck Company, in which Mr. Croker is interested.

#### Cheap Vehicle Announced.

Buffalo, April 24.—The Buffalo Spring and Gear Company, makers of light road vehicles, are working on the plans of an automobile which officials of the company assert will be a revelation in the motor line and which will be marketed at the low price of \$400. The motive power is to be gasoline.

# KEEP POSTED!

ARTHUR STEUART.  
JAMES L. STEUART.

LAW OFFICES

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New York, April 19th, 1899.

Messrs. G. W. Cole & Co.,  
141 Broadway,  
New York, N.Y.

Gentlemen:-

Referring to the matter of the threatened litigation on the Duryea patent by the Buffalo Specialty Mfg. Co. of Buffalo, New York, against yourselves and others, who are manufacturers of tire fluid in which you and some of your associates have retained our firm to defend any suit that may be brought by said Company, we desire to report as follows:

When this litigation was first threatened several months since, we notified the Buffalo Specialty Mfg. Company that we were prepared to defend any suit that might be brought by them on the Duryea Tire Fluid patent. Up to date the only suit that has been brought, of which we have any knowledge, is one by the Buffalo Specialty Mfg. Co. against the Manhattan Storage Company of Philadelphia.

As soon as this suit was brought we communicated with the defendants and offered to take up the defense of that case, undertaking all expense that might be incident to such defense, and agreeing to indemnify the defendants against any loss or damage in the matter of that case. At first the defendants assured us that we would be permitted to defend the case, but later on they withdrew their consent, and now we find that they have permitted the case to go by default, and that an Order has been entered pro confesso. This means that no appearance or defense has been entered in the case.

A judgment of this character does not establish any rights, whatever, except against the particular defendant against whom suit is brought, that is to say, it does not in any way confirm the validity of the Duryea patent, and therefore, becomes a case of no importance in the matter of stopping manufacturers of tire fluid from continuing their business of manufacturing and selling fluid suitable to be used in connection with bicycle tires.

As far as this case goes, therefore, you and your associates are at liberty to continue to manufacture and sell tire fluid, and we stand ready to defend any suit that the Buffalo Company may bring on the Duryea patent under our retainer from you.

With best regards, we remain,  
Very truly yours,

*Arthur Steuart*

## COLE'S STOP LEAK FLUID

in 4 oz. Tubes, screws to valve—No Pump required. Sells at sight. We guarantee Jobbers and Dealers.

G. W. COLE & CO. MAKERS OF *3 in One*

141 BROADWAY, NEW YORK



This Tube Screws on to the Valve.  
A Pump Not Required.

MANUFACTURED BY  
G. W. COLE & CO.  
New York, U. S. A.

Price, 25 Cents.

4 OZ. TUBE.  
REDUCED CUT.



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New York, U. S. A.

Price, 25 Cents.

4 OZ. TUBE.  
REDUCED CUT.



WRITE FOR COMPLETE CATALOGUE S

**DAILY GRIST OF WANT ADS.****MOTORS AS SECOND-HAND GOODS****Advertisements Showing the Part Played by Motor Vehicles in Parisian Life.**

A lively and varied mental picture of the motor vehicle activity in France is gained by the perusal of the "want ads" in the daily papers of the French metropolis. In a single issue taken at random, the following items appear:

Conductor, Panhard system, familiar with the care of automobiles, wants situation. References given.

**Dion Motors Lead the Rest.**

For sale very cheap: Creanche tricycle with Dion motor, 1½ H. P., double lubrication chain casing, double reservoir and new detachable trailing cart for two.

Real bargain: Four wheeler, capacity two, 1¾ H. P., Dion motor, as new. Can be delivered at once, 1,700 fr.

Wanted: Dion motor 1¾ or 1½ H. P., second hand; acceptable even if in bad condition.

Four-wheeler wagonette, composed of Dion tricycle with Petitjean fore-runner on springs, large single seat (capacity 1½), double reservoir (gasoline and oil), special rear brake, complete gear change accessories, good as new, perfect working order and guaranteed, 1,800 fr. crated.

For sale: Peugeot racing vehicle, 10 nominal H. P., 20,000 fr. At the Automobile Storage.

One motorcycle, Dion-Bouton, 1¾ H. P., with gong, 1,050 fr. At Automobile Storage.

One motorcycle, Dion-Bouton, 1¾ H. P., 1,000 fr. At Automobile Storage.

**Bollee, Panhard and Peugeot Next.**

Six H. P. Panhard, wagonette for six, latest model, four speeds, elegantly upholstered. Used less than one month. Immediate delivery, 13,000 fr.

Much below cost, two tire casings for motor vehicles, 90 by 65, four air tubes 90 by 65, one 65 by 65.

Wagonette Leon Bollee, 3 H. P., 3 cap., speed gear, mud guards, accessories, 2,000 fr. Same make, 4 H. P., 3 cap., same equipment, 2,200 fr. Both as new, running order guaranteed.

Wanted for cash, second hand motor tricycle, even old, worn model, 500 to 700 fr.

Real Bargain. Absolutely new tri (tricycle), Dion motor, 1¾ H. P., last model, broad air tires, 1,200 fr.

**Traffic Rules in France.**

The government of the French Republic has issued an elaborate series of regulations for motor vehicle traffic throughout France. These regulations have been expected for a long time and comprise 35 articles, mainly embodying the regulations which were recommended by the Automobile Club. The minister of public works has sent the regulators to all prefects in the provinces, with lengthy explanations in regard to the manner of enforcing the decree, and the prefects are expected to provide all civil engineers with the regulations, it being one of the general features of the decree that considerable power to decide doubtful points in regard to safety of construction, etc., is given into the hands of engineers resident in the localities where such questions may arise for legal decision.

**COMPRESSED AIR IN CHICAGO****Owl Cars to be Run With New Motor System—Compound Engines and Reheaters Used.**

Compressed air motive power is to be tried on Chicago street railways at night. An experimental car with motor and an air compressor have been shipped from New York for this purpose. The motors which drive the air cars are similar to

small compound steam engines. They are carried on the trucks under the bodies of the cars. Connection is made directly with the wheels. The high-pressure cylinder drives one pair of wheels, and the low-pressure engine another.

The air which supplies the power is held at a pressure of 2,500 pounds to the square inch in steel bottles under the seats. A water tank or heater containing hot water under a pressure of 225 to 230 pounds to the square inch is also provided. The air goes from the reservoirs through the heater and into the high-pressure cylinder of the engine which drives the car wheels. Then it is returned through the heater and sent to the low-pressure cylinder of the engine, from which it exhausts into the outer air. Sprays of hot water are shot into the air pipes just before they connect with the cylinders.

**ELECTRICS IN WASHINGTON****Virginia Company Will Operate Street Cars, Omnibuses and Livery Carriages.**

Washington, April 21.—The company recently incorporated under the laws of Virginia with a capital stock of \$750,000 known as the Washington Automobile Company, and backed financially by a local street railway magnate, intends to place in operation within the next two months a line of automobile carriages on the streets of this city. Besides operating a line of busses to carry sixteen passengers, the company will also put into service electric carriages for private hire, which will probably be rented from the private livery stables of the city. In addition electric delivery wagons will be put into service, either to be operated by the company or sold to merchants. The carriages to be employed are those of the Pope Mfg. Co., and sixty of them have already been ordered. These carriages will be operated by electricity, which can be charged at any supply station connected with the currents of either of the local electric light plants, which are owned by the syndicate controlling the automobile company.

**Hosepipe Motorcar Tires.**

A patent has been issued to George H. Clark, of Boston, for a single tube tire in which the canvas or fabric on the rim side is slit transversely at intervals before the air tube, the fabric and the outer rubber coating are vulcanized together. The slits extend about half way on the sides of the tire. By this arrangement the rim side of the tire is made stretchable, so that the tire may be forced onto a rim which has a deeper concavity than the ordinary crescent rim and yet fit snugly when in position. The invention is evidently intended for canvas fabric tires only, and especially for motor vehicle tires, for which a deep seat and a broadly flanged rim are very desirable.

**Mossberg to Make Vehicles.**

Frank Mossberg, formerly vice-president and general manager of the Mossberg & Granville Manufacturing Company, at Attleboro and Providence, has formed, though not yet incorporated, a stock company, to be known as the United States Automobile Company. It is the intention to build a factory at Attleboro, Mass.

The Pennsylvania Electric Vehicle Co. has now four vehicles of different types running about the city of Philadelphia.

Major R. T. Davidson, instructor of military science at Northwestern Military Academy, at Highland Park, Ill., has designed an automobile gun carriage intended for Gatling gun service.

**FINED FOR WORKING OVERTIME****HUNDRED THOUSAND WORKERS****De Dion Conflicts With Labor Law in — Trying to Fill Orders—Workingmen Support Him.**

A French tribunal has fined De Dion, head of the great automobile factory of the De Dion-Bouton company, in the sum of forty francs for allowing his employes to work overtime. Count De Dion put in a protest signed by 600 employes against interference with their liberty to work as much as they pleased. The judge recommended the defendant to have the law which regulates working hours repealed and imposed the lowest possible fine.

**The Extent of the Industry.**

During the proceedings it was incidentally brought out that the syndicate chamber of automobile manufacturers, of which De Dion is president, employs one hundred thousand workmen.

**Abbreviated Motor Vehicle Terms.**

Automobile is a cumbersome word in English, but it might be abbreviated front and aft and called a "tomo." An explosion engine vehicle might be designated, on the same principle, as a "plo," while storage battery vehicles already answer the name of "bat." For the steam engine vehicle the term may be borrowed from the chemical composition of water, H<sub>2</sub>O, and it might be called "ho." These names are submitted for prayerful consideration of "tomo"-makers, sellers and users.

**Motor Tricycles in New York.**

Petrol-engine tandems for pacing purposes are being built in New York for use in this year's racing season. Motor tricycles driven by the same form of power are now turned out by the Automobile Company of America, of New York city. They are similar to the French De Dion tricycles, but lighter in weight and appearance. They weigh 160 pounds. New Yorkers have already had a chance to observe these tricycles passing through the streets at hair-raising speeds.

The Studebaker Bros. Carriage Mfg. Company, at South Bend, Ind., has bought a Winton gas-engine carriage.

A Winton carriage is the first vehicle of the horseless kind to reach Salt Lake City. It was purchased by George E. Airis.

The Howard Mfg. Company, of Mount Holly, N. J., whose specialty is hubs for cycles and sulkies, has extended its field to embrace also hubs for motor vehicles, and has received its first order in the new line from a New York vehicle manufacturing company.

**NEW INCORPORATIONS.**

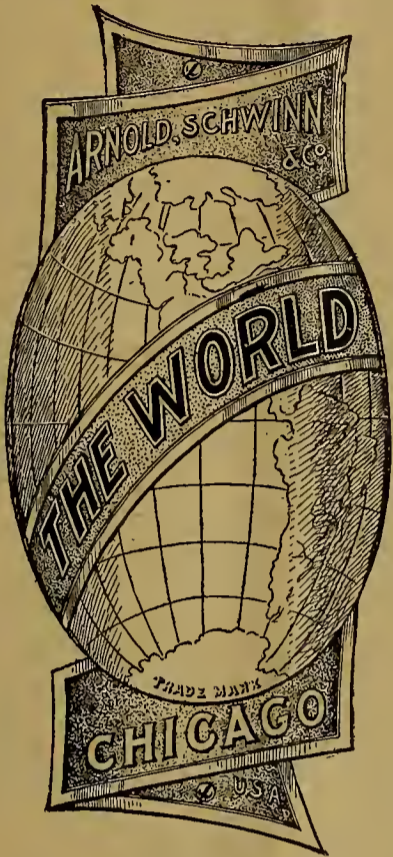
Atlantic Electric Vehicle Co. Principal office, Camden, N. J. Manufacture, motor vehicles of all kinds. Capital, \$100,000. Incorporators: James H. Nixon and Charles P. Rooney, Philadelphia, Pa.; Francis D. Weaver, Camden, N. J.

The American Motor Carriage and Truck Co. Manufacturing and dealing in vehicles of all kinds. Capital stock, \$200,000, of which \$1,550 is paid in. The officers are: President, Albert H. Rolfe of Newton Centre, Mass.; treasurer, W. M. L. McAdams of Newton Highlands, Mass.

The International Automobile and Vehicle Tire Co.; \$3,000,000; half preferred, half common stock.

Federal Car Truck and Motor Co. Principal office, 76 Montgomery street, Jersey City. Manufacture of motor cars, wagons, trucks, etc. Capital, \$300,000. Incorporators: John H. Carnes, Joseph Wells, James F. Fielder, all of 76 Montgomery street, Jersey City.

# Arnold, Schwinn & Co., World Bicycles



## ANNOUNCEMENT

WE have opened a Retail Store and Wholesale Salesroom for Chicago City Trade, Agents in Illinois, Wisconsin, Indiana, Eastern Iowa, The South and such territory that is not covered by our Wholesale Distributors.

All users of World Wheels and Bicycle People are **Welcome**. Come and see our Bicycle Show. Better wheels than have ever been shown before. High Grade and Medium Grade Tandems, Triplets and Quads.

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Wabash Avenue  
Chicago

...267

**Arnold, Schwinn  
& Co.** *World Cycles*

## TWENTY THOUSAND BICYCLES IN STOCK

AND READY FOR SHIPMENT

Secure the agency for a line of wheels that you can get promptly. The Riding Season is here We are making average daily shipments of **Five Hundred Machines**.



We anticipated the demand for **Monarch Bicycles** and assumed the responsibility of building **Sixty Thousand Wheels** for the season of 1899.

# MONARCH

**Quality and Reputation** make our line the most desirable on the American market.

**Our prices are lower** than can be obtained on bicycles of equal merit. Every machine embodies 1899 features, and are up-to-date in every particular. Only a limited amount of unoccupied territory. Write us at once for catalogue and terms.

**RIDE A MONARCH AND KEEP IN FRONT.**

**MONARCH CYCLE MFG. CO.**

Lake, Halsted and Fulton Sts., CHICAGO, ILL.

NEW YORK LONDON HAMBURG

# THE PASTIME AND SPORT

## Cycle Path Movement Growing

There has been a rush in New York to take advantage of the provisions of the Ellsworth side path bill, the preliminary steps to the appointment of sidepath commissions having already been taken by the wheelmen in twenty-one counties. This bill requires the county judge, upon the application of fifty resident wheelmen, to appoint a side-path commission to raise by voluntary assessment a fund for the construction of the cycle paths, which are open solely to the use of those who have contributed to their construction and bear the evidence of having so done in the form of tags on the front forks of their bicycles. In Pennsylvania they are also pushing side-path work under the Parshall bill, but under its provisions the paths will be open to all wheelmen, the expense of construction being borne by a general tax on cyclists. This cycle path legislation is the newest feature of the good roads movement.

## Opposition to Lamp Ordinances

Considerable opposition has developed among the wheelmen of Connecticut toward the bill now before the state legislature making it a misdemeanor for cyclists to ride at night without carrying lighted lamps attached to their bicycles. To some of the wheelmen the carrying of lamps seems an unnecessary hardship and delegations have gone to Hartford to oppose the measure, while cycling organizations have passed resolutions against it. But the greatest argument against the bill comes from those who feel that it discriminates against the cyclists, and if it becomes a law will unjustly force all who ride bicycles to incur the expense and trouble of providing lights for their machines, while all who drive horses are exempt from the obligation.

The last argument is the only one which is tenable. Most of the large cities of the United States, and, indeed, of the civilized world, have recognized the imperative necessity of lights on vehicles using the public highways and thoroughfares after dark, and enforced the carrying of lights on public conveyances long before they passed ordinances compelling cyclists to use lanterns. Every city in this country which has passed a law calling for the use of lamps on bicycles has met with this same unreasonable opposition, but after it has been enforced for several seasons the cyclists themselves have recognized its benefits and now have no fault to find except that all other vehicles are not likewise provided with lights at night.

"Rome wasn't built in a day;" neither were "universal lights" secured in Chicago, and a very few other cities, without a great deal of united agitation of the wheelmen. By themselves first submitting willingly to carrying lights, the wheelmen of Connecticut will put themselves in a stronger position to demand lights on other vehicles. Time was a few years ago when it was an undoubted hardship to have to carry the ill-smelling, foul and imperfect cycle lanterns then in the market. Now, however, there is small ground for objecting to attaching one of the really handsome lamps of the large variety for sale everywhere.

Oil lamps have been brought to a state of perfection where they give little trouble if properly attended to, and the stores are almost overflowing with various styles of acetylene gas and electric lamps for bicycles and carriages. These

are not only ornamental, but give a strong, beautiful light and are cleanly and not excessively expensive.

When \$2 to \$5 invested in a bicycle lamp may be the means of saving a damaged bicycle and very likely a broken bone, it is cheap insurance.

## Century Runs and the Collins Bill

Century, double century and triple century runs have for some years been a feature of cycling life in and about New York city and other New York towns. Since the recent passage of the Collins bill to limit athletic contests to twelve hours' continuous duration certain interested individuals have begun to speculate regarding the legality of organizing and participating in such runs hereafter. These centuries amount to more than ordinary club runs, since medals and prizes of some value are offered to the winners and to all who complete the one, two or three hundred miles within the time limits set. They bring out sometimes 100 or 200 contestants of both sexes and all ages, from the immature youth to the venerable white haired enthusiast.

While there is no reason for condemning the century run per se, there have been many objectionable features in some of these runs and their elimination would be for the elevation of the pastime of cycling in the eyes of the general public. If then the Collins measure can be construed to cover these contests there will be small cause for regret. It would have the effect of shutting out those women and children and aged men who have too frequently figured in them, riding through rain and mud and finishing after twelve hours or more of exhausting exertion in a state miserable to behold. Any cyclist who is unable to ride 100 miles over ordinary country roads in twelve hours ought to be excluded from such a contest.

There is apparently nothing in the new law which will prevent any individual from going for a road record over any distance during any length of time nor to prevent ordinary club runs of 100 miles or more organized solely for the pleasure of the ride.

## Reviving Club Competition

While cycle racing as a sport will always appeal to a certain clientele of considerable magnitude, this following of itself is not yet sufficient to make the formation of race meets a certain and established success. Show features, therefore, must be put forth to add to its patrons a paying share of the general amusement seeking population. This class constantly demands something new, which, even though it may be along the legitimate lines of the sport, still is novel in the sense of being new to the amusement seekers.

Paced racing came most opportunely, gave great impulse to the game, and increased the regular patronage marvelously. Motor pacing seems likely to furnish a needed innovation the coming season; but it will hardly be general enough to supply the whole demand; so it is that live and experienced promoters are adding other new features to their spring programs. Sweepstakes, big money handicaps, and the giving of popular local names to the important races, are among the notable features on the new entry blanks.

Along this line attempts are also being made to revive the club rivalry in ama-

teur contests, which was so potent a drawing feature in the palmy days of club promotion, by encouraging team competition. In the latter new forms are being devised and promulgated apart from the old lines of point counting determined by the order of the finish, practically about the only form of team matches that has been so far tried. The Berkeley Oval management, for instance, has scheduled for its Decoration day meet a mile heat club race for teams of five, one member from each team to ride in each heat. The points in each are to be reckoned on the intercollegiate scale of "five, three, two, one," and the highest aggregate will determine the winning club. The starters in each heat are to be drawn by lot at the post. A banner will be given the winning club and the individual winner in each heat will get a prize.

A recent sweeping challenge from Collett, Hausman and Ertz, the eastern crackjack amateur trio, may also give a novel idea for an all-round team competition. They offer to ride any three amateurs in the country a team race on the old lines, a team pursuit race, or a triplet match, or all three, or Collett and Hausman will ride any team tandem, or Collett will go against anyone single. A combination of all these races figured on an aggregate point basis would make a most interesting form of team competition.

## Cyclists and Defective Streets

Michigan cyclists are much perturbed regarding the recent decision of the state supreme court in the case of Mary Leslie vs. the City of Grand Rapids, in which it was held that the state laws do not require townships, cities and villages to keep highways in safe condition for bicycle riding, the duties of the municipality ceasing with maintenance of safe roads for other classes of vehicles.

There is a feeling throughout the state that the Leslie case did not warrant so emphatic and general a decision as that handed down by the supreme court; that it was not a case of sufficient strength to be taken fairly as an example or criterion where such extensive interests are involved, or a case that called for such a general warning to bicyclists that they could not expect protection in the public thoroughfares.

Mrs. Leslie's injuries, alleged to have been caused by a fall from a wheel which struck a hole in an asphalt pavement, were of an internal character and of such a nature that it was a disputed medical question as to whether they were caused by the accident or by disease. The suit involved her peculiar right to damages against the city, but was not considered in Grand Rapids a fair test, and the League of American Wheelmen declined to assist in fighting it. It was not anticipated that the supreme court would allow it to govern other cases in which a wheelman's rights were more fairly represented.

It is doubted if the decision would be upheld if carried to a higher court, and the L. A. W. is expected to take some action either toward having the decision reversed or preparing a bill for the next legislature looking to the protection of cyclists from defective streets.

The bicyclist takes more chances than any other user of the public thoroughfares and ought to have at least equal protection. A carriage or wagon could pass safely over defects in a pavement

# The Only House of Its Kind on Earth



OUR MODEL NO. 59

Shelby seamless tubing, patent expander at seat post and handle bar, Excelsior swaged spokes, Baldwin patent chain, highest grade enamel, "Columbia" Guaranteed Tires (fully guaranteed). Equipment very best.

PRICE **\$17.50** EACH

Gent's, same specifications as above,  
**\$16.75** EACH

Send us \$2.50 and we will send you one pair of "Columbia" Guaranteed Tires. This is for introduction only and we will only send one pair to one address. We will not send them C. O. D. at this price.

### NOTE OUR LOW PRICES ON SUNDRIES

Foot Pump, 16x1 $\frac{3}{4}$ inch.....	\$0.20	Kensington 1899 Pedals... per pair,	.60
Schinner Pat. Bar, $\frac{7}{8}$ -inch stem...	.45	Standard Saddles..... each,	.50
Adjustable Bar, $\frac{7}{8}$ -inch stem.....	.70	Tire Tape, best quality..... per lb.,	.25
Leather Grips.....	.10	C. R. Rubber Cement, large tube,	
Baldwin Pat. Det. Link Chain.....	.70	..... per doz.,	.30
High Grade '99 Hubs.....	1 10	C. R. Wood Rim Cement, large tube,	
(Turned from solid bar steel)		..... per doz.,	.30
Best Swaged Spokes with nipple, N.		C. R. Graphite, 4-inch sticks.....	
P..... per 100,	.75	..... per doz.,	.20
Morgan & Wright Inner Tube, each,	.55	Hard Cement..... per lb.,	.12
Graham Adjustable Pedals, per pair,	.45		

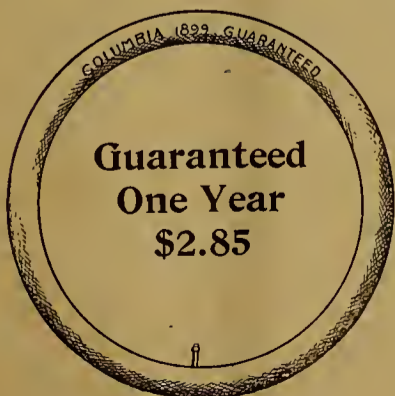
Remember we furnish any part for any bicycle manufactured.  
Parts for old bicycles a specialty.

## CYCLE REPAIRS CO.

52 to 60 Fifth Ave., Chicago

Sole  
Selling  
Agents  
for  
Columbia  
Guaranteed  
Tires

Sole  
Selling  
Agents  
for  
Columbia  
Guaranteed  
Tires



that might cause the death of a bicyclist. If a hole in a street caused the breaking of a wagon wheel, the result would not necessarily imperil the occupants, but if a bicycle wheel was broken in that hole, the result could hardly fail to be serious, and the chances are it would prove fatal. And yet, according to the supreme court of Michigan, the man in the wagon, if hurt, might recover damages, but an injured wheelman could not.

### AUSTRALIAN CHAMPIONS MEET

Walne Defeats Jackson and Megson in Match Series  
—Closing Electric Light Meet.

Sydney, March 25.—The last of the electric light race meets run under the auspices of the League of N. S. W. Wheelmen was held in Sydney on March 13 and 14, in the presence of a very large attendance each evening. The "draw" was the meeting of Walne, Jackson and Megson, the three best riders in Australia, in a triangular match, and a mile match between W. McDonald and A. C. Forbes to decide the winner of the Orient plate, a classic scratch run at a previous meet, in which these two riders each gained seven points and thus dead heated. In the run-off McDonald beat Forbes in 2:01 4-5, after a great race.

In the triangular match Walne was to race both riders singly, three heats of one mile each, for a stake of \$500. Walne met Jackson the first night and defeated him easily by winning two straight heats. On the second night the Walne vs. Megson match took place, and resulted in Walne winning two out of the three heats. The first event produced a magnificent struggle between the two champions, Walne gaining the verdict by inches in 2:06 2-5. The second heat was won by Megson by a wheel in 2:07. In the deciding heat Walne won by a length in 2:12 2-5, thus securing the prize and proving his supremacy and his right to the title of champion of Australia. In the deciding heat Walne caught Megson napping and jumped him, gaining a length and a half.

McDonald won the five-mile scratch race the first night in the fast time of 11:01. On the second night Joe Megson won the ten-mile scratch brilliantly in 25:11 2-5 from all Australia's cracks except Walne, who did not start. Few expected to see him win after having ridden three terrific races with Walne, only finishing the last race a few minutes before the start of the ten-mile.

A. C. Forbes appropriated the two-mile handicap from 15 yards the second night in 4:24. Phelan won the half-mile from 60 yards in :57 4-5. Rennie won the mile handicap in 2:07 2-5 and J. Denning the two-mile handicap from 90 yards in 4:30.

The League of Victorian Wheelmen has decided to affiliate with the I. C. A. and arrangements are being made for Australia to be represented by a professional rider at the world's championships in Montreal. It is almost certain that Walne will be selected and Australians will be surprised if he does not shake up the rest of the world's best and carry back to Australia the mile championship. Walne showed his back wheel to Green, Barden, Ainsworth, Bill Martin and other foreign racers so often while they were in Australia that it was monotonous chronicling his wins. Australia will also be represented by an amateur rider, the New South Wales Cyclists' Union (the only body at present affiliated) having decided to send a representative. Test races will be held to decide upon the man. Goodson, who represented the Union last year, seems to have a mortgage on it.

### To Define Racing Men's Attitude.

Officials of the American Racing Cyclists' Union may soon hold an important

meeting in Louisville to take some action in relation to the claim so freely made that the professional racing men and their supporters are wholly antagonistic to the L. A. W. and would welcome the demise of the organization. They say that nothing could be more untrue, as they are not working against the body itself, their fight being against the racing department, which, by the testimony of the L. A. W. officials themselves, they claim, is a self-supporting and practically independent department. The racing men say that they firmly believe in the League of American Wheelmen and would like to see it mount in membership to far more than the 100,000 mark. They believe, with the other wheelmen of the country, in the cause of good roads, all being ardent wheelmen from other standpoints than racing, and they also believe in the baggage bills. The prominent members of the union, believing that the organization should be put on record once and for all time, will strive to have a resolution passed at the next meeting, which will occur, probably, on May 1. In this resolution they believe the N. C. A. will concur, and will request that organization to do so.

### PLANS FOR LEAGUE MEET

Race Series to Determine Best All-round Man—  
Large Prizes—Century Runs and Tours.

Boston, April 23.—At the previous National meets of the L. A. W., the principal events of the week have been the national championships, but the '99 Meet Club has arranged features and attractions which will interest those who are not followers of the racing game. Monday will be devoted to the opening of League headquarters, which will be established at Mechanics building. Information bureaus will be established, and tourists and century riders will find this a convenient point to start from.

Tuesday's programme will open with a century run over the Newburyport course. Details will be made up to form an escort for the various centuries that are scheduled during the week, and an effort will be made to give visiting centuries an opportunity to reel off centuries over some of the finest roads in this section of the country. The remainder of the day will be devoted to short tours in and around Boston. A moonlight run through the park will be the final feature of the second day.

The racing programme commences Wednesday and promises to be one of the most complete and extensive ever offered at a National meet. According to present plans, the total value of the prize list will be in the neighborhood of \$15,000. This amount may be changed slightly to comply with the status of middle-distance racing at the time of the meet. Those in charge of the racing programme have under consideration a scheme that will enable the public to decide who is the best all-around man. By this plan it is proposed to decide the best man at three distances, which will consist of a fifteen-mile paced race, five-mile pursuit race, and one-mile sprint race. The scoring of these events is to be by points, the second man to count one less than the first and so on, the first man in each race to score as many points as there are contestants in the race containing the largest number of entries. The prizes in the paced race will be \$2,500, to be divided as follows: \$1,250 first, \$750 second, \$500 third; for the pursuit race, \$350 first, \$250 second, \$150 third; one-mile sprint, \$250 first, \$150 second and \$100 third.

In addition to the above prizes there will be awarded the following cash prizes to accompany the medals commemorative of the event, \$250 to the first, \$150

to the second, \$100 to the third, making the total cash prizes \$4,250. To this will be added \$1,750, which will be divided equally among the riders in the paced event to assist them in defraying their expenses. This will make the total cash prize for this event \$6,000. According to the present plans, one of these events will be run on each day of the races.

On Saturday afternoon it is proposed to hold a mammoth bicycle parade. Prominent military officials have signified their willingness to assist in this. At the previous meets held in this city the parades formed a striking and attractive feature. It has been suggested that the pioneers of the L. A. W. be invited to act as an honorary escort.

### CRACKAJACKS REDUCING WEIGHT

Wear Several Racing Suits and Train Hard at  
Fountain Ferry—Go to Washington in May.

Louisville, April 24.—Hard work and lots of it is being done by the racing men in training at Fountain Ferry park. The weather has been most favorable to consistent training, the men are the most willing lot ever gathered there, and although no very remarkable speed has been made, the times have proven faster for this time of the year than ever before. The closing mile of a five-mile ride was made by McFarland, Stevens and Cooper in 1:59, the closing two-thirds by McFarland and Stevens several times in from 1:19 to 1:20, and the closing lap in :38, by both McFarland and Stevens, while Kiser, Cooper, Kimble and Downing have hit it at :40 several times. The men do no sprinting at all, unless this fast lap may be called so. They dress in four or five suits of training clothes, covering every part of the body, and the heavy clothing aids them in reducing flesh. Kimble has come down to 163, which is twenty pounds lighter than he rode last year. McFarland has reduced twelve pounds and is now at 180. He expects to go down to 172. Kiser has taken off five pounds and is at 161, but Cooper has added three pounds by all his hard work, now being at 160. Hardy Downing, the San Jose ranch owner, is staying with the fast bunch. By May 1 the men hope to be able to take off the heavy clothing. They will then appear for the first time in light racing suits, and the sprint work will be started. This starts the putting on of the finishing touches and all of the men expect to go seconds faster than ever before.

In the slow bunch are Mertens, the ex-five-mile champion; Horace Pouch, a local rider; George Dupre, another local man; Jerry Woodward, of Detroit, who, although lazy, is considered a likely man, and Charles Porter, the only L. A. W. supporter at the track. Mertens is doing unpaced work in the early mornings on the road and from ten to fifteen miles twice daily, unpaced, on the track. He is working hard to reduce flesh and hopes to be able to join the fast brigade this week. In this fast bunch McFarland and Stevens are head and shoulders over their fellows because they have had an entire month of hard work in California. Downing is very close to them, although he is unable to stay with the bunch to the finish as yet. Cooper and Kiser are going better than ever before. All of the men expect to leave early in May for Washington to join Bald, Zimmerman, Fournier and the eastern party, which is training there. Headquarters for May will be established at the Park Bicycle Club track and a trip will be taken to New York for the opening of the season at Ambrose Park May 20. After the Newark meet of May 21 the men will return to Washington for the great Jubilee Meet of May 24 and all will scatter for May 30



# CYCLE AGE ADVERTISES

Vol. XXII. No. 26.

THE CYCLE AGE OFFICE.

April 27, 1899.

## If You Have Not Yet Ordered "Modern Cycle Repairs"

It may interest you to know what repairmen and the trade press have to say about it:—

"Modern Cycle Repairs," is the title of a handsomely bound volume of 130 pages, published by the Cycle Age Company, of Chicago. The book is well printed and contains a large number of illustrated descriptions of economical methods for repairing bicycles and their equipment. It is a work which will prove of incalculable value to the trade. As stated in the preface, the purpose of this book is to aid the practical bicycle repairman to make his business profitable, and even a cursory glance through the book will suffice to prove that it is well calculated to realize the intent of its publishers. The chapter on repairs is especially worthy the careful perusal of every reader of this volume.—The Age of Steel.

The Cycle Age, Chicago, are publishers of Modern Cycle Repairs, a 130-page volume, whose get-up is certainly a pleasing innovation in literature of a strictly technical character. The small cuts with which the book is copiously illustrated all appear in the wide edition de luxe margin, not only giving the book a very dainty dress, but enabling one by rapidly thumbing the leaves to find any desired illustration in a second's time. The dominant chord in this book is practical usage, theorizing being treated with scant ceremony.

The subject is treated so thoroughly and the book is so saturated with technical drawings that any clever mechanic can gain a comprehensive knowledge of mending bi-

cycles from its perusal.—The American Artisan.

I have received copy of Modern Cycle Repairs. Anyone with bicycle repair business will find it is worth many times the price before the season is over. C. W. Ward, Caneadea, N. Y.

I am greatly pleased with the "Modern Cycle Repairs," which I received recently. I find it a complete and very desirable help to repairers. H. J. Loden, Anderson, I. T.

I consider the Cycle Age the best of its kind.—Thos. P. Bayer, Lansingborough, N. Y.

### EXTRAORDINARY ENDORSEMENT

An Advertiser Who Knows Cycle Age's Value and Doesn't Hesitate to Say So.

Messrs. F. S. Waters & Co. are occasional users of The Cycle Age as an advertising medium. They have written, absolutely without solicitation or suggestion, about the strongest endorsement of its value the paper has ever received. Their letter is as follows:

Chicago, April 18.—The Cycle Age Co. Gentlemen: We have just received an order for shipment of 20 bicycles from a large jobbing house in South Africa, this order coming to us through our ad. which we have been running in The Cycle Age, and we must say we are very much pleased with the results we have received from your paper the past two seasons. We have been receiving a number of orders from people both abroad and in Canada through your paper, and the wheels we are shipping to these parties are our best model three-crown, eccentric hanger. They say they want nothing but the finest goods.

Trusting this information will be of benefit to you, we are, very truly yours,  
F. S. WATERS CO.

### Satisfied Advertisers

*The amount of inquiry through your paper has been very great.*

*We are behind in our orders.*

ST. LOUIS GASOLINE  
MOTOR CO.

### Case Hardening Conundrum.

Thanks are extended to W. F. Calt, of Walla Walla, Wash.; James Slack, of New Knoxville, Ohio, and to C. L. Howe, of Portland, Ore., for further communications relative to a cheap and quick method of case hardening for repairmen. Unfortunately, they throw no new light on the subject, however.

### Queer Advertisements.

Curiously worded advertisements, which are funny without intent, are common in the London papers, it would seem. One paper recently offered a prize for the best collection of announcements, and the following is the result:

"Annual sale now on. Don't go elsewhere to be cheated—come in here."

"A lady wants to sell her piano, as she is going abroad in a strong iron frame."

"For Sale—A pianoforte, the property of a musician with carved legs."

"Wanted—A room for two gentlemen about 30 feet long and 20 feet broad."

"Lost—A collie dog by a man on Saturday evening answering to Jim with a brass collar round his neck and muzzle."

"Wanted—By a respectable girl, her passage to New York; willing to take care of children and a good sailor."

"Mr. Brown, furrier, begs to announce that he will make up gowns, capes, etc., for ladies out of their own skins."

"Wanted—An organist and a boy to blow the same."

"Wanted—A boy to be partly outside and partly behind the counter."

"To be disposed of, a small phaeton, the property of a gentleman with a movable headpiece as good as new."

## The Cycle Age Motor Vehicle Supplement

The first of the Cycle Age monthly supplements, devoted to the motor vehicle industry, will appear with the next issue.

to a number of meets promoted under the N. C. A.

Tom Eck has his party at Hot Springs. Johnson, McCarthy, McLeod, Davidson and Bennie Munroe are among the men under Eck who will star this season.

During their stay here the riders have been approached from one quarter and another regarding returning to the League. Offers to McFarland and Stevens were made through a cousin in Iowa. Kimble has been tempted, but sticks with his fellows. He had an offer of a match race at Philadelphia against Freeman, who is reported also to have wavered, but who wrote to Downing today that he would join him here May 15 and team it with him this season under the management of Charles Ward, who is expected to join the party here with his new star, Gibson.

#### The N. C. A. Amateur Rule.

The following amateur rule has been promulgated by the N. C. A. board of control:

An amateur is one who has never competed in, nor assisted in, and who has not taught any athletic exercise for money or other remuneration; nor knowingly competed with or against a professional for a prize of any description; nor sold or pledged any prize or token obtained through connection with cycle racing (this clause is not retroactive) or whose membership in any cycling or athletic organization is of no pecuniary benefit to him whatever, directly or indirectly, except such as is hereinafter provided for in these rules; or who, having transgressed any of the foregoing provisions, has been duly reinstated.

For this class of riders prizes are limited to \$35 in value for a first, unless a permit to exceed this amount shall be granted by the board of control.

It is not intended that this rule shall apply to persons who may instruct others in cycling for the purpose of effecting the sale of a bicycle; nor to those who serve as officials of the N. C. A. or at races conducted under its permits.

The following rules in reference to inter-club and team competition have an important bearing on the amateur rule above quoted:

1. Riders must be members of a club for at least thirty days before being allowed to compete under its colors; riders who have competed under the colors of a club cannot compete under the colors of another club until a period of at least three months has elapsed, unless their original club should be disbanded or go out of existence.

2. A club desiring to enter a rider or team in an inter-club or team competition at a meet in the territory governed by this association may be allowed to pay the traveling, hotel, and entry fee expenses of such rider or team upon application to the member of the board of control in charge of the district in which the club is located.

3. Any club desiring to establish a "racing membership," whereby riders competing under its colors may be granted privileges, will be given permission to do so, if such privileges are restricted to the remission of dues, the use of the club's trainer or trainers, and the payment of entry fees for inter-club or team events only.

4. Riders representing clubs in national and state championships may have traveling, hotel, and entry fee expenses paid by their clubs without application to the board of control.

#### Pennsylvania Road Bill Defeated.

Philadelphia, April 24. — After having successfully passed the Pennsylvania senate and reached third reading in the house, the "compromise" road bill, a substitute for the Hamilton measure, was defeated by a vote of 78 to 71. The city members were generally favorable to its passage, but the farmers, to whom good roads would be more beneficial than to any other class of citizens, brought about its downfall. As the legislature meets biennially, Pennsylvania will be compelled to worry along under the present inadequate system for at least two more years.

The Williamsport wheelmen will be the first to take advantage of the side-path law recently passed by the state legislature. There are, it is estimated, 7,500

wheelmen in the county, and with the \$7,500 which would be annually raised by taxing their bicycles \$1 each, much can be done toward providing the county with a network of bicycle paths within a few years which will make that section a Mecca for wheelmen from all sections of the state and country.

#### Bonhours-Walters Team Wins.

A large crowd of spectators was attracted to the Parc des Princes track, in Paris, on April 10, by the announcement that Bouhours and Walters, respectively middle distance champions of France and England, would be team mates in the fifty-kilometer paced tandem race. Four teams took part in the event, paced by eight electric tandems. At the start Champion and Digeon took the lead and gained 100 meters, Bouhours and Walters bringing up the rear. In the twelfth kilometer an accident occurred to the tandem pacing Champion and Digeon and they lost 200 meters, but a new motorcycle was put in and in the next two laps they were pulled into the lead again. Another accident in the twenty-first kilometer put them out of the race for good, however, and then Bouhours and Walters went to the front and steadily increased their lead until at the end of the thirty-one miles they were 1,000 meters ahead of the Fossier brothers, who finished second. The time was 57 minutes, or a little more than 1:50 per mile.

#### Woodside Park Re-opened.

Woodside Park track in Philadelphia was opened for the season last Saturday. Manager Wiese says that a number of improvements have been made which will result in the famous oval being faster even than last year, when Major Taylor brought to it every short-distance record worth riding for. Among those who will get into condition there are Kimble, Taylor, Freeman, Aker and other prominent riders of National circuit fame in addition to all the local "pros." and "pures" of note.

#### The N. C. A. Incorporated.

The National Cycling Association, organized to conduct bicycle races in opposition to the L. A. W., was incorporated under the laws of New Jersey, at Trenton last Friday. The new incorporation is capitalized at \$2,000. The incorporators are: Charles P. Biomecke, Newark, N. J.; Nate Salisbury and Frederick B. House, Jersey City, N. J.; John D. Lasley, Washington, D. C., and Amos Batchelder, New York city.

#### Gimm to Return Home Soon.

Louis Gimm is recovering health in the San Francisco hospital and hopes to return to his Pittsburg home in time to see the races scheduled for May 30.

Several European countries are already asking the privilege of organizing the world's championships in 1891. Switzerland, Norway and Scotland have made application, but it seems likely that the privilege will be awarded to Switzerland.

The people of South America are great lovers of races, says Momo, the Italian racing man, who returned to his native land from a tour of that continent recently, but the promoters give such poor prizes that it does not pay to ride there.

Cycling is becoming very popular in Cairo, Egypt, notwithstanding that riding there is very difficult because of the many children, dogs and other animals

which run in the streets. Wheelmen there are circulating a petition asking that certain rules for riding be promulgated.

#### NEWS IN BRIEF.

The Indianapolis Cycle Board of Trade will give the annual Memorial day road race this year.

President Keenan, of the L. A. W., has appointed William B. Curtis as A. A. U. representative on the racing board, and Fred Gerlach as representative to the International Cyclists' Association.

It is reported that the authorities of Union township, Missaukee county, Mich., have passed an extraordinary ordinance which prohibits bicyclists from riding on any of the roads in the township.

A. J. Henley, a C. R. C. veteran of Kansas City, rode a century over a hilly course in Jackson county, in 10:40:00 without handle bars. He had frequent falls owing to ruts and a high wind. Henley holds all the state records from 50 to 100 miles.

Henry Fournier and Arthur Zimmerman will train together at Freehold, N. J., for the present and later at Ambrose Park, where they will be joined by Harry Elkes. Fournier and "Jimmy" will train for sprint racing. Fournier's infernal machine is being altered and a new one with increased horse-power is being built in Zimmerman's factory.

The appointment of "Pop" Brewster, president of the Philadelphia Cycle Board of Trade, as a member of the N. C. A. board of control was without his consent, for he positively stated last Saturday that he will not accept the honor thrust upon him, as his sympathies are with the L. A. W., which organization he faithfully served in responsible positions in past years.

So good has trade been this spring that it now looks as if nearly every maker in Chicago would respond to the request of the Associated Cycling Clubs for prizes for the Decoration day road race. The prize committee is at work early and their requests have received favorable consideration. It looks as if there would be nearly twenty single machines and several tandems to top the list.

Washington and its fine third mile track have received favorable mention of late as a possible training ground for the sprinters during the month of May. The third mile track of the Park Bicycle Club is fast and the weather in the Capitol City is as favorable at the present time as at any place each year, believing that malaria results toward a more northerly training quarters from working too far south.

The new touring department of the League of American Wheelmen is already in receipt of hundreds of applications from League members for routes in various parts of the country. A large force is at work in the Boston headquarters of the department getting the necessary information properly filed, and the opening of the riding season will see it ready to answer any and all questions respecting touring a wheel in this country and Europe.

An innovation which will meet with hearty approval on all sides will be introduced by the National Cycling Association. Classes which were so altered during the regime of multicycle pacing will be abolished and an entirely new classification of the riders will be made upon the times made in final events only. In the past the winner's time in a heat has been used in the classification and a number of riders have been dropped from class after class solely on their times made in heats before they had won a prize in the lower classes. Another alteration in the manner of conducting affairs is that official timers will be appointed whose watch without confirmation will be taken as official time in a contest.

E. C. Bald, who has been in New York city for several weeks negotiating with A. G. Spalding & Bros., has contracted to ride a Spalding bicycle in all his races this season and will be the star of a Spalding team to be put on the circuit. Bald is in excellent health, and his preliminary training demonstrates that the speed for which he is noted has not left him. He has done some work on the road and has taken a few turns at Berkeley Oval, where his sprinting has given him confidence in what he expects to do this year. Last year Bald neglected the circuit to a considerable extent to ride in match races and he scored victories over the best of riders, while in competitions on the circuit he proved himself invincible. Bald has decided to make New York city his home and he will do most of his training in this vicinity. For the present, his work will consist of plenty of road work.

AS WE HAVE SAID BEFORE

# We Sell Everything for Bicycle Builders and Dealers

WHEN YOU REALIZE THAT—YOUR BANK ACCOUNT CAN BE INCREASED MANY \$

IF YOU FIGURE THE SAME WAY YOU WILL BE THE GAINER, FOR QUALITY EVENTUALLY SELLS QUANTITY WHICH MEANS  $q + q = \$$

Our stock comprises only the best of EVERYTHING. We carry nothing except that which can successfully carry out our guarantee and back up our reputation.

You should be with us on Tires, Cements, Fittings, Parts of all kinds, Rims, Spokes, Washers, Frames, Forks, Tubing, Bolts, Nuts, Sundries—in fact, EVERYTHING. Get our catalogue.

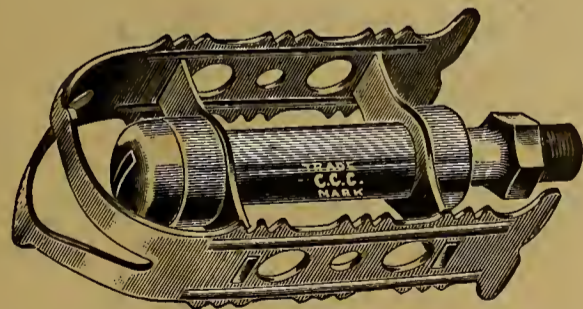
## EXCELSIOR SUPPLY CO.

(ESTABLISHED 1876)

88-90 LAKE ST., CHICAGO, ILL., U. S. A.

# THE Successful Pedal

...OF '99...



Stamped from best grade Steel; no castings used; the balls, cones and axles are made from Tool Steel, hardened and ground. All parts are heavily coppered and nicked and INTERCHANGEABLE.....

### CYCLE COMPONENTS CO.

Mfrs. of PEDALS ONLY. 9-13 Maiden Lane, N. Y.

Sole Selling Agents: ROGER B. McMULLEN & CO., 88-90 Lake St., Chicago, Ill. New York: 309 Broadway.

Mention The Cycle Age

## 1899

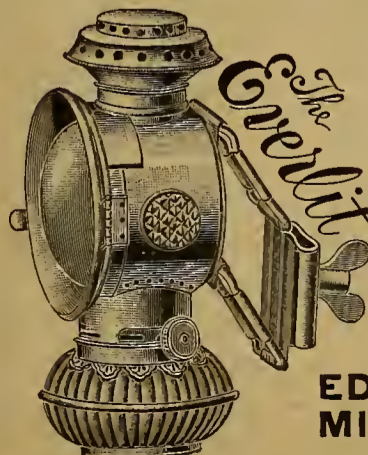
WE ARE READY FOR YOU



THESE ARE THE REAL THINGS—SO THEY ALL SAY.

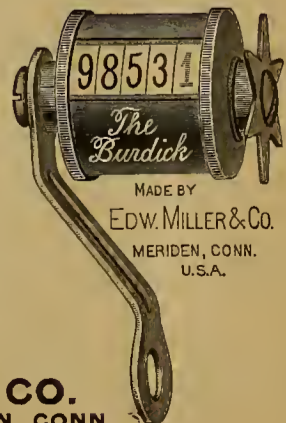
BELLS—With Royal Tone.  
BURDICK CYCLOMETER—Accurate and Trusty.  
EVERLIT LAMP—None better at any price.

IF YOU BURN GAS "THE MAJESTIC"



IS the Lamp

It's Made All Right and Gives Big Light.



MADE BY EDW. MILLER & CO. MERIDEN, CONN. U.S.A.

EDWARD MILLER & CO. MERIDEN, CONN.

## RETAIL MISCELLANY

### General Information Concerning Cycle Agents and Repairmen Throughout the Country

#### Alabama.

Huntsville.—J. A. Bell & Co. have opened a bicycle repair shop in the Lowe building on Madison street. High grade bicycles will be kept for rent.

#### Connecticut.

Falls Village.—Darling Bros. have rented F. M. Olin's store and opened a bicycle store and repair shop.

Greenwich.—James F. Lally, who has been in Ray & Son's hardware store for some years, has joined C. J. Ferris in the bicycle business, and hereafter the firm of Ferris & Lally will conduct the bicycle store in the News building.

Naugatuck.—J. R. Murphy has opened a bicycle store in the Dayton block on Water street.

Norwich.—R. Beckwith has opened a bicycle store in the rooms formerly occupied by Hale & Kelsey.

#### Illinois.

Aurora.—Frank Anderson and Oscar Grafton, two skilled employes of the Aurora Automatic Machinery Works, have opened a bicycle supply store and repair shop at 4 Downer Place.

Freeport.—W. C. Schouer, of the Brown & Schouer implement house, has taken the agency for the Thomas bicycles.

Kansas.—John Ruppert is arranging to reopen his bicycle shop.

La Prairie.—J. C. Hogsett, proprietor of a general store carrying agricultural implements and bicycles, has taken a partner. The firm is now Hogsett & Ross.

Ottawa.—Armstrong & Mathewson have opened a bicycle store at 110 Madison street.

Rossville.—Chas. W. Meneley has opened a bicycle establishment in the Crane building, where he will do a general bicycle business and carry bicycle sundries and repairs in connection with a general plumbing business.

Waukegan.—T. F. Wheeler has a branch bicycle shop in Lake Forest, having purchased C. R. Mills' old established stand.

Woodstock.—C. F. Dacy has moved his office into his new building just completed, where he will be found with his usual high-grade bicycles.

#### Indiana.

Indianapolis.—Christian Eby and John Thompson of 154 North Delaware street have formed a partnership under the name of the Indiana Supply Co. They are general agents for Old Hickory bicycles and Julius Andrae & Sons' line of cycles and supplies. Pianos, organs and sewing machines are also handled by this firm. Mr. Eby manages the business, while Mr. Thompson is on the road in the interest of Old Hickory bicycles.

#### Iowa.

Cedar Rapids.—Hruby & Pavlis, hardware and bicycle dealers, have filed dissolution papers.

Minden.—William McEndee & Co., dealers in hardware, etc., have been burned out.

West Union.—George Mears has opened a very neat bicycle repair and supply shop.

#### Kansas.

Claffin.—G. N. Moses has sold his interest in the Claffin Hardware & Implement Co., which handles bicycles as a side line.

Great Bend.—G. N. Moses has sold his interest in the firm of G. N. & E. R. Moses. The E. R. Moses Mercantile Co. succeeds.

Hanover.—Wm. E. Kornbaum will carry on the business of the firm formerly known as Kornbaum & Mullegan.

#### Maine.

Bath.—Nick McGilvray, the polo player, will open a bicycle repair shop.

Gulford.—Clarence Weymouth has opened his bicycle repair shop on South Main street. Quite a stock of machines is already on hand to be cleaned and repaired.

Orono.—Fred Park has added a bicycle repairing department to his store and is already doing quite a business.

#### Maryland.

Annapolis.—The business known as the Annapolis Bicycle Agency, for many years conducted by J. F. Abbott, has been purchased by Edwin B. Smith, a promising

young business man of Annapolis. The new management will make some improvements to the store and will represent the Crawford, Crescent, Cleveland and other standard machines. A fully equipped repair shop has been added to the agency.

#### Massachusetts.

Barre.—C. N. Cowan has opened his bicycle rooms for the season with a carefully selected line of bicycles and sundries.

Salem.—James F. Almy, of the firm of Almy, Bigelow & Washburn, is dead.

Stoughton.—Chapman & Sons are to open a new bicycle store in the Stretton building. The Chapman factory is running at full capacity, having orders enough to keep it busy well in to the season.

#### Michigan.

Bay City.—Annis & Adams, both practical bicycle men, have opened a repair shop in the Primm block. They intend to handle the latest and best bicycles and supplies made and will do expert repairing on short notice.

Delray.—Charles and Burt Reinhart will soon open their bicycle repair shop on Fort street. Enameling will be a specialty.

Grand Rapids.—The Tiger bicycle people have displayed in their window a magnificent tiger head carved out of a solid piece of wood. It is framed in a bicycle rim and is a striking advertisement for the bicycles which the agency handles.

Grand Rapids.—Harry Rablin and Eugene Miller have rented a building and opened a shop for the repairing of bicycles. It is their purpose to handle several different grades and makes in bicycles.

Lowell.—Clark & Clark, dealers in hardware and bicycles, have dissolved partnership.

Pontiac.—Herman B. Seagrave has sold out his hardware business.

Port Jervis.—Frank Bond, bicycle agent in the Opera House block, has been so rushed with work that he has been forced to secure the services of C. H. Custis, a practical repairer, who has had six years' experience in the works of the John P. Lovell Arms Co. and who for the last three years has run a bicycle shop in Milford.

Sault Sainte Marie.—A. E. Runnels has opened his Portage avenue bicycle livery. He has just received a line of new bicycles, both for sale and for rent, and also offers his old machines for sale at a bargain.

Ypsilanti.—Harding & Shaefer have gone out of business.

#### Minnesota.

Glencoe.—W. G. Gould is building a bicycle emporium on Hennepin avenue.

St. Paul.—The Northwestern Cycle Co. has opened a store in the Grand Opera House block.

#### Missouri.

Albany.—Peery & Pierce, dealers in harness, bicycles, etc., have dissolved partnership.

Perry.—Mr. Moore has sold his interest in the hardware business of Sterrett & Moore. The new firm is Sterrett & Moss.

#### Montana.

Helena.—Weinstein & Co., proprietors of a general store handling bicycles and sundries, will incorporate.

#### New Hampshire.

Dover.—H. W. Hartman of Salem, O., will open a bicycle store.

Lancaster.—Fred Stebbins has bought out the bicycle repairing business of W. L. Rowell, Jr., and is doing a good business.

#### New York.

Attica.—Mr. Moritz has retired from the hardware firm of Ballsmith & Moritz. A new partnership has been formed under the name of Ballsmith & Pilgrim.

Cherry Creek.—Masons are putting the foundation under the building to be used by Boller Brothers in their bicycle business.

Dunkirk.—Spencer, Lord & Co. is the name of a new bicycle house in this city.

Olean.—W. D. Newerf, representing the Gormully & Jeffery Mfg. Co. of Chicago, has taken charge of the new bicycle store in the Masonic building. The firm will show a complete line of Rambler machines.

Penn Yan.—Ward Ellis, a bicycle repairer, has been burned out. He places his individual loss at about \$800, with no insurance. There were also in his shop bicycles for repairs belonging to different parties, which he estimates as valued at another \$800.

Port Jervis.—George M. Decker has opened a bicycle store in the Lockwood building. He has a line of first-class machines for sale and is well stocked with bicycle supplies for repairs.

#### North Dakota.

Grand Forks.—Barnes & Nuss are remodeling their hardware store on Third street and are adding a new stock of hardware. They are also exhibiting a fine line of bicycles. The firm has in connection one of the most complete repair shops in this section.

#### Ohio.

Dayton.—R. Harry Croninger succeeds the Croninger Cycle Co.

New Lexington.—The hardware firms of Acker, Rose & Ward and S. McGirr have consolidated under the name of McGirr, Wood & Co.

Salem.—H. W. Hartman, who has been running A. M. Carr & Son's bicycle repair shop, has left for Dover, N. H., where he will be in charge of a large bicycle repair shop.

Salina.—V. & H. Schmitt have opened a general bicycle repair shop on West Fayette street. They thoroughly understand their work and can put a bicycle in excellent trim.

#### Pennsylvania.

Altoona.—The Altoona Cycle Co. has opened for business at 1426 Eleventh avenue. William Shaar is the proprietor.

Pittsburg.—Albert Hofer, who is conducting the bicycle business of Louis Gimm, the Pittsburg rider who is ill in San Francisco, has had news that Gimm is on the road to health and hopes to be home in time to see the races scheduled for May 30.

#### Rhode Island.

Westerly.—Albert Pilling, formerly bookkeeper for the Smith Granite Co., has purchased the bicycle business of the Stilman Carriage Co. and will conduct it hereafter at the same location on Coggswell street.

#### Texas.

Sherman.—B. L. H. Wright has sold his hardware business to E. E. Flippen.

#### Wisconsin.

Chill.—Gus. Bulgrin has decided to go into the bicycle business. With him will be associated M. L. Link, and together they will handle high grade bicycles, do repairing and carry supplies of all kinds.

La Crosse.—C. A. Krebaum has opened a bicycle store in this city.

Milwaukee.—The bicycle repair shop of George Schmidt, 785 Twelfth street, has been slightly damaged by fire. Mr. Schmidt believes the blaze was of incendiary origin.

Oshkosh.—A one horse power motor is about to be placed in H. F. Werner's bicycle repair shop.

#### On Tooting Bazoos.

Perhaps the author of the following advertisement, which is strikingly incomplete, consoles himself with the reflection that it is better to be laughed at than neglected:

#### SOME PEOPLE TOOT THEIR BAZOOS

When there is really no justification for doing so. But when we tell you that we have just received our invoices for twenty-seven new bicycles comprising the following:

#### Columbia, Hartford, Ideal, Orient, Rambler

Bring in your bicycles early and have them enameled and repaired, and avoid the rush.

#### W. H. MITCHELL,

Dealer in Hardware, Stoves, Tinware,  
Paints and Oils,

116 E. Brown St. 'Phone No. 184.

The inference is clear—some people toot their bazoos.



# SNELL WHEELS

ARE SWELL WHEELS!

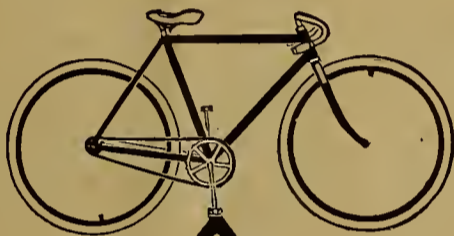
Don't you believe it? Then get our catalogue and be convinced.

THE SNELL CYCLE FITTINGS CO.

TOLEDO, ❁ ❁ ❁ ❁ OHIO

## Catalogue Now Ready!

CONTAINS  
EVERYTHING  
IMAGIN-  
ABLE  
IN BICYCLE  
LINE....



60 PAGES  
OF WONDERFUL  
BARGAINS

WE HAVE  
A BEAUTIFUL  
BICYCLE  
THAT CAN BE  
LISTED  
AT \$25.00

**FRAMES**  
THE BEST, MOST HANDSOME  
AND HIGHLY FINISHED FRAMES ON  
EARTH. EVERY FRAME GUARANTEED.

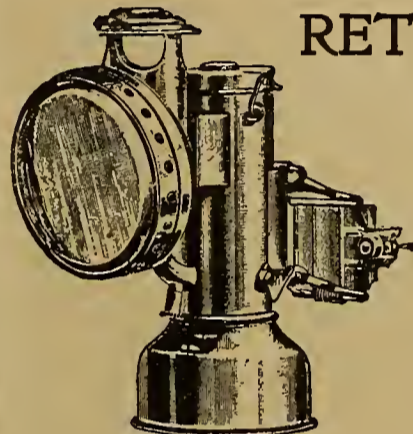
**SHONE-HANNA CO.**  
MANUFACTURERS  
AND  
WHOLESALEERS.

29 S. CLINTON ST. ROCH. N.Y.

FRAME SETS 5 STYLES  
SUNDRIES ALL KINDS

EASY TO ASSEMBLE      FINISH SUPERB

SEND FOR CATALOGUE      LOWEST PRICES ON EARTH



RETAILS FOR

**\$2.00**

WEIGHT, 11 OUNCES.

WITH A  
GOOD PROFIT TO  
THE DEALER

## The Murray Gas Lamp

Most Brilliant  
Light on  
the Market

Has advantages not possessed by any other lamp. Can be easily taken apart. Aluminum parabolic reflector. A new valve. Large opening for meter. *Can be lighted immediately after opening valve.* Write at once. Output almost sold.

**William P. Murray**

Sole Importer

533 Broadway, New York

## ...Every Point a Good Point on Elfin Juvenile Bicycles...

Remember a few. Every part in proportion (not the rule in juveniles although it ought always to be), the reversible crank bracket which meets the requirements of the growing rider, a clean cut stylish model and a fair selling price. Better get a few more models for the juvenile vacation trade. Once an Elfin agent, always an Elfin agent.

WM. SOMERVILLE'S SONS,  
66 West Broadway, New York,  
Agents for Greater New York and Foreign Distribution.

E. G. EAGAR & Co.,  
Toledo, Ohio,  
Distributing Agents for Ohio, Michigan and Indiana.

**FRAZER & JONES COMPANY**

353 WEST FAYETTE STREET

SYRACUSE, NEW YORK

# INFORMATION FOR BUYERS

## SPALDING TO BUILD IMMENSE PLANT.

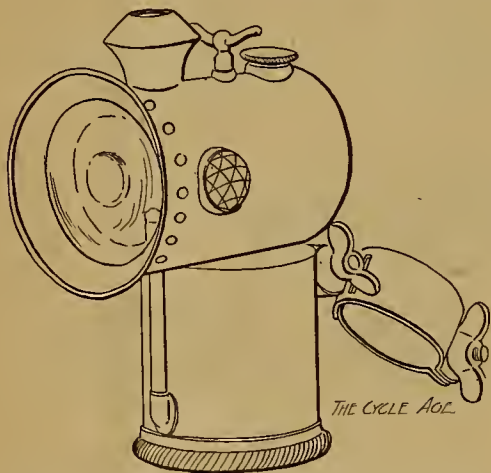
It is reported that A. G. Spalding & Bros. will begin the erection of an extensive manufacturing plant in West Harvey, just south of Chicago on the Calumet river, on a tract of 700 acres owned or controlled by the firm. This plant will cost about \$250,000 and will be occupied by the various bicycle, sporting goods and other manufacturing industries at present operated or controlled by the Spaldings in various towns of New York, New Jersey and Massachusetts. The saddle concern of H. A. Christy & Co. of Jackson, Mich., has already begun to remove to Harvey close to the site of the factories to be built, having shipped several carloads of material to Harvey and commenced moving it into temporary quarters.

The land has been leased from the American Trust & Savings bank, trustees, and \$600,000 worth of 6 percent bonds issued and partly placed. Rough plans of the buildings are now in the hands of A. G. Spalding, who is holding them back for some reason known only to himself but believed to be connected with the proposed bicycle consolidation.

Mr. Spalding is quoted as saying that when his plans are completed it will mean the doubling of Harvey's present working force, which is something over 2,000 persons. The general impression among manufacturing circles in Harvey is that work on excavations for the new factories will commence within thirty days.

## THE SOLITAIRE GAS LAMP.

Sanford & Pollow, 235 Lake street, Chicago, are more than satisfied with the reception that is being accorded their little 8-ounce Solitaire gas lamp by the trade. The lamp, an exterior view of which is shown herewith, though it is much smaller than the



average acetylene lamp is said to give a strong white light for five hours and to answer all the requirements in this form of cycle lantern. The construction is exceedingly simple, little chance being allowed for the working parts to get out of order. The water reservoir is back of the reflector and the connection between it and the carbide cup is through a needle drip valve. The water, however, does not drop directly upon the carbide but first passes through a blotting paper held near the top of the carbide chamber and separated from the lower side of the water reservoir by a wire screen. Thus the water drips upon the upper surface of the blotter and spreads over the greater portion of its area before soaking through and dropping upon the carbide below. This feature aids in the uniform distribution of the water. The flame and gas pressure are regulated by the water valve. The gas passes to the combustion chamber through an outlet commencing at the bottom of the cup below the carbide holder and so does not have to pass through wet carbide but reaches the burner dry. Any form of carbide may be used. Each lamp is furnished with a combination bracket which may be fastened either to steering head or fork side.

## SUPPLIES ANY KIND OF CYCLE PART.

The Cycle Repairs Co., 56 Fifth avenue, Chicago, has been organized for the purpose of supplying to repairers, dealers and others, parts of all descriptions to match broken and worn pieces from bicycles no longer manufactured or for which fittings cannot be readily purchased. The company is composed of resourceful cycle experts who will be able to duplicate any part or parts which may be needed by patrons and who will never reject an order no matter how diffi-

cult it may be to procure or to manufacture fittings for which a call is made. The firm will also keep in stock a full line of frames, wheels, forks, handle bars, tires, chains, hubs, rims, standard cups and cones and other materials and fittings used by dealers, repair men and small manufacturers. Prices on all goods and work will be reasonable, and satisfactory filling of orders is guaranteed. Nickeling, enameling, vulcanizing and general repair work are also included in the range of the company's business.

A specialty is being made of the Columbia single tube tire which is fully guaranteed and yet sold at a price that places it in competition as far as cost is concerned with many of the cheap unguaranteed tires now on the market.

## AUTOMATIC LIGHTER FOR CYCLISTS.

The Rathbun Mfg. Co., 11 Blue Island avenue, Chicago, is general United States selling agent for the automatic lighter shown



THE CYCLE AGE

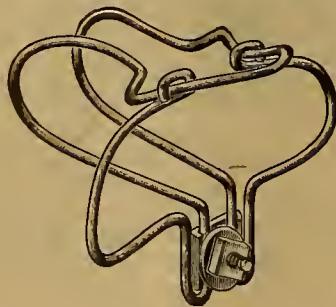
in the accompanying illustration and which is intended for use by cyclists, smokers and others who often desire to strike a light in the wind. The holder, which is nicely nickelled and so thin that it can be conveniently carried in the pocket, carries a series of fuses. By pushing the ejecting fork quickly forward with the thumb a section of the fuse is pulled from the case and is ignited as it moves. The flame thus caused will not blow out in the wind. As soon as the fuse section has been burned out the ejector may be drawn back and the lighter is ready for use another time. Each holder is accompanied by sufficient fuses for 200 lights and additional charges may be purchased at very reasonable rates.

## HANSON NAMEPLATE CATALOGUE.

C. H. Hanson, 40 Clark street, Chicago, who is well known throughout the trade as one of the oldest nameplate manufacturers in the country, has recently issued a catalogue showing full size nameplate designs of patterns which are carried in stock and which can be filled out with name, etc., to suit the purchaser on short notice and in lots of all sizes. Many choices of finishes and styles of lettering are offered. The exterior of the catalogue presents an original idea in the form of a regular metal nameplate bearing the maker's name and address secured to the front cover. The plate is of tasty design and is finished in Mr. Hanson's new royal blue finish.

## ASHWORTH ADJUSTABLE TOE CLIP.

L. T. Snow, manufacturer of hardware specialties, in New Haven, Conn., is offering to the trade the Ashworth patent toe clip, new this season. It is a wire clip of



the basket variety and formed of a single piece of wire, as shown herewith. It is tasty in appearance and so constructed that the sides are elastic, which it is claimed makes it fit comfortably and allows the foot to be easily withdrawn in case of a fall. The adjustment is made when the clip is on the pedal, without loosening a screw or clamp, by merely spreading or contracting the toe of the clip. A free sample is offered to any reputable agent or dealer who applies for one.

## NEW BESLEY MATERIALS CATALOGUE.

The new catalogue of Chas. H. Besley & Co., 10 North Canal street, Chicago, will be ready for delivery May 1 and will thereafter

be sent postpaid to any address upon application. The company calls especial attention to the revised list on all metals catalogued and to the fact that all lists have been corrected to agree with the present market conditions, the quotations being compiled exclusively from manufacturers' lists. Among recent additions to the Besley line of materials and tools are the Badger die stock set, Besley adjustable tap wrench, new Brown & Sharpe and Starret machinists' tools, improved laboratory specialties, Gardner grinders, Tanite grinding machines and emery wheels, Pecora machinery points and various other articles and lines of recent introduction to the machinery market.

## NAME CHANGED TO LIBERTY BELL CO.

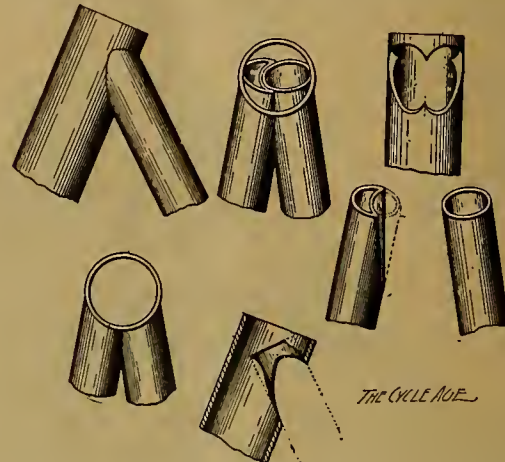
The Bristol Bell Co., of Bristol, Conn., well known manufacturers of Peerless, Corbin and Standard bicycle bells, has changed its name to The Liberty Bell Co., without, however, having made any change of management or ownership.

This company is bringing out a new line of high grade bells to be known as the Liberty bell, while at the same time continuing to manufacture the other lines of bells already manufactured by the Bristol Bell Co.

The new name is announced at this time in order that the trade may become familiar with it before another season opens.

## STEARNS' TRIM SEAT CLUSTER.

H. L. Trebert, of Syracuse, has patented for E. C. Stearns & Co. the system of making tube joints—especially upper rear stay connections—as shown in the accompanying illustration. The construction of the joint is described as follows: The upper end of one of the fork sides or stays is compressed inwardly or cut out, so as to form a seat



THE CYCLE AGE

fitted to receive the upper end of the other fork side. Into the rear face of the upper end of the upright is then drilled an aperture of proper size and at a proper angle snugly to receive these upper ends. They are then inserted together, brazed in position, and the upright is milled out on its interior, cutting away portions of the fork sides to receive the seat-post. It will be seen that in cutting the aperture to receive together the upper ends of the fork sides the upright must be drilled at two different angles corresponding each to the angle of outward and downward inclination of one of the fork sides. The result of this is a peculiar double hole, in cutting which a considerable surface of contact is formed in the interior of the upright and shoulders for receiving the ends of the fork sides. The joint so formed is strong, simple, and easy to construct. It is a flush joint without any unsightly projections—such as thimbles, ears, lugs, and bolts—but at the same time easy to braze, there being none of the objectionable interior brazing; but this is all practically on the exterior, so that there is little possibility of careless work and imperfect brazing.

## JACKSON'S COASTER AND BRAKE

The Jackson automatic coaster and brake, partly shown in the accompanying illustration, is a combination of a roller-clutch-mounted rear sprocket with a band brake, which presents a very neat and original method for enabling the rider to stop his wheel in emergencies, slow up without effort and coast with the feet on the pedals when desired. The whole device is designed to be attached to any ordinary bicycle hub by screwing it onto the hub-end as sprocket wheels are usually screwed on, space being provided for a locking-ring within the

# Kozy Baby Seat!

LIGHT, SAFE, COMFORTABLE.

Do you carry them in stock? You can not afford to be without it. Ask your Jobber or obtain them direct. Sell quickly at \$2.00.

Send for Catalogue of

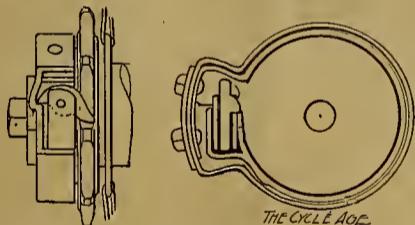
## FITTINGS AND SUNDRIES

LARGEST STOCK BETWEEN NEW YORK AND CHICAGO.  
Orders filled same day as received.  
Prices right, too!

GEO. HILSENDEGEN, Detroit, Mich.



brake flange. The latter is surrounded with the band brake box, the square projection of which rests with a small ledge on the upper edge of the lower rear stay if this tube is D-shaped. A special attachment clip is provided for securing the box to round tubing. In either case the attachment permits readily of chain adjustment. The square projection of the band-brake box fits in between the upper and lower chain reaches and contains a trigger arrangement attached to the free end of the band. With forward pedaling the sprocket wheel passes freely past the trigger, but when the sprocket is held back the trigger immediately turns on its pivot, being pushed out by a weak spring, and the sprocket tooth engaging the trigger turns its opposite end against the inner wall of the ledge on the box as a fulcrum. If no back pressure is exerted by the rider this simply results in free action of the roller clutch, permitting the rear wheel to revolve while the chain and sprocket are at rest, but if the rider puts back pressure on the pedal the trigger is lifted around its fulcrum and the band brake contracted around the drum with a retarding force exactly in proportion to the exertion. The action of the brake may thus be made gradual or almost positive, as desired. In the roller clutch a new feature has been introduced to secure positive un-falling action. The inner edges of the sprocket hub fit snugly over the clutch, forming a groove between them in which the clutch balls are introduced through holes drilled radially through the clutch



hub. The sprocket must therefore be mounted on the clutch before the balls are introduced, but this is done in the factory and does not concern the rider. After the balls have been placed, a thin spring wire is placed in between the balls and the race and is imbedded in a groove in the bottom of the latter, entirely encircling the clutch. This wire not only serves the purpose of preventing the balls from dropping back in the holes but also acts as a spring by which the balls are always kept in rolling contact with the sprocket hub. The whole device presents an attractive proposition. It may be suggested, however, that the relations between the sprocket ring and the screw threading of the clutch hub are not identical with the corresponding relations noticed in several sprocket wheels in the Cycle Age office. If therefore the device were mounted on a machine to take the place of such sprocket wheels, a slight misalignment of the rear sprocket in relation to the front sprocket would be the result. In most models the sprocket line is fixed, and it may therefore be necessary in some instances to provide a slight modification of the design of this device to make the chain run sweetly. When made specially for each style of popular hubs the device should command a very ready sale. The makers are the Jackson Coaster & Brake Company of Jackson, Mich.

### GENEVA CYCLE CO. INDUSTRIOUS.

More than 8,000 bicycles have been shipped since January 1 by the Geneva Cycle Co. of

Geneva, O., whose plant has been running every day of the past winter with increased facilities. More than \$80,000 was paid out in wages by this company last year.

### THE "FAMOUS" CHAIN GUARD.

The Excelsior Supply Co., 88-90 Lake street, Chicago, has recently placed in the market a steel chain guard of attractive design and moderate price. The fitting is made of hard rolled steel, heavily nicked and provided with light-weight attaching braces of sheet metal. A strip of felt is cemented to the



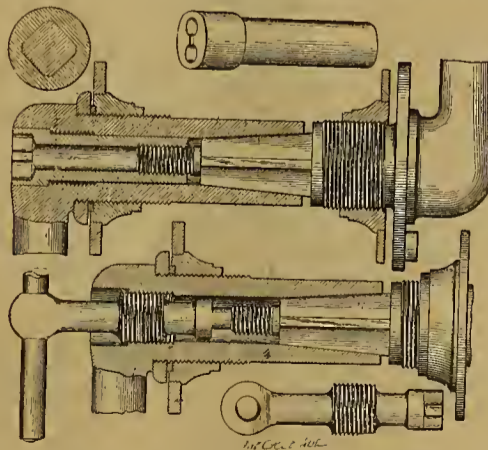
part that covers the top run of the chain, preventing any rattle from contact of the chain with the guard.

### AN UNFOUNDED REPORT.

Owing to an incorrect newspaper report, a story has gained wide circulation to the effect that the Pope Mfg. Co. discharged a number of its employes about Easter time. The statement is entirely unfounded. As a matter of fact, the Pope company has been constantly adding to its force for several months past, and is at the present time employing more men than ever before in its history. Every department of the company's immense factories is working overtime, and the full capacity of the plant is being taxed to meet the demand for the new Columbias, Hartfords and Vedettes. More than 3,800 names are now on the weekly pay roll.

### FEATHERSTONE CRANK AXLES.

The object of the construction illustrated, for which patent has been issued to A. Jerome and assigned to A. Featherstone & Co., Chicago, is to provide a crank hanger mechanism which may be readily separated



and substantially put together without any chance of mistakes. The construction is incorporated in the output of the Featherstone company in its latest models and is therefore so well known to the trade that the illustrations afford all the description necessary. The characteristic feature is that one simple tool, as illustrated, suffices for performing every operation in assembling and taking down of the mechanism, making

all hammering or wrenching to disengage parts wholly unnecessary.

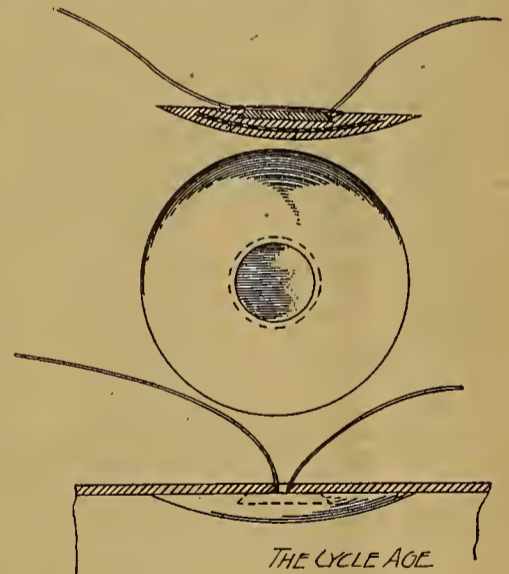
### STICK TO GOOD THINGS.

When a progressive manufacturer clings to an expensive patented device through the numberless changes of many successive seasons, its value must be unquestioned. The Wolff-American people of New York city have thus retained their eccentric chain adjustment and their system of self-oiling bearings. A system would not be a system, but only a scheme, if it did not "work."

The Salamander, or ruby, finish of Wolff-American bicycles must be expensive, but it is beautiful. The frame goes through successive processes of nickel plating, polishing and transparent enameling. It comes out as translucent as red wine.

### NOVEL REPAIR PATCH.

J. E. Bancroft of Toledo has devised the novel repair patch herewith illustrated and assigned the patent to the National Cement



& Rubber Co., of Toledo. The patch is reinforced by fabric imbedded in the vulcanized rubber disk and the latter has a pocket in its face designed to hold raw rubber stock. The pocket is largest at the bottom so as to hold the raw rubber securely, and a string passes through the rubber.

### CHANGE OF PACIFIC COAST AGENCY.

The Elastic Tip Co., of Boston, which has been represented for years on the Pacific coast by the Robert Malcom Co., of San Francisco, has transferred its representation in that territory to John E. Klein & Co., 114 Eddy street, San Francisco. Dealers buying from the last named house will be accorded the same attention heretofore extended the trade by the Robert Malcom Co. In addition to a full line of bicycle materials, fittings and sundries, the new agents will carry a choicely selected stock of guns, fishing tackle and general sporting goods and also built-up bicycles.

The Miami Cycle & Mfg. Co. of Middleton, O., has decided to build a factory in Ontario, Can., for the manufacture of the Racycle.

**MISCELLANEOUS.**

Advertisements under this head 5 cents per word first insertion; 3 cents per word each insertion thereafter. Cash with order. Express orders, postoffice orders or stamps received.

**WANTED.**

**WANTED**—Wide-awake, progressive manager, who knows bicycle manufacturing business, and can financially interest himself in bicycle plant, established and doing business, located in Chicago. Will reorganize if desired. State name, address, reference and experience for conference. Address K., care Cycle Age, Chicago.

**TWO EXPERIENCED MEN** will install a nickel plating plant with some reliable firm. No objections to out of town. C. B., care Cycle Age.

**WANTED**—Prices on built-up frames, frame parts and fittings of all kinds to the trade. G. A. YOUNG CYCLE Co., 811 G st., N. W., Washington, D. C. 1

**RESPONSIBLE FIRM** in Chicago, with wagon and three salesmen covering entire city, wants first-class novelties and specialties to handle to bicycle trade. A. J., care Cycle Age.

**WANTED**—Repairman, first-class machinist; state wages wanted. CROCKER CYCLE Co., Falmouth, Mass.

**BICYCLE AGENCY WANTED**—Prosperous repairman in a Connecticut City would like bicycle agency on consignment. Best references. Address REPAIRMAN, care Cycle Age, 150 Nassau St., New York.

**WANTED**—Traveling men in the bicycle and hardware trade, to sell a fine sundry as a side line on good commission. Address W., care Cycle Age.

**INDIA, BURMA, AND THE EAST**—Henderson & Co., Rangoon, English Watchmakers, Opticians, Cycle Engineers, Agents and Repairers, are prepared to correspond with responsible manufacturers and agents in novelties pertaining to any of the branches of trade above enumerated. Samples (where possible) and prices to be submitted. Splendid area for trade. Highest London and American references. Address HENDERSON & Co., 63 Phayre st., Rangoon, Burma, India. 10

**SIDE LINE**—Salesmen in the bicycle and hardware trades wanted to sell standard bicycle sundry on commission. Quick seller and liberal commission. Samples carried in vest pocket. B. H. DIVINE, Utica, New York.

**FOR SALE.**

**FOR SALE**—Steam engine, 1½ horse power, built for an exceptionally fine one, warranted all right. Price \$40 f. o. b. CROCKER CYCLE Co., Falmouth, Mass.

**FOR SALE**—Bicycle, gun and locksmith and general repair shop, with power. Sporting goods store connected. F. H. MARK, Bellows Falls, Vt.

**BEST TOOL STEEL**—Short lengths, ¾ in. to 2 in., 10c lb. W. BACCHUS, Danbury, Conn.

**OILERS**

"PERFECT" 25c.



"LEADER" 10c.



"STAR" 10c.



"GEM" 7c.



Our name on an oiler proves its quality. CUSHMAN & DENISON, 159 Ninth Ave., NEW YORK.

**THE RATHBUN Automatic Lighter**

will not blow out  
Every cyclist should have one. Especially adapted for cycle lamps. PRICE, 25 CTS.

For sale by all dealers. Trial order lots of dozen, \$1.80. Cash with order. THE RATHBUN MFG. CO., - CHICAGO, ILL.

**DYNAMO Electro-Plating MACHINES**

Size	Gallons	Nickle	Copper	Silver	Price
No. 1	50	35	3½ oz.		\$35.00
No. 2	100	70	7 oz.		50 00
No. 3	200	140	14 oz.		65 00
No. 4	300	210	21 oz.		80 00

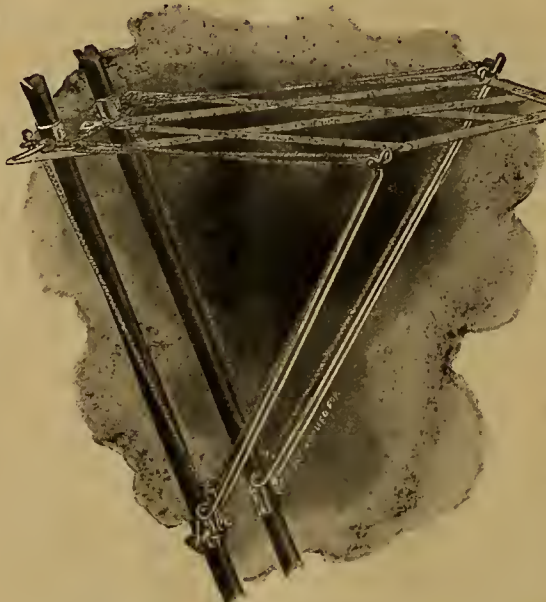
All sizes to 5000 gallons. Write for prices. Dynamos for lighting and power motors for all circuits. Send for catalogue. ELECTRIC MACHINERY COMPANY, 137 S. Clinton St., CHICAGO

**ÆTNA Combination Bicycle Parcel Carrier AND Mud Guard**

EASILY attached to any bicycle. This device is so arranged as to be quickly adjusted to large or small packages weighing from ONE TO FIFTY POUNDS, HOLDING SAME SECURELY. . . . .



This Parcel Carrier is constructed of cold rolled steel, nickel plated, and weighs less than one pound.



EASILY ATTACHED . . . SELF-ADJUSTING

When not in use as a Carrier, it serves as a perfect Mud-Guard.

PRICE \$10.80 PER DOZEN.

Special Rates to Jobbers. Write at once.



**ÆTNA MFG. CO.**

225 DEARBORN ST. - CHICAGO

1899 MODEL

**WATERS WHITE SCORCHER**

Fitted with Our One Piece Hanger made under Fauber licenses. Retail Price, \$22.00  
Send for net price and catalogue.

F. S. WATERS CO., 155 W. Washington St., Chicago

- Rims
- Spokes
- Hubs
- Hangers
- Handle Bars
- Grips
- Cyclometers
- Enamels
- Cements
- Saddles
- Pedals
- Chains
- Tires
- Rear Stays
- Rear Forks
- Frame Sets
- Etc., Etc.

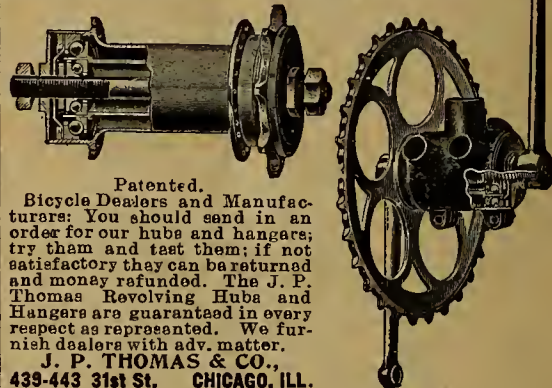
To Repair }  
To Make } With  
To Equip }

For Material and Sundries, write us. Special prices. . . . .

**Chicago Tube Co.**

217 Washington St. CHICAGO

J. P. THOMAS Double Ball Bearings with an inner Revolving Sleeve Increase the Speed 40 per cent  
Revolving Hubs and Hangers



Patented. Bicycle Dealers and Manufacturers: You should send in an order for our hubs and hangers; try them and test them; if not satisfactory they can be returned and money refunded. The J. P. Thomas Revolving Hubs and Hangers are guaranteed in every respect as represented. We furnish dealers with adv. matter.

J. P. THOMAS & CO., 439-443 31st St. CHICAGO, ILL.

**A NEW PROPOSITION: WHEELS BUILT \$12 TO ORDER.**

upwards from high-grade material and fittings of your own selection. Send for Illustrated catalogue of the famous TEMPLE'S CROWN FRAMES and all standard makes of bicycle parts and fittings. "make your selection," we build the wheel accordingly. Lowest Prices—Guaranteed. Write today. RALPH TEMPLE CO., 81 Lake St., Chicago.



**ORIENTS LEAD THE LEADERS**

Walham Mfg. Co., Walham, Mass.

**High Grade BICYCLES HAMILTON WELLINGTON GREENWOOD**

Write for new illustrated catalogue and special prices to dealers. WELLINGTON WHEEL WORKS, 35 Randolph Street, CHICAGO.



**ADLAKE BICYCLES**

THE WHEELS OF HIGH DEGREE. THE ADAMS & WESTLAKE CO. MAKERS. CHICAGO.

IF DEFECTIVE PARTS ARE FOUND IN THE MANSON BICYCLE  
W. WILKINSON, 401 LA SALLE ST. EXPRESS CHARGES  
MANSON CYCLE CO., 135 S. W. JACKSON ST. CHICAGO.



# TRIBUNE BICYCLES

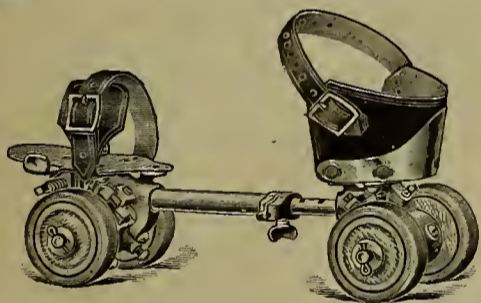
Preparations for 1899.



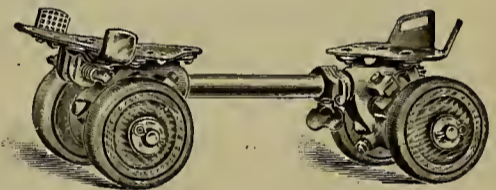
The accompanying illustration shows the large addition to our plant now in process of construction. The building is 100 feet by 50 feet, three stories high, constructed of brick, stone and iron, the floors only being wood. It will be devoted exclusively to enameling and decorating our Tribune Bicycles, and will be one of the largest departments of its kind in the country. This is, perhaps, in itself the best evidence that could be given of the popularity of the Tribune wheels.

THE BLACK MFG. CO., - - - ERIE, PA.

Mention The Cycle Age



WITH A  
**PAIR LIKE THIS**  
TO DRAW TO  
YOU CAN EASILY FILL



NOT ONLY YOUR RINKS WITH SKATERS OF ALL AGES

BUT ALSO YOUR POCKET WITH COIN OF ALL KINDS.

ADJUSTABLE, EXTENDIBLE, FLEXIBLE.—SWIFT, SAFE, STRONG.

## Our New Ball-Bearing Cushioned Skate

CATCHES THEM ALL—THE LEARNER—THE OLD TIMER—THE EXPERT.

READ WHAT ALBERT C. WALTZ, THE FAMOUS EXHIBITION SKATER, SAYS:

TOLEDO, OHIO, Oct. 18th, 1898.

"THE CYCLESKATE CO., CHICAGO:  
GENTLEMEN: Your letter of Oct. 17th and also the skates received. I find them first-class in every respect. \* \* \* (I) gave the first exhibition on them this p. m. and find them just the skate I have been wishing for in my performances. \* \* \* With best wishes to you, I am Yours truly, ALBERT C. WALTZ."

WRITE TO **THE CYCLESKATE COMPANY,**

64 N. JEFFERSON ST., CHICAGO, U. S. A.

Mention The Cycle Age

# Some Difference



One of the largest retail dealers in the United States writes in to say that "the difference between Patee Crest bicycles and those offered for the same money by other makers is about as striking as the difference between a Broadway tailor-made dress and a Jersey home-made gown" Only those of our readers who have left New York on a bright summer's morning to tour through Jersey can appreciate how well this simile applies.

Patee Crests are right up to the top notch in style and finish, while the quality is guaranteed to be equal to any bicycle in the world.

## Note What Some of our Agents Say:

PATEE BICYCLE CO., Peoria, Ill.:

*Gentlemen*—Your wheel this season has given the best of satisfaction, both to ourselves and the riders, and we could have easily doubled our sales if we could have had the wheels. We have been in the wheel business for the past five years, and have handled the Waverly, Sterling, Imperial, World, Hibbard and Ajax lines, so you may see that our experience is not limited to one wheel; and, with the exception of three or four tires, your wheels have given us no trouble whatever. Your wheels have been a splendid advertisement last season in this section, and we should judge that it is the same everywhere you have sent them. It is known around here as the best \$35.00 wheel on the market, and equal to any high grade. The Patee Crest has stood the test of a year, and another season it would not require the work of advertising to sell double the number of wheels that you sold last season. If you sell your wheel at \$40.00 retail it is practically placing another wheel on the market, and your labor of putting the \$35.00 wheel on the market last season would be lost. No doubt your profit at \$35.00 is small, but it seems to us that we would be contented with the smaller profit rather than to advance the price. We as retailers would rather sell your wheel next season at \$45.00 with the same profit as last season, than to sell it next season at \$40.00 at even \$5.00 more profit. We are certain that we could sell more wheels and at the end of the year would be far ahead.

However, our opinion is only one of many of your agents, and, whatever may be your decision, we shall do the best we can for Patee Crest. We kindly ask that you place us at the head of the list, and forward us the first complete sample you get out. We want an early start next season and reap some of the benefit of the good work we have done in the past.

In closing we will kindly say we are with you at all events, but with one model at \$35.00, we would be with you "with both feet." Wishing you all the success possible next season, we remain,

Yours truly, NORTHWEST GUN AND BICYCLE CO.,  
By M. C. Riley, Sec'y.

SALT LAKE CITY, UTAH, Sept. 12, 1898.

PATEE BICYCLE CO., Peoria, Ill.:

*Gentlemen*—Please don't forget that I want a '99 sample as soon as it is ready. While our sales the past season did not quite reach the 300 mark, as I thought they would when I got my first machine, it was only because you were not able to supply me. I will guarantee to sell 500 next season, as I have never handled anything that gave such universal satisfaction as the Patee Crest does.

Every rider is more than pleased with his mount, and I don't know of a single one who would trade for any other make at any price. Just keep up to your present standard and you can't make enough of them.

I am glad you are going to build 12,000 next season, but put me down now for 500 and see that I get them. Anxiously awaiting the '99 model, I am,

Yours truly, A. H. MEREDITH.

SPRINGFIELD, ILL., Sept. 9, 1898.

PATEE BICYCLE CO., Peoria, Ill.:

*Gentlemen*—I have been handling your Patee Crest bicycle all this season and find that it gives excellent satisfaction. The sales have exceeded anything I have ever handled for a new wheel. It seems to hold its own as good if not better than any of the older makes of wheels. I have sold over one hundred of them, and they are all you claim for them

as far as I can see. I can recommend it to any dealer who wants a good wheel for the price. I shall continue to handle it as long as it is made of as good material as is now used in its construction.

Yours respectfully, B. H. FERGOUSON.

WALLINGFORD, CONN., Sept. 16, 1898.

PATEE BICYCLE CO.

*Gentlemen*—Now that the season of '98 is drawing to a close, we wish to thank you for your courteous treatment of us and to say a few words of praise for the Patee Crest.

We have just completed our fifth year in the bicycle business, and in all our experience we have handled no line that has given us the satisfaction that the Patee Crest has, our only "kick" is that we did not get a sample sooner. You have, without doubt, the best wheel on the market for the money, and in our estimation, is better than many so called \$75.00 high grade wheels. The Patee Crest has not cost us one penny for repairs, and you know you have had no parts to replace. We can give you numerous testimonials from Patee Crest riders, who will attest to the easy-running qualities, durability, etc., of your wheels should you desire them.

Thanking you again for your kind treatment of us during the past, and hoping our pleasant relations will continue in '99, we beg to remain,

Yours truly, COTTRILL & SMITH.

CHAMPAIGN, ILL., Sept. 20, 1898.

PATEE BICYCLE MFG. CO., Peoria, Ill.:

*Dear Sirs*—We have received yours of the 8th, and in reply will state that we have had very good satisfaction with the Patee Crest, and think it is equal, if not superior to the majority of the \$75.00 machines. It is enough to say that it is about the only machine in the market that we have been able to sell at the list price, also to sell at the same price in September that they sold for in May which is saying considerable for any wheel. We anticipate an immense trade on it next season.

Yours very respectfully, NICOLET & Co.

NEW YORK CITY, N. Y., Sept. 10, 1898.

PATEE BICYCLE CO., Peoria, Ill.:

*Gentlemen*—We wish to express to you our entire satisfaction with the '98 Patee Crest, and ask that you give us a larger territory in '99. Your bicycle is the best we have ever handled, regardless of list. It looks well, runs well and lasts well. The only trouble we have had was in not getting them fast enough in the Spring when we could have sold two thousand in place of two hundred. Very truly yours,

NEW YORK SPORTING GOODS CO.,  
Per P. R. Robinson, President.

CHICAGO, ILL., Sept. 10, 1898.

PATEE BICYCLE CO., Peoria, Ill.:

*Gentlemen*—We take pleasure in stating that, as Chicago agents for the Patee Crest, we have found the machine to be one of the best sellers we have ever handled. We could not get them fast enough. This machine is in many ways the superior of any \$30.00 wheel on the market, and we have been unable to find anything else at \$35.00 that approached it in quality. Yours very respectfully,  
Dictated by Clyde P. Warner. CLYDE P. WARNER MFG. CO.

While others are still asleep we are shipping hundreds of 1899 Models.

If you want to get in on a "good thing," write early for catalogues and prices. We don't want many more agents and when our list is full you can't get in for love nor money.

Patee Bicycle Co., 111-113 Main St., Peoria, Ill.



# “Not how cheap, but how good”



Cheapness has never been characteristic of Cleveland Bicycles for we have always found plenty of buyers with discernment enough to know when they get their money's worth.

Our goods have never been sacrificed by Department Stores, hence we have no lost ground to regain---our record is clean.

The Cleveland Bicycle is today standard for excellence; more new and distinctive features than any other in the market.

LIST PRICES:

**\$50 and \$75**

LIBERAL TRADE PRICES TO  
RESPONSIBLE DEALERS ❦❦❦

## H. A. Lozier & Co.

CLEVELAND, OHIO.

Branches: New York, Philadelphia, Buffalo, Baltimore, Chicago, Detroit, Toronto, San Francisco,  
London, Paris, Hamburg.

Factories: Toledo, Ohio; Westfield, Mass; Toronto Junction, Ont.; Thompsonville, Conn.

Mention The Cycle Age

1899

# Advance Announcement

1899

20th CENTURY MFG. CO., 17 Warren St., NEW YORK.

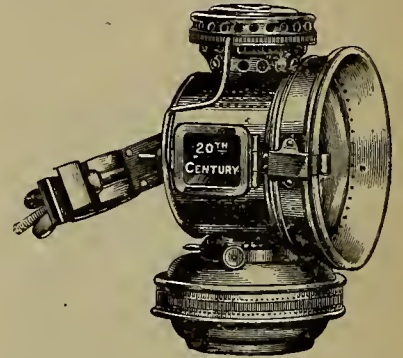
## "20th CENTURY" KEROSENE HEADLIGHT

OUTSHINES ALL OTHER OIL BICYCLE LAMPS IN EVERY PART OF THE WORLD.

1899 MODEL HAS BEEN PERFECTED.

1899 MODEL OVERCOMES ALL DIFFICULTIES.

The 1899 model, smaller, lighter in weight, handsomer, more compact, but with same great light-giving capacity. Does not smoke, jar or blow out. The wick self-locks without attention, Combination attachment for head and fork of bicycles and carriage dashboards. The "20th CENTURY" Kerosene Headlight gives no trouble and the greatest satisfaction, and will always be popular. The "1899 MODEL" will be ready for delivery in December, this year. Electrotypes for catalogues now ready, please state size wanted.



## The "20th Century" Cyclometer

Small and handsome and guaranteed absolutely accurate and reliable. Handsomely packed. Ready for immediate delivery.

PRICES ON APPLICATION.

ELECTROTYPES FOR CATALOGUE NOW READY.

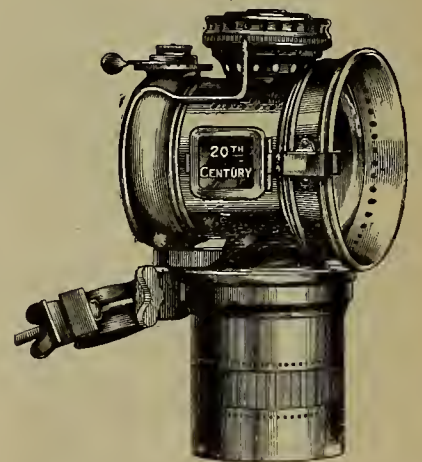
## "20th Century" Acetylene Gas Headlight

Similar in design, combining many of the original and now famous characteristic of the "20th CENTURY" Kerosene Headlight. Aluminum Parabola Reflector. Hinged Front Door. Red and Green side Lights. Ball Handle to Make Hand Lantern, Etc.

Small, Light, Compact and Graceful as Consistent with Strength, Durability and Lighting Capacity. Made of Brass and Steel and Heavily Nicked. Water Flow Accurately Ganged. Lights Instantly. Steady Flame which jarring does not affect. Burns Full Flame Eight Hours. Easily Kept Clean and Does Not Clog. **BURNS ANY GRANULATED CARBIDE.**

The 20th CENTURY MFG. CO., with the most scientific mechanical experts, have been experimenting for nearly two years on the Acetylene Gas Lamp, and it is with pleasure that they now are able to offer a safe, simple, reliable and most satisfactory gas lamp to the bicycle-riding public. Will be able to make deliveries early in December of this year. Electrotypes for trade catalogues now ready. Please state size wanted.

**GRANULATED CARBIDE**, in 1 and 2 pound cans, we will sell to the trade at about cost, although, as previously stated, our lamp is adapted to use any packing of bulk carbide.



PATENT PENDING.

# THE "20th CENTURY"

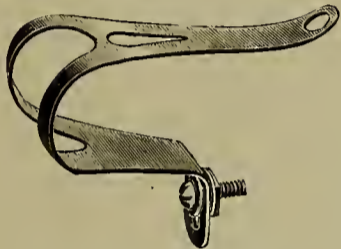
THE GREATEST LIGHT ON WHEELS

# 1899 PRICES READY

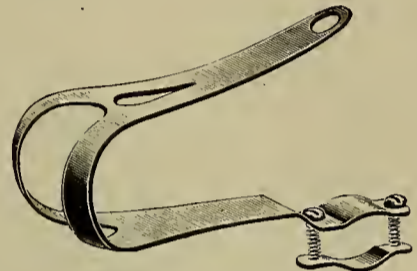


Look at this Trade Mark

It means Perfection  
of Finish at Lowest  
Prices.....



"NONPAREIL" TOE CLIP.



"UNITY" TOE CLIP.

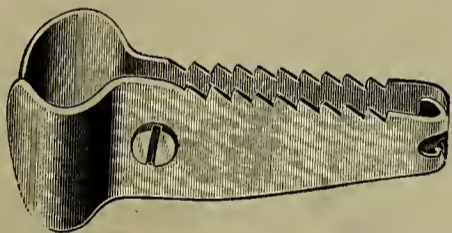
The Only Round Edge  
Finish.



"RACER" TOE CLIP.

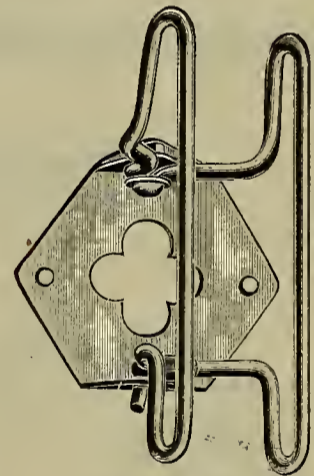
Smoothest Nickel Plated and  
Hardened Steel.

## Coe Manufacturing Company



"HERCULES" COASTER.

50 Warren St.  
NEW YORK  
CITY.



"BOULEVARD" STAND.



SEND FOR 1899 ILLUSTRATED PRICE LIST.

Mention The Cycle Age

A. D. Meiselbach,  
Manufacturer for Jobbers Only,  
No. Milwaukee, Wis.,  
U. S. A.  
'99 Models Now Ready.

Mention The Cycle Age

**Say, Mr. Jobber!**

**...MORE** **Solars** **Have Been Sold....**

**Than All Other Makes Of Gas Lamps Combined.**

SOLARS ARE NOT AN EXPERIMENT.

**A Success Because They Always SATISFY!**

We have the largest factory in the world devoted to the exclusive manufacture of  
Acetylene Lamps. Write for electros and prices of

**Our '99 Lamp Wonder.**

BADGER BRASS MFG. CO.,

KENOSHA, WISCONSIN.

Mention The Cycle Age

# Write Us, Anyway.

Perhaps we are represented  
in your town, but not as satis-  
factorily as we wish. Unless  
your credit is first-class and  
your reputation capable of  
withstanding scrutiny, save  
the postage stamp. But if  
you're the right kind of a  
dealer it might pay you to  
take the trouble of dropping  
us a line. ❀❀❀ We make the  
Wol-American, you know. ❀



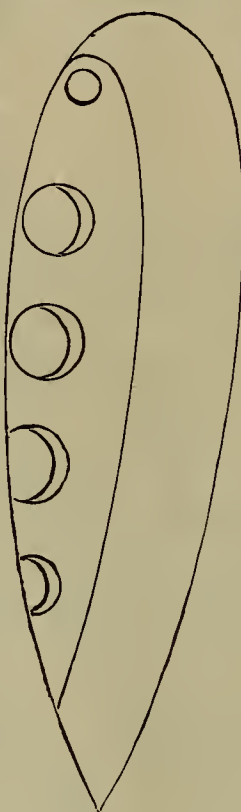
**R. H. WOLFF & CO., Ltd.,**  
**NEW YORK CITY.**

# Garford, Hunt AND Brown Saddles

Have so long held the Premier-  
now universally regarded as The  
we perform only a perfunctory  
when we make our Annual An-  
appearance of our line of  
somest, best-made," etc., etc.,

NOBODY ✨  
DISPUTES IT

ship that they are  
STANDARD, and  
duty to the trade  
nouncement of the  
"best, hand-  
Samples ✨ ✨ ✨



**N**INETY-NINE out of every hundred bicycle riders who find either of the above names on a saddle know **AT ONCE** that that Saddle is right in every particular. It is prima facie evidence of the best there is in saddle construction and designing. ✨ ✨ Why? Because we have never put a poor or cheaply-put-together saddle on the market. We have, and intend to keep, the confidence of our patrons.

HAVE YOU SEEN THE  
NEW SAMPLES?

THE GARFORD MFG. CO.,  
ELYRIA, OHIO.

THE HUNT MFG. CO.,  
WESTBORO, MASS.

THE BROWN SADDLE CO.,  
ELYRIA, OHIO.

UUU

R. B. McMULLEN & CO.,  
Sales Agents, Chicago and New York.

HIBBARD, SPENCER, BARTLETT  
& CO., Chicago Distributors.



# "FAVORITE"

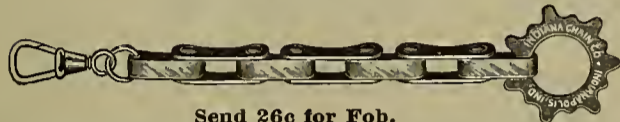
BICYCLES 20, 24, 26 and 28 Inch Wheels..... ARE NOW READY.

Jobbing trade a specialty. ✱ ✱ Prices and quality are right. ✱ ✱ Excelsior Needle Co.'s Spokes at the right prices.

THE TOLEDO METAL WHEEL CO., Toledo, O.

## CHAINS--1899

QUALITY, QUANTITY AND PRICE



Send 26c for Fob.

Mention The Cycle Age

INDIANA CHAIN CO.

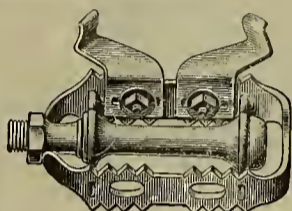
INDIANAPOLIS, IND.

## "PERFECT" OILER

25c



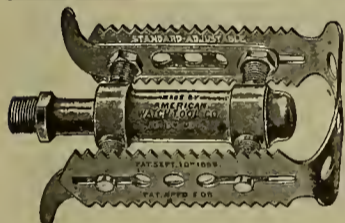
Used by over 40 makers of high-grade bicycles—Union, Monarch, Tribune, Trinity, etc. The only oiler that regulates supply of oil. CAN NOT LEAK. CUSHMAN & DENISON, Manufacturers, 159 Ninth Ave., New York. Mention The Cycle Age



## THE "BEST" CLIPS

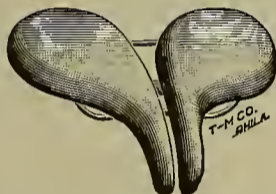
BEST TO ENGAGE. BEST TO HOLD. BEST TO RELEASE. BEST TO STAY WHERE SET.

NO DANGEROUS HOOK over toe. in case of accident. Fits any shoe. Retail price, 25c, postage prepaid. Wholesale prices on application. Electros furnished to jobbers. BERNSON MFG. CO., 38 PARK ROW, NEW YORK CITY.



## PEDALS

American Watch Tool Co. Waltham, Mass., U.S.A. Mention The Cycle Age



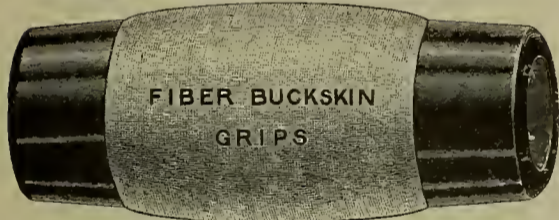
## The Bernasco SADDLE

is hygienic and will not chafe, bruise, irritate or tire the rider. It will suit every figure, as it is adjustable. It will be sold in your town by somebody. If you are interested write for descriptive catalogue. Riders will ask for it.

WM. B. RILEY & CO.

324 Market St., Philadelphia, Pa.

Mention The Cycle Age



THE BASCARMAN MFG. CO., Malden, Mass.

Headquarters for Cyclers and the Cycling Trade

## Everett House

We Solicit Your Patronage. Union Square NEW YORK

Mention The Cycle Age

## "WHITE SCORCHER."

1899 Model 30-inch Wheels.

STRIPPED WHEELS.

Sizes frames 22 and 23-inch full bush joint, handsomely decorated two-piece hanger... \$11.50 With Fauber hanger... 13.00 30-inch stripped ('99) wheels, 4-inch drop... 20.00

P. S. WATERS CO., 155 W. Washington St., Chicago.

## JULIUS HEINEMANN & CO.

MANUFACTURERS OF

## Bicycle Hubs

Hub Shells, Cups and Cones 193-197 East Van Buren Street CHICAGO TELEPHONE MAIN 4719

We are going to change our location, and MUST CLOSE OUT every '98 Model and second-hand machine in stock within 30 days.

RALPH TEMPLE CYCLE CO., 204 35th St., CHICAGO. Send for Bargain Sheets. Mention The Cycle Age

"WE MAKE WHEELS TOO."

## Eldredge and Belvidere

NATIONAL SEWING MACHINE CO.

339 Broadway, New York. Belvidere, Ill.

Mention The Cycle Age

IT IS GUARANTEED

TO BE THE BEST THING THAT EVER HAPPENED.

For particulars, address Hitchcock Lamp Co. WATERTOWN, N. Y.

Mention The Cycle Age



For 1899

AS ALWAYS—THE FINEST

## "The Troquois"

TROQUOIS CYCLE WORKS,

331 Wabash Ave., Chicago.

## THE BEST BICYCLE CHAIN LUBRICATOR

CAN BE USED ON THE BALL-BEARINGS.

## ANTI-FRICTION

It will not get stiff or draw dust... Agents wanted everywhere.

Useful Supply Co., P. O. Box 349, Williamsport, Pa. Send 10c for sample, to cover expenses. Mention The Cycle Age

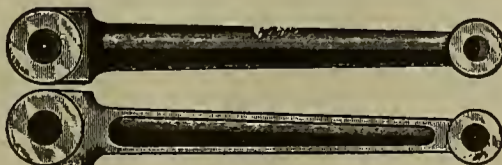
## Three Crown Frame

1899 model. 4-inch drop, made up and filed including fork and head fittings, and Fauber Hanger, any size sprocket from 22 to 30 tooth, seamless tubing throughout. Price, \$12.10.

The Carlisle Mfg. Co., 69-73 W. Jackson Boul., Chicago

## DROP FORGINGS

FOR BICYCLES.



Write us for prices on any forgings you need.

RICHARD ECCLES - AUBURN, N. Y.

Mail us your Subscription.

## LACING CORD

on spools, or in pieces tipped on both ends.

## FLETCHER MFG. CO.

18-20 Thomas Street, New York City.

53 Lincoln Street, Boston.



TRUE AS THE GREENWICH TIME BALL.

The Burdick Cyclometer

Simple Accurate, Beautiful. We Guarantee it. Registers 10,000 miles.

EDW. MILLER & CO., Meriden, Conn.

Mention The Cycle Age

# DIXON'S

ANTI-FLUX

## Brazing Graphite

Thoroughly prevents the flux, brass or spelter from sticking to metal.

"We consider Dixon's Brazing Graphite the best improvement in the process of brazing bicycle frames that has ever come to our attention."

"We have tried Dixon's Brazing Graphite, and must say it is a great labor saver."

"Our brazers say it is satisfactory and that they think they will be able to do still better work with it when they become more accustomed to its use."

"Dixon's Brazing Graphite does all that you claim for it. The only one who is kicking is the fileman."

JOSEPH DIXON CRUCIBLE CO.

Mention The Cycle Age Jersey City, N. J.

ALL YELLOW WHEELS ARE EITHER STEARNS BICYCLES OR IMITATIONS.

DON'T RIDE A CHEAPLY MADE WHEEL.

## Ride a Stearns.

E. C. STEARNS & COMPANY,

Mention The Cycle Age SYRACUSE, N. Y.

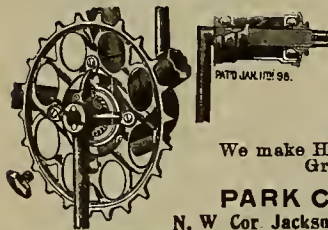


Refined Bike Steel Metal

### SPROCKETS

are standard. Will finish easier, take higher polish, wear longer than any other metal.

ACME MALLEABLE IRON WORKS, Buffalo, N. Y.



"D. & J."

Single, Tandem, Triplet, Quad

### HANGERS

We make Hangers for Only High Grade Wheels.

PARK CITY MFG. CO. N. W. Cor. Jackson & Clin on 4th St., Chicago.



## MANSON THREE-CROWN

1899 models, with 30-inch wheels and eccentric hanger, are ready for delivery. Send for catalogue. Address

Manson Cycle Co., 153-155 W. Jackson Bd., Chicago  
Mention The Cycle Age

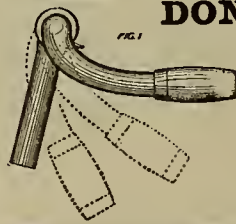
TO THE  
**Jobbers**

CATALOGUE  
**US**

It will Pay  
**You.**

Write Us at  
**Once.**

Robt.  
Holmes  
& Bros.  
DANVILLE,  
ILLS.



### DON'T BREAK YOUR BACK.

The bar for the Rider, Agent, and Manufacturer.

JAS. H. BURT MFG. CO.,  
Springfield Mass.  
Mention The Cycle Age

### COLLAPSIBLE TUBES



for  
Cements  
and Lubricants.

A. H. WIRZ, 913-917 Cherry St., Philadelphia, Pa.  
Mention The Cycle Age

## CAFE BRAUER,

Headquarters for the wheelmen....

Come and see us. 229-231 State St., Chicago.  
Mention The Cycle Age

### Manufacturers "High Pressure"

Brazers Enameling Ovens Sundries  
Cements Gasoline Torches Cycle Oil  
Graphite Vulcanizers

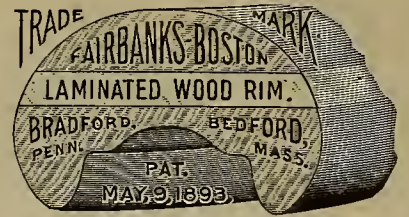
Send for illustrated catalogue.

THE NATIONAL CEMENT & RUBBER MFG. CO.,  
Mention The Cycle Age [DEPT. V] Toledo, Ohio.

### "The Original Keene Wood Rim"

Prices and samples on application. The only rim on earth guaranteed against everything.

GEO. E. SHAW,  
35 WARREN ST., NEW YORK.



We manufacture 90 per cent of Dunlop Wood Rims. When accuracy and durability are required

## FAIRBANKS-BOSTON LAMINATED

are used. We are making a specialty of 30-in. Rims; also Motor Carriage Wood Rims.

FAIRBANKS-BOSTON RIM CO.

Bradford, Pa.

FACTORIES—Bradford, Pa.; Bedford, Mass.  
Toronto, Canada.

Hibbard, Spencer, Bartlett & Co., Chicago,  
Western Distributing Agents.

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## SPECIAL PRESSES, DIES

and other

## SHEET METAL TOOLS

For Bicycles and Cycle Fittings.

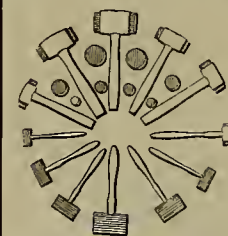
## FERRACUTE MACHINE CO.

Bridgeton, N. J., U. S. A.

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## For.... Hide = Faced Hammers (With Renewable Faces)

..AND..



## Raw Hide Mallets

Address the manufacturers,

A. & C. W. HOLBROOK PROVIDENCE, R. I.

THE LEADING FEATURE FOR 1899 WHEELS

## SUNBEAM SPOKES.

THE AMERICAN SPECIALTY MFG. CO., Hartford, Conn.

PATENTEE AND SOLE MAKERS, ALSO MANUFACTURERS OF

Highest Grade Swaged Spokes and Nipples.  
Send for quotations Mention The Cycle Age

# Baldwin Detachable Chains FOR 1899



are made in a large variety of styles, with finest finish, superior for correct construction, durability and smooth running. Our Special Racer, made of nickel steel, lightest and strongest chain made; our Special Tandem we guarantee to hold any multiple wheel made.

Buy the genuine and you will have the best. Look for our TRADE MARK stamped on each connecting link.

Baldwin Cycle Chain Co., Worcester, Mass...

Hibbard, Spencer, Bartlett & Co., 18-32 Lake St., Chicago, Ill., always have a full line in stock, and are Distributing Agents for Chicago and the Western States.  
K. Franklin Peterson, 159 Lake St., Sole Sales Agent.  
Mention The Cycle Age

# Transfer Name-Plates for the Masses.

**N**ONE realizes the enormous demand there is for transfer name-plates for the dealer, repairman and small maker or bicycle builder. There are from twenty to twenty-five thousand that would meet under that heading, and to devise a transfer name-plate that could be sold to them at a very low price with their special wording matter or lettering, was a subject that kept us thinking a long time. We realized that in every hundred inquiries we received, not more than one or two felt that they could afford to spend fifteen or twenty cents for a special name plate and not buy more than fifty or one hundred at a time. The public is too well educated in an artistic way to accept any gold leaf design only. The result is there are eight or ten dealers in the country who would buy transfer name plates, while if they could buy them in nice colors, something artistic, for a reasonable price, there would be that many thousand who would use transfer name-plates.

We have at last devised the very best thing possible, something that we feel sure will make a big hit, and take like wild fire with the dealers as well as all makers of bicycles who buy fifty or one hundred name-plates at a time. We have just completed our '99 catalogue, and in it have illustrated four designs of those transfer name-plates, which we can sell to anyone interested, in small lots of 50, 100 or 200 at a time. As an illustration of what we ourselves have to sell, we present herewith a cut of one of the designs. The open spaces in the design are open in the transfer, and in this open space we print in gold leaf any special lettering or wording matter desired by any dealer or repairman. That is, when he wishes to sell fifty wheels of his own brand during the year, or say 100 wheels, we will make up his own lettering in the design and he can buy this name plate beautifully worked up in brilliant coloring with his own exclusive wording matter in it, and at a very low price.

Orders for name-plates can be executed in about one week. Every jobber interested in selling this line of name-plates as well as our decorations will please write us. Every dealer, small builder and repairman throughout the land will find it to his advantage to write us for samples and prices.



**The Meyercord Co., Inc.** American Manufacturers  
Guaranteed Decalcomania Transfers,

St. Louis Office:  
621 Holland Bldg.

Main Office: Chamber of Commerce, Chicago.

New York Office:  
805 St. James Bldg.



STYLE A. NICKEL STEEL BLOCKS & PLATES.



STYLE C. NICKEL STEEL BLOCKS, HIGH CARBON PLATES.

Mention The Cycle Age

**STYLE A.**

Made in 3.16-in. or 1/4-in. blocks and plates hardened and drawn to a straw color. The cheapest finish has plates polished on the edge. Six finishes in both qualities.

**STYLE C.**

This is the same chain as above as regards accuracy and durability, the only difference being that the plates are made of hard-rolled high-carbon stock instead of nickel steel.

*The blocks of all our chains are made of nickel steel.*

**POWER MFG. CO., - Bloomfield, N. J.**

## HUBS HANDLE BARS PEDALS

6,000 Bars per day.

1,000,000 pairs Artemis Hubs next season.

.. Runaway Pedals ..



We make every

Style of Handle Bar on

the Market.

ALL OUR PARTS ARE TRIPLE PLATED \* GUARANTEED ONE YEAR

The Largest Makers of High-Grade Parts in the world.

**ARTEMIS PLATING WORKS**  
CHICAGO.

72-74-76-78-80-82 W. Jackson St.  
109 111-113-115 West 14th Street.

Mention The Cycle Age

LOOK FOR SOMETHING INTERESTING NEXT WEEK.

## IMITATIONS

of the original "Schinneer" bar are being offered the trade as "Schinneer pattern bars," "similar to Schinneer," etc.

The original "Schinneer" is manufactured exclusively and legally controlled by us.

Riders want the original and readily distinguish between it and bars made somewhat after the same design.

We are quoting this bar to '99 trade at favorable prices.

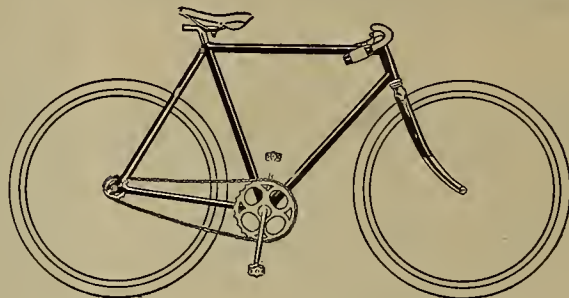
Your product will market to better advantage through its use.

CHICAGO HANDLE BAR CO.

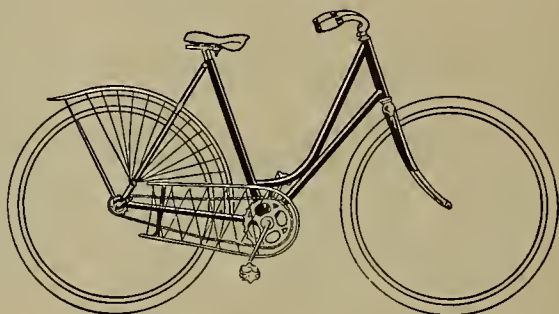
312-314 5th Ave., Chicago, Ill.

Mention The Cycle Age

# CAPACITY 30,000



We Manufacture for Jobbers and Exporters. Circulars for '99 now ready; also prices. Write for information.



MILWAUKEE MFG. CO.

NORTH MILWAUKEE, WIS.

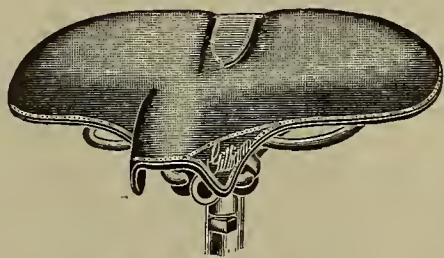
Chicago Office:  
636 Manhattan Bldg.

U. S. A.

Mention The Cycle Age

# Gilliam Saddles

for 1899.



MODEL NO. 57.

A road saddle for women, having a broad seat with coil springs. Padded with curled hair; base of laminated wood, the lightest material possible to use for this purpose. This saddle is designed particularly for women, but is used to a great extent by men who prefer a wider seat than is found on most saddles for men.

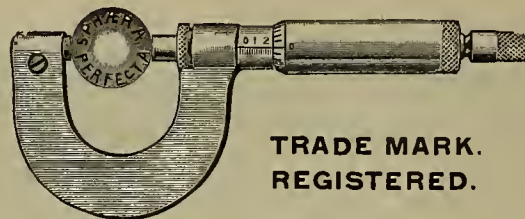
The above is only one of many styles. Samples of our full line are now being shown the trade by our travelers. See them and get prices before placing your saddle contract.

GILLIAM MFG. CO.

CANTON, OHIO.

Mention The Cycle Age

# STEEL BALLS



TRADE MARK.  
REGISTERED.

We are the ONLY makers that turn out Uniformly Perfect Balls.

### THESE ARE OUR GUARANTEES:

- First—That every ball is A PERFECT SPHERE.
- Second—That every ball is within 1-10,000 of an inch of exact size.
- Third—That the surface of the balls is absolutely smooth and is free from scratches and pit marks.
- Fourth—That balls bought from us at one time will be exactly like balls of a similar size bought from us at any other time.
- Fifth—That the balls are made of the best grade of ball steel that can be bought.

OUR BALLS MAKE EASY RUNNING WHEELS.

YOU WON'T FIND on our boxes a caution not to mix balls.

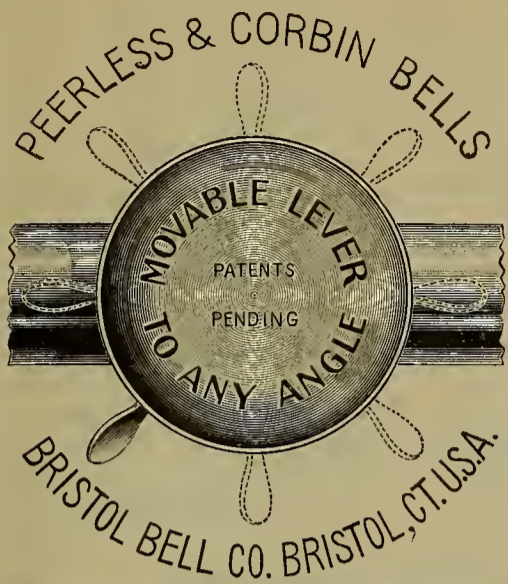
OUR PRICES ARE THE CHEAPEST. OUR BALLS ARE THE BEST.

THE STEEL BALL CO.

39 W. RANDOLPH ST., - - CHICAGO, ILL.

Mention The Cycle Age

# NOTICE TO THE TRADE

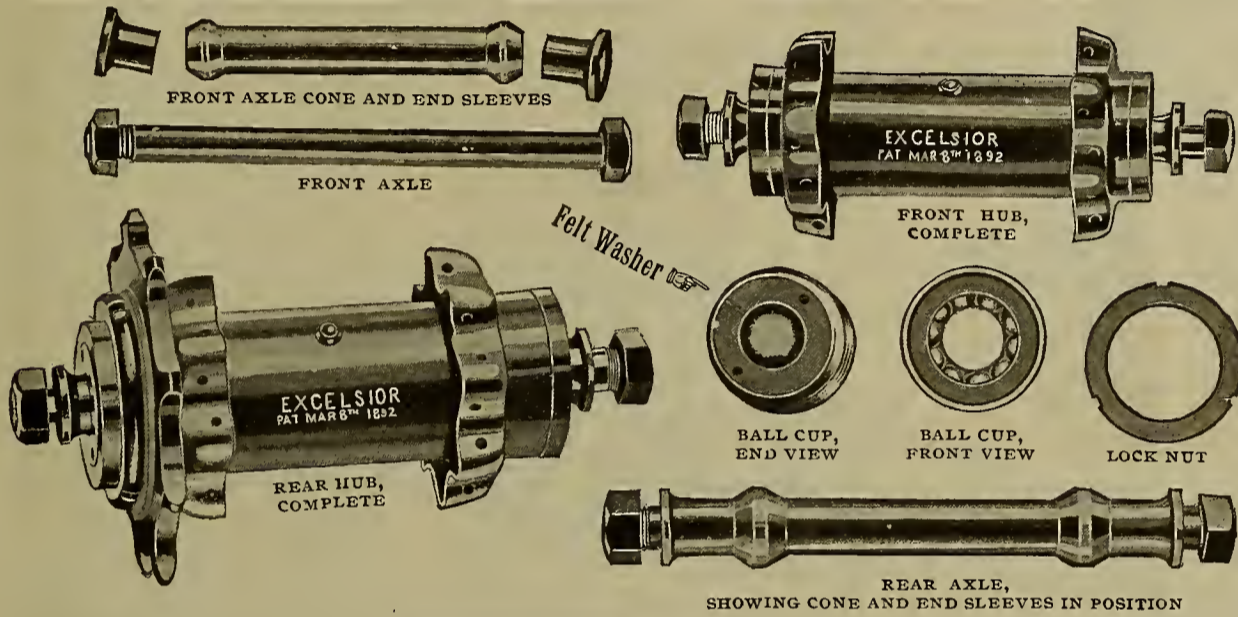


A movable Base for a Bell, whereby the Lever or Push Button can be adjusted to any desired (fixed) position is our invention and we believe that the object of this notice will be attained by simply calling your attention to our claim.

Respectfully,

**THE BRISTOL BELL CO.,**

BRISTOL, CONN., U. S. A



...THE NEW **EXCELSIOR**  
**HUBS** FOR 1899  
DISC ADJUSTING

Embodiment all the very latest and most desirable features. Thousands of dollars spent in advertising will not induce sales equal to the use of these hubs. All up-to-date manufacturers now use

**STRAIGHT TANGENT SPOKES.**

The Excelsior Hub has always been a distinctive feature of the "STERLING" bicycle and has done more to make it popular than all others combined.

The only Hub that received special commendation and medal at the World's Fair.

**CHAS. F. STOKES & SONS,**  
56 FIFTH AVE., CHICAGO, ILL.

**DID YOU  
EVER  
CYCLE  
A FOOT?**

## The Buffalo Foot Cycle

is the only Foot Cycle suitable for academies or rinks, made with rubber tires.

Ball bearings, rubber tires, noiseless, dustless, does not jar, faultless workmanship.

The swiftest thing on wheels  
Send for sample pair.  
Write for illustrated booklet.  
Address.....

**CYCLE SKATE & NOVELTY CO.,**  
MANUFACTURERS OF THE BUFFALO FOOT CYCLE,  
1014 Real Estate Exchange, BUFFALO, N. Y.

**NOW IS THE TIME TO  
OPEN AN ACADEMY.....**

Be the first to open an Academy in your town. State and county right given.\*\*\*



Mention The Cycle Age

**The Hollenbeck Rawhide Saddle**

WEIGHS BUT TWELVE OUNCES. PRICE, \$2 00.

The most durable, lightest, finest finished and handsomest saddle made. Let no one persuade you that something else is as good. Correspond with us regarding prices.

OUR NEW BOOKLET IS YOURS FOR THE ASKING.

**Hollenbeck Saddle Co. = Syracuse, N. Y., U. S. A.**

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# M.C. Henley's

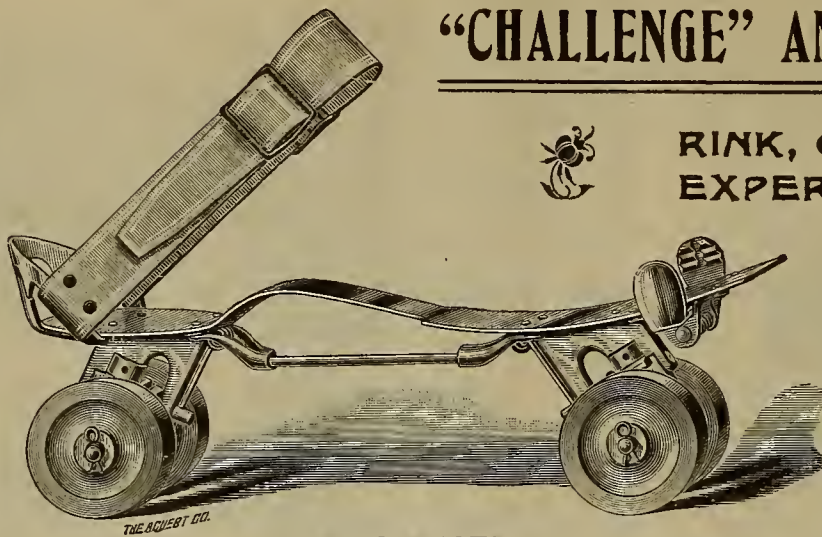
Celebrated, Improved, Adjustable

## Roller Skates

In use in all Principal Rinks in this and other countries.

Full line of RINK SUPPLIES always on hand.

Write for prices and send 4 cents in stamps for 75 page catalogue.



POLO SKATE.

# "CHALLENGE" AND "MONARCH"

RINK, CLUB, POLO AND EXPERT ROLLER SKATES

"The success of the past a guarantee of the future."

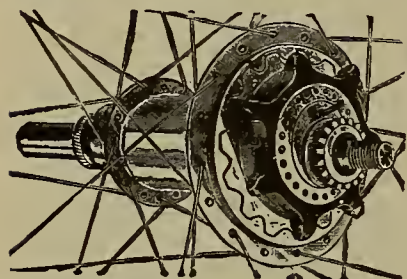
Not a "Cycle" Skate, but a perfect, SCIENTIFICALLY CONSTRUCTED SKATE easy and light running, and the most durable and practical Rink Skate on the market.

Over 2,000,000 Sold

Mention The Cycle Age

Henley Bicycle & Roller Skate Works, Richmond, Indiana.

# Bicycle Manufacturers!



When studying how to make your '99 model the most serviceable, at active and salable, we would like your favorable consideration of the

## BI-GEAR

If you should regularly equip one of your standard models with

## A CHANGEABLE GEAR

not to be sold as an extra attachment, but as much a part of the machine as the saddle, pedals, etc., you would increase your business by selling wheels that you would not otherwise sell.

THINK IT OVER AND WRITE US.

"Sure Thing" Tire Mender.  
Rubber bands. No cement.  
Postpaid, 15 cents.

BROWN-LIPE GEAR CO.,  
SYRACUSE, N. Y.

# Sprokette Chain Washer



Cleans perfectly in three minutes, without removing the chain. Uses a liquid, is easily adjusted, fits any wheel, and is guaranteed to give perfect satisfaction.

Sent by mail to any address for 25 cents.

Free cuts to jobbers for illustrating in catalogues. Write for price list and list of cuts.

Walter Luther Dodge, 97 Clark St., Chicago, Ill.

# Thames Chains

ARE MADE IN THESE TWO QUALITIES:



No. 7—Nickel Steel, hardened B blocks, polished and straw colored; B sides, milled and blue; hard rivets.



No. 11—Roller-Block Chain, polished blue sides; B centers polished and tempered; case-hardened rivets and rolls.

Also in 13 other patterns. We are ready for contracts and deliveries.

## THE THAMES CHAIN & STAMPING CO.

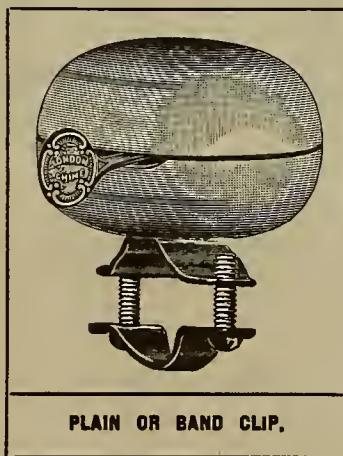
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NORWICH, CONN

"ESTABLISHED 1838."

# BEVIN'S LONDON CHIME

Just out. The hit of the season. Rotary Movement. Electric Chiming. TWO BELLS IN ONE. It will be a sure seller. Liberal discounts to the trade only.



PLAIN OR BAND CLIP.

## BEVIN BROS. MFG. CO.

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EAST HAMPTON, CONN.

"PATENTED DEC. 14, '97."

# The Highest Grade Bar

MADE

The most complete line of ADJUSTABLE HANDLE BARS on the market, with AUTOMATIC INTERNAL EXPANDER.

BRENNAN HANDLE BAR CO., 318 East Water St. Syracuse, N.Y.

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# A MONEY MAKER...

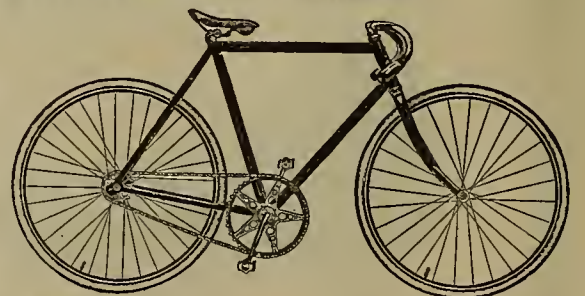
Don't close up for the season before having seen this.

STRICTLY UP TO DATE IN LINES

and for the rest, let this extract of specifications speak:

1 1/4 inch tubing.  
5 inch head.  
3 inch drop.  
Fauher hanger.  
Seat-post cluster and Expander.

The only small thing about it is the price.



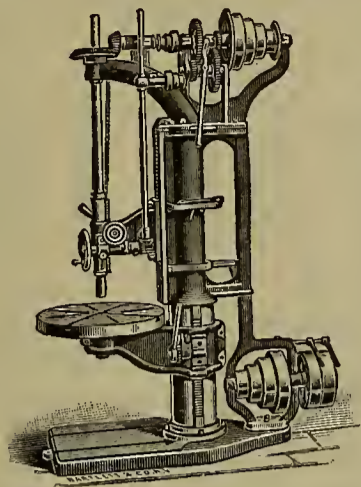
Frame (including Seat-post and Handle-Bar) - \$14.00  
Complete Wheel (no Tires) - - - - - 22.50

## INTERNATIONAL CYCLE FITTINGS CO.

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74 Reade Street, NEW YORK

## Drill Presses



Bench Drills  
Sensitive Drills  
Upright Drills  
Gang Drills

All Sizes and Styles  
in Stock

LARGE STOCK OF

**Machine Tools** New and Second-Hand

Lathes, Planers, Shapers, Drill Presses, Screw and Milling Machines, Gear Cutters, Cutter Grinders, Profilers, Screw Slotters, Special Bicycle Machines, etc.

Send for New Catalogue and New Prices Just Issued.

**THE GARVIN MACHINE CO.**

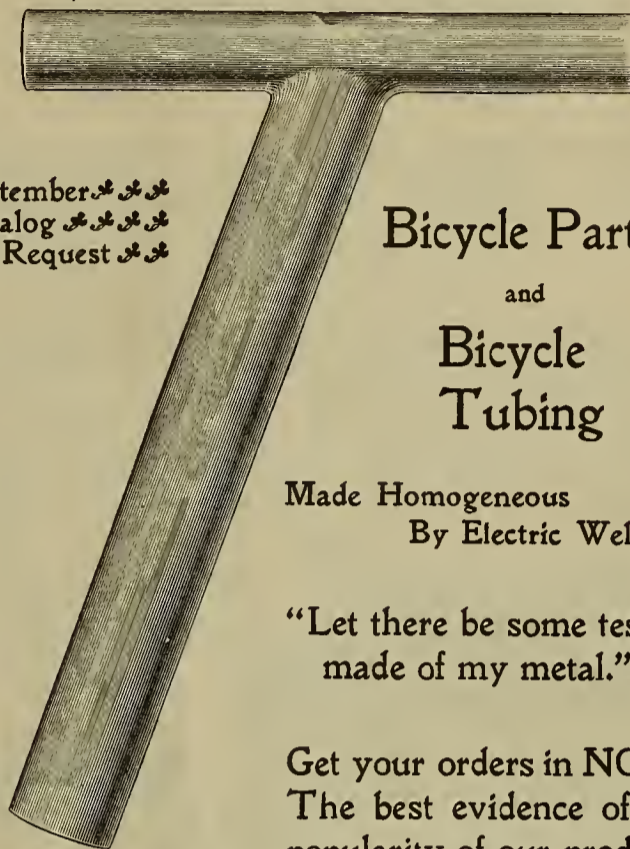
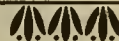
Spring and Varick Sts, NEW YORK.

Philadelphia Store—The Garvin Machine Co.,  
51 N. 7th St., Philadelphia, Pa.

Berlin Store—The Garvin Machine Co., m. b. H.,  
17 Burg Strasse, Berlin C., Germany.

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**STANDARD TOOL CO.** Manufacturers of  
CLEVELAND, OHIO.



September   
Catalog   
On Request 

**Bicycle Parts**  
and  
**Bicycle Tubing**

Made Homogeneous  
By Electric Welding

“Let there be some test   
made of my metal.” 

Get your orders in NOW.  
The best evidence of the  
popularity of our products  
is the PUSH NECESSARY TO EQUAL  
THE DEMAND.

NEW YORK OFFICE:  
94 Reade Street.

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# Saddles



For **Manufacturer**

And . . . .

**Jobber**

FROM THE TANNERY TO THE  
consumer. A full line of padded sad-  
dles at bottom prices.

Write for Quotations.

**Geo. N. Oberne & Co.**

383-401 N. HALSTED ST., CHICAGO, ILL.

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PETERS & DFAKE,

107 Chambers St.,  
New York.



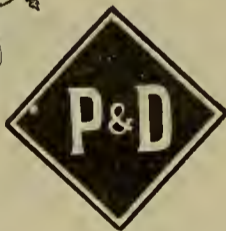
Can be used by hand, or affixed to wall, bench or support.

An important advantage of this form of pump is that it can be operated by hand without being attached to a fixed support and possesses all the advantages of that class of pump known to the bicycle trade as lever pumps. 2 in. x 8 in., nickel-plated cylinder; arms japanned.

Price, \$3.50; to Dealers, \$2.60 net.

HAND LEVER

**PUMP.**

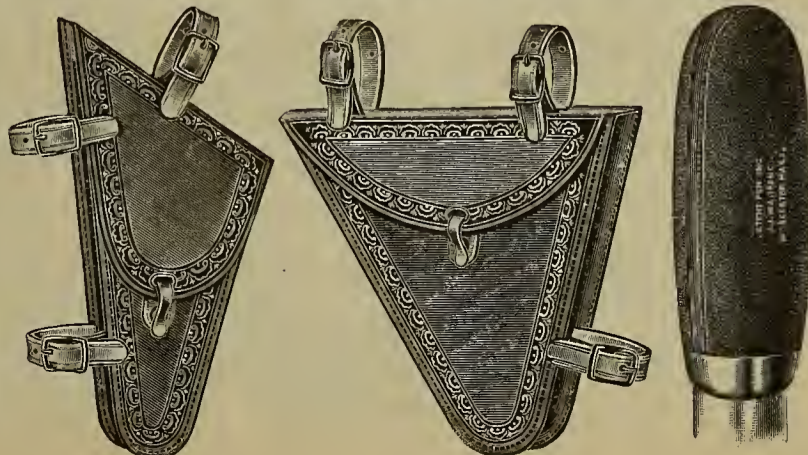


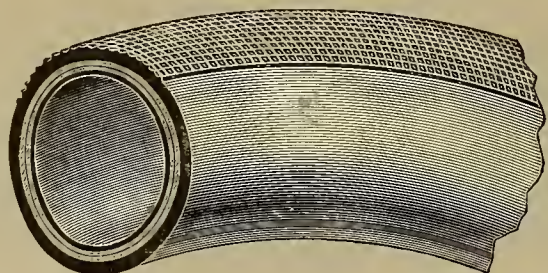
**PUMPS.**

**J. J. WARREN COMPANY,** Worcester, Mass., U. S. A.

—MANUFACTURERS OF—

Bicycle Saddle Tops, Tool Bags, Leather Grips, Luggage Carriers, Lunch Boxes, etc. Send for catalogue.





FIRST THING  
ESSENTIAL  
PUT ON . . .

## Defender Special!

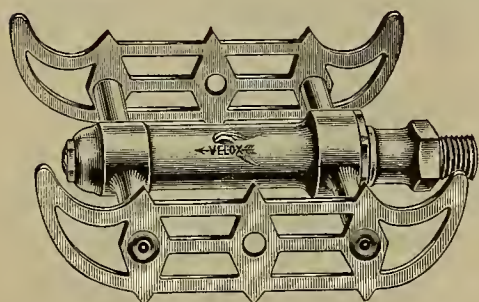
Write for Catalogue and Prices.

**KOKOMO RUBBER CO., Kokomo, Ind.**

CHICAGO BRANCH—135-137 E. Lake St.  
H. W. Coolidge & Co., Managers.

Mention The Cycle Age

## THE VELOX PEDALS



Are better than the best and  
cost but little more.



If you are making high-  
grade bicycles use

## Velox Pedals

They will not be found on cheap wheels.

VELOX MACHINE WORKS, 315 Dearborn St., Chicago, Ill.

## WE CAN SUIT YOU CHAINS

In Quality, Finish and Prices on



**READING SCREW CO.**

2722 HOPE ST., PHILADELPHIA, PA.

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# SUNDRIES

Everything for Bicycles.  
To Make, Repair, or Equip.

Write us for the most complete catalogue of sundries and cycle fittings ever  
issued, and read the story,  
"How It May Be Accomplished."

**TOLEDO CYCLE SUPPLY CO.**

Jobbers' and Manufacturers' Agents,  
431-433 St. Clair Street, TOLEDO, OHIO, U. S. A.

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# SEE OUR LINE FOR '99

We Make the Reliable

# W & E PARTS

For Bicycles, Tandems, Triplets and Quads.

HUBS, PEDALS, CRANK HANGERS,  
FRAME FITTINGS, OIL CUPS.

Expanders for Handle Bars, Seat Posts, Turned Head Fittings.

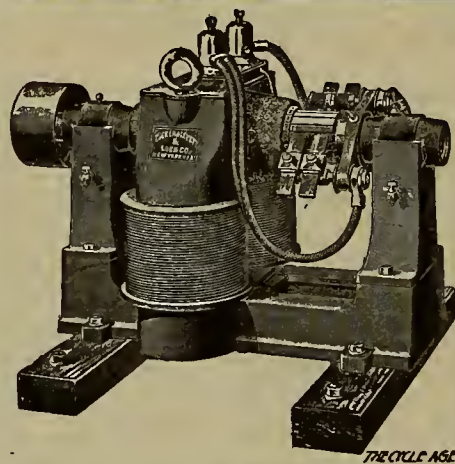
**WALKER & EHRMAN MFG. CO.,**

WASHINGTON and UNION STS., CHICAGO.

Send us your name for Catalogue.

Mention the Cycle Age.

## ZUCKER & LEVETT & LOEB CO.



526-530 WEST 25 ST.

NEW YORK.

MFRS OF  
POLISHING  
AND  
PLATING  
MACHINERY  
AND  
MATERIALS

ILLINOIS  CENTRAL

**CHICAGO**  
TO  
**ST. LOUIS**  
SPECIAL

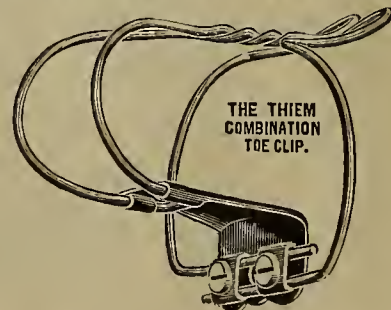
**SOLID VESTIBULE TRAIN.**

Daily at 9.00 p. m. from Chicago. New and elegant  
equipment, built expressly for this service. Train  
lighted throughout by gas. Tickets and further infor-  
mation of your local ticket agent, or by addressing  
A. W. HANSON, G. P. A. Ill. Cent. R. R. Chicago, Ill.

## LEADING TOE-CLIPS

Nothing has been produced in the way of toe-clips that has given such universal satisfaction to the trade as the clips manufactured by us. Their success is assured. They are therefore offered for the season of '99 absolutely without change in design, material or workmanship.

We also manufacture a line of lamp brackets for head and fork attachment, plain steel and wire toe-clips, cycle floor stands and the Weber New Departure Luggage Carrier. The value offered in this line is recommended to the attention and scrutiny of the jobbing and wholesale trade, whose correspondence is invited.



**THIEM & CO., - - ST. PAUL, MINN.**

78-80-82 SOUTH ROBERT STREET.

Mention The Cycle Age



A Good Thing for Large Dealers to Know.

When you contract for

ELMORE BICYCLES

You may be certain that your orders will be promptly filled. We are getting in large consignments of stock now, and are fully able to take the best care of our trade. We have the best wheel on the market, for the price, and want a chance to show it to you.

ELMORE MFG. CO., Clyde, Ohio.

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**HELIOS**  
BURNS GAS AUTOMATIC CARBIDE LAMP  
POSITIVELY CANNOT GO OUT OR EXPLODE.  
THE MOST BRILLIANT AND PENETRATING LIGHT EVER CARRIED ON A WHEEL  
ONLY LAMP HAVING A CHECK VALVE  
NO WICKS, NO OIL, NO TROUBLE, NO DIRT, NO SMOKE, NO GREASY CLOTHES, NO GREASY HANDS  
Helios Carbide Specialty Company  
ATLANTIC CITY, N. J.

READY  
AUG. 15

NEW '99 LAMP

Mention The Cycle Age

NEW DESIGN  
**FOR 1899**

NOW READY

4-inch drop. 30-inch wheels. One-piece hanger. 1 1/4-inch tubing. These bicycles now ready for delivery. It has proven to be a great seller. It's a winner. Secure an agency.

We can also sell you now the parts and material for this new model, or can make frames for you, or can supply you now with the complete bicycles and agency. Send for illustration of it; also of GREATEST BARGAINS ever offered to close out balance of high grade Model A 1898 Bicycles.

REMEMBER We sell all material and parts to make or to repair bicycles and tandems. Send for catalogue.

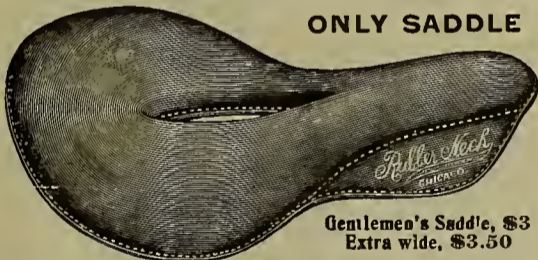
CHICAGO TUBE CO.

Mention The Cycle Age

217 E. Washington St., Chicago, Ill.

...RUBBERNECK

ONLY SADDLE IN THE WORLD.



Gentlemen's Saddle, \$3  
Extra wide, \$3.50

Look at that Patented Rubber Cushion—Soft, Springy, Cool and Durable.

The vertical rubber tubes forming the honeycomb yield to every motion and conform automatically to the form of the rider. The air spaces or cells extending from the plate to the cover throughout its area keep the saddle cool and thoroughly ventilated. The

"vitality" peculiar to this saddle imparts vitality and activity to the rider; the weak and debilitated are known to become strong and healthy after two or three weeks' riding.

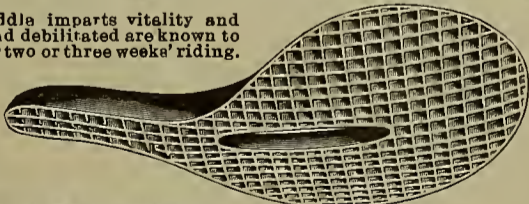
TRY IT.

We also manufacture the finest line of Cycle Belts in the U. S.

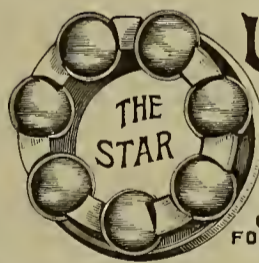
The Bunker Saddle Co.

208-210 E. Lake St. Patented Rubber Cushion.  
CHICAGO, ILL.

Used exclusively in our Rubberneck saddles.



A New Light on an O'd Subject



U.S. PATENT  
JUNE 14' 98

CANADIAN & FOREIGN PATENTS GRANTED

THE STAR ANTI-FRICTION BALL RETAINER WILL SAVE FROM 33% TO 50% PROPELLING FORCE IN ALL BALL-BEARINGS.

It will be the greatest talking point in 1899 wheels. It is a positive ball retainer made as strongly as any other part of the bearing, and will always stand up under any circumstances.

Manufacturers send us your cups and cones, and we will send you samples at our expense. Jobbers and handlers of parts, specify the Star.

No bicycle manufacturer, hub, hanger and pedal maker, or motor-carriage builder can afford to overlook us.

THE STAR BALL RETAINER CO., Ltd.

Mention The Cycle Age

LANCASTER, PA. U. S. A.

'99 BICYCLES

FOR

JOBBERS

ONE MODEL ONLY!

THE

IMPROVED

THREE CROWN.

Milwaukee Engineering Co.

MILWAUKEE, WIS.,  
U. S. A.

Mention The Cycle Age



# HAMMER FORGED BALLS

Fitchburg Steel Ball Co.  
FITCHBURG, MASS.

GEO. W. WEYMOUTH,  
President and General Manager.

Mention The Cycle Age



# Iven-Brandenburg Co.

131-133 LAKE ST., CHICAGO,

SOLE UNITED STATES AGENTS FOR

SAGER MANUFACTURING Co.  
Saddles.

OAKMAN-BRANDENBURG Co.  
Pedals.

AUROTA AUTOMATIC MACHINERY Co.  
Thor Hubs, Crank-Hangers, Ex-  
panders, Spoke Tie Clasps, Spoke  
Tying Machinery, Nipple Washers  
and Oil Cups.

SAGER GEAR Co.  
Chainless Bicycle Gears.

MORSE-KEEFER Co.  
Silver, Nickel and Carbon Stee  
Spokes with Nipples to match.

TUCKER BICYCLE WOOD WORK Co.  
Hickory and Maple Rims, Mud  
and Chain Guards.

LE FEVER ARMS Co.  
Chains.

CHICAGO DROP FORGE & FOUNDRY Co  
Steel Drop Forgings.

## L -- A -- W BIG FOUR ROUTE

THE BEST LINE FROM

Chicago Peoria  
St. Louis Benton Harbor  
Cleveland Cairo  
Cincinnati Columbus  
Louisville Terre Haute  
and all other points to

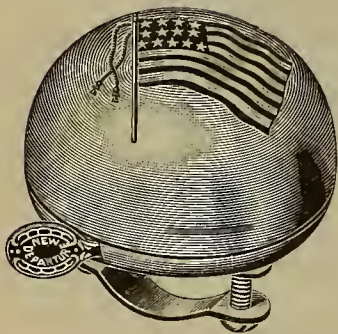
### INDIANAPOLIS

E. O. McCORMICK,  
Passenger Traffic Manager, CINCINNATI.

W. Y. LYNCH,  
A. G. P. A.

J. C. TUCKER, General Northern Agent, CHICAGO, ILL.  
H. M. BRONSON, A. G. P. A., INDIANAPOLIS, IND.  
W. P. DEPPE, A. G. P. A., ST. LOUIS, MO.

# Just Hear Dem Bells

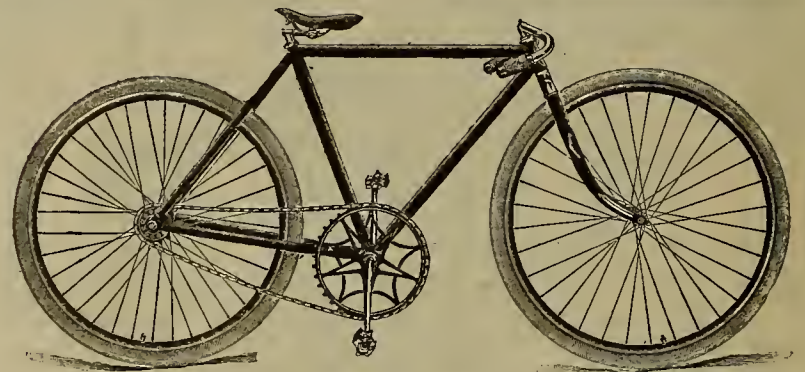


## Celebrate Manila and Santiago

Our national emblem in colors.  
Bright and durable. More  
than a novelty.

SELLING AGENTS:

JOHN H. GRAHAM & CO., 113 Chambers St., New York.  
Mention The Cycle Age



1899 MODEL.

## "OTIS SPECIAL" 30-in. Wheels

Antiquity should not excuse error, nor should novelty prejudice truth.  
4 1/4-in. drop; 4 1/2 in. tread; 49-in wheel base; one-piece eccentric  
hanger; large sprockets. One year guarantee. Pr ce..... \$50.00  
Secure an agency and order a sample at once if you want your  
share of next season's business. This wheel will get it for you.

OTIS BICYCLE CO., 114 Dearborn St., Chicago, Ill.

# FAY & BOWEN

AUBURN, N. Y.

MAKERS OF ALL GRADES AND SIZES OF

## Swaged and Plain Spokes

... AND ...

## SPOKE NIPPLES

SELLING AGENTS:

THE CROSBY & MAYER CO.

BUFFALO  
NEW YORK

CHICAGO  
TOLEDO

Mention The Cycle Age

# Jobbers! Take Notice!

## THE NEW MORSE TWIN ROLLER CHAIN

fits the standard one-inch pitch sprockets and is made in both 1/4  
inch and 3/16 inch widths.



This chain has no bearing surface where use will result in length-  
ening of the chain. If you want a good selling chain which will give  
perfect satisfaction, write for circulars and prices to

Morse Chain Co., - Trumansburg, N. Y.

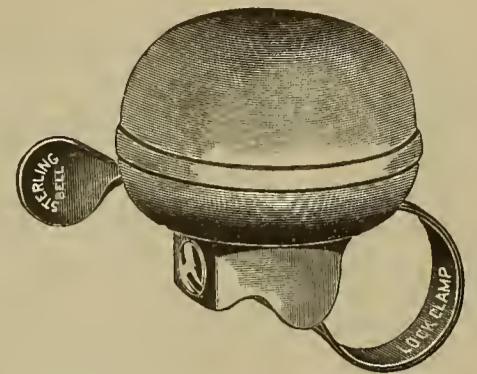
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**Musical Bicycle Bell**

Consisting of two bells tuned in harmony, producing a sweetness of tone delightful to the ear.

**STERLINGS TRINITY CHIMES AND DAISY BELLS**



**N. N. HILL BRASS CO., East Hampton, Conn.**

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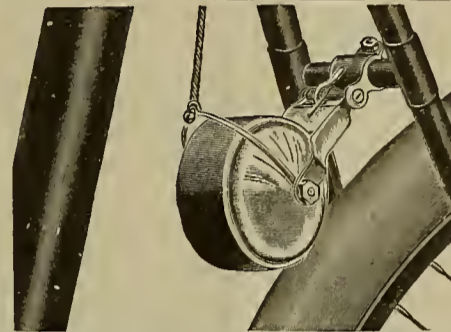
**SCORCHERS....**

The New Christy Racing Saddle, the one used by Bald, Michael, Kiser, Butler, Mertens and all the other champions, will help you make fast pace on the roads. It's the scorcher's friend.

NEW YORK CHICAGO

**A. G. SPALDING & BROS.**

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**JOBBERs desiring ELECTROTYPES**

will be supplied by mail free, and to early

**Buyers, we can offer some Bargains**

Our Bells are double toned, light, strong, loud, and located out of the rider's way.

**ALUMINUM BELL CO. BALTIMORE, MARYLAND.**

**CHICAGO TO DENVER**

Via Omaha and Lincoln, Nebraska.

In 1867, the first railroad from Chicago to Omaha was completed, and it was considered fast time when the distance of 490 miles was covered in twenty-four hours. Now the same distance is run by the trains of the Chicago and Omaha line of the Chicago, Milwaukee and St. Paul Railway, in less than sixteen hours, and the whole distance of 1,069 miles from Chicago to Denver is run between 10 o'clock p. m. of one night and 7.45 a. m. the second morning.

The finest Sleeping Cars are run daily from Chicago through to Denver, without change, making connections at Denver Union Depot with trains of all roads departing for principal points in Colorado, Utah, New Mexico, Nevada, and California.

The Scenic Route of America is through "the heart of the Rockies," in Colorado, and the best route to Colorado is via the Chicago, Milwaukee and St. Paul Railway, by way of Omaha and Lincoln, Nebraska.—City Ticket Office, 95 Adams street, Chicago.

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**NEW WABASH FAST TRAIN EAST**

"The Continental Limited," a new fast train on the Wabash, now leaves Chicago daily at 12:02 noon, and arrives at Buffalo 5 a. m., New York 3:30 p. m. and Boston 5:50 p. m., next day, with through car service.

TICKET OFFICE, 97 Adams St., Chicago.

**DUCKWORTH CYCLE CHAIN FOR '99....**



Our new bolt a sure lock.

Furnished on all high-grade chains if desired.

Mention The Cycle Age **JAMES DUCKWORTH, 41 Mill St., Springfield, Mass**

**THE MESINGER SPECIAL FOR 1899**

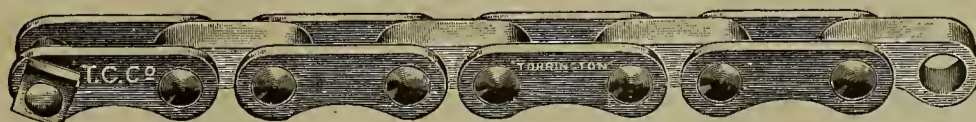
This saddle has met with unqualified approval. It's the right shape. It's handsome. Embodies all the healthful qualities of our saddle with opening and raitan base, soft nose and flexible sides. Ready for delivery.

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**MESINGER BICYCLE SADDLE CO., New York.**



**"Torrington" Chains Drop Forgings**



3-16-inch and 1-4-inch Widths Only.

The ESSENTIALS of a good chain are ACCURACY OF PITCH, ACCURACY OF ALIGNMENT and STRENGTH, and are striking features in "Torrington" Chains.

**THE TORRINGTON CHAIN CO., Torrington, Conn.**

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**F. S. ODELL, Western Representative, 204 Lake St., Chicago, Ill.**

**FOR CYCLE MANUFACTURERS. CHICAGO DROP FORGE & FOUNDRY CO., KENSINGTON, ILL., U. S. A.**

**"TRADE MARK" PEGAMOID**

**BRIGHT METAL PROTECTOR.**

Colorless liquid. Easily applied by brush or dip. Dries rapidly without brush marks. Leaves a colorless, invisible, a strongly adhering film, which protects the surface against rust and corrosion. Unequaled for bright and steel parts of machinery, nickel plated bicycles, hardware in stock, etc. Sample bottle and circular for 25c.

**AMERICAN PEGAMOID CO., 345 Broadway, New York.**

# Crawford Bicycles

The dealer who has Crawfords in stock can always make a sale—he can fit any one—no matter what the size of reach or purse.

**\$50—\$35**

Juveniles, \$30, \$25, \$20. — Tandems, \$75.

Even if the size or model required is not in the store, it can be had in a few hours—our branch house system avoids delays.

**The Crawford Mfg. Co.**

HAGERSTOWN, MD.

Factory Branches at—

New York, 89 Chambers St.  
Boston, 170 Congress St.  
Chicago 86 Wabash Ave.  
St. Louis, 603 N. Fourth St.  
Baltimore, 14 W. German St.

Farwell, Ozmun, Kirk & Co.,

St. Paul, Minn., Distributing Agents  
for Minnesota, South Dakota, North  
Dakota, Idaho, Oregon, Washington,  
Montana, Wyoming, Western Wisconsin,  
Northern Iowa, Vancouver Island

Mention The Cycle Age

# Star Foot Power Lathes



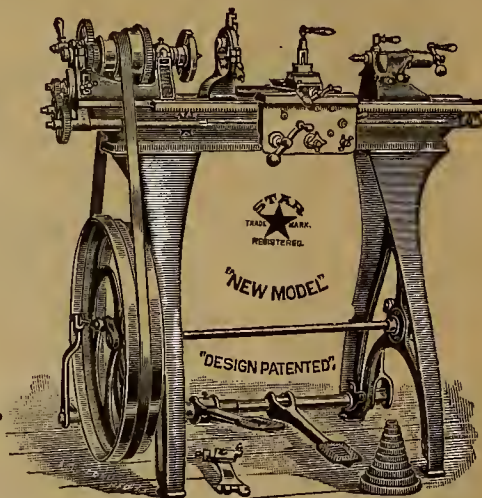
Complete Screw Cutting, Engine Lathes, with Automatic Cross Feed, with or without Compound Rest, Friction Countershaft, etc. Contain new and original features, especially adapted for Bicycle, Electrical, and Accurate Machine Shop Service.

Send for Catalogue B.

**Seneca Falls Mfg. Co.**

400 Water St., SENECA FALLS, N. Y., U. S. A.

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**THERE IS A DIFFERENCE**

in bicycles. Some are good, many are bad, more are indifferent.

**Sterling Bicycles**

"BUILT LIKE A WATCH"

are among the good kind. The proof is in the riding—they ride easily; in the lasting—they endure for years. Sterling prices for '98: Road Models, \$60 and \$75. Racers, \$85. Chainless, \$125. Tandems \$125. Catalogue free. Correspondence invited and cheerfully answered.

A Sterling War Map will be sent prepaid on receipt of ten cents in postage.

**STERLING CYCLE WORKS**

274-276-278 Wabash Ave., Chicago.

New York Agents—Schoverling, Daly & Gales, 302 Broadway.

Pacific Coast Agents—A. C. Nichols & Co., 400-404 Battery St.,

San Francisco, Cal.

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# NEW YORK TO BUFFALO

West Shore R. R.

First-Class Service.....



Copyright, 1898, by James Charlton.

"GOOD BYE!"

PERFECT PASSENGER SERVICE.

**Chicago & Alton RR.**

AMERICA'S MOST POPULAR RAILROAD.

The direct, best and only completely rock ballasted, dustless line between

CHICAGO and KANSAS CITY,  
CHICAGO and ST. LOUIS,  
CHICAGO and PEORIA,  
ST. LOUIS and KANSAS CITY.

Through Pullman service from Chicago to  
HOT SPRINGS, ARKANSAS, DENVER,  
COLORADO, AND CALIFORNIA.

JAMES CHARLTON, General Passenger and Ticket Agent,  
CHICAGO, ILLINOIS.

**CALIFORNIA**  
FAST TRAINS  
equipped with Double Drawing-Room Sleeping Cars and Tourist Sleeping Cars  
THROUGH WITHOUT CHANGE  
Dining Cars and Buffet, Smoking and Library Cars  
Leave Chicago EVERY DAY.  
CITY TICKET OFFICE 212 CLARK ST. CHICAGO.

IN **3** Days VIA THE **NORTH-WESTERN LINE**  
CHICAGO & NORTH-WESTERN RAILWAY.



THE DIRECT LINE TO



**INDIAN-APOLIS**



**4 TRAINS DAILY.**

Only line to West Baden and French Lick Springs.

...BICYCLES CHECKED FREE...

FRANK J. REED,

CITY TICKET OFFICE

G. P. A.

CHICAGO.

282 CLARK ST

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THE TRADE CIRCULATION OF THE CYCLE AGE REGULARLY EXCEEDS THE JOINT CIRCULATION OF  
THE WHEEL AND THE CYCLING GAZETTE.

# THE CYCLE AGE

## AND TRADE REVIEW

Vol. XXII—No. 10

CHICAGO, JANUARY 5, 1899

New Series No. 59

# IVER JOHNSON



CHAINLESS  
CYCLES

\$75

SAGER

ROLLER

GEARS



## Iver Johnson's Arms & Cycle Works

FITCHBURG, MASS.

Branches: New York, 99 Chambers St. Boston, 408 Washington St. Worcester, 304 Main St.

**READING STANDARD**

**THE BEST LINE FOR 1899**

IS, WITHOUT QUESTION,  
... THE ...

**“Reading Standard”**

==== LINE ====

Our competitors know it and wide awake  
agents find it out. . . . . Write to

**READING STANDARD MFG. CO., Reading, Pa.**

Reading Standard Road Racer.....	\$50.00	}	<b>“MADE RIGHT AND SOLD RIGHT.”</b>
Reading Standard Roadster.....	40.00		
Royal Reading.....	30.00		

**READING STANDARD**

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# Matthew Strauss

formerly connected with the Strauss Cycle Supply Co., also with the Strauss-Hanna Cycle Material Co., has opened up one of the largest and most complete bicycle supply houses in the East at ❁ ❁

**334-338 Genesee St., Buffalo, N. Y.**

**Our Fittings**  
**Fit** ❁ ❁

MANUFACTURERS, DEALERS AND REPAIRMEN,  
SEND FOR OUR ADVANCE SHEET AND GET  
YOUR MONEY'S WORTH. ❁ ❁ ENTIRE NEW AND  
UP-TO-DATE STOCK. ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁

**Some of the Goods We Handle** • •

- Shelby Steel Tube Co.'s.....Forks and Stays
- W. H. Fauber's.....Hangers and Fittings
- Stockton Mfg. Co.'s.....Hubs, Chains and Pedals
- Billings & Spencer's.....Wrenches and Forgings
- Fay & Bowen's.....Spokes and Nipples
- Drake, Winona and Keene's Wood Rims
- Ideal Plating Co.'s.....Handle Bars
- Brennan Handle Bar Co.'s...Handle Bar
- Crosby & Mayer's.....Stampings and Fittings

**Fauber 1899**  
**Crank Hanger at \$1.98**

would be cheap. ❁ Watch our ad. in two  
weeks and get a complete 1899 Fauber  
Crank Hanger FREE OF CHARGE. ❁ ❁

# What Constitutes a Good Bicycle? Why Tribunes Excel.

Last week we showed you our seat post binder from the outside, this week we have taken the small spanner wrench which accompanies each wheel, and unscrewed the round nut and slid it a little ways up the seat post, also pulled out the remainder of the binder that you may see it complete. Now that you have it all in view, we would be willing to wager a cooky that you cannot tell how it works, or what makes it bind. If you are ingenious enough to discover the principle you will see at once that it is the neatest, simplest, and most effective seat post binder that was ever put on a bicycle. For the benefit of those who have not been fortunate enough to discover all this, we will next week show the parts all separately. You can, however, end the suspense at once by sending for our new catalogue which will fully illustrate it, together with some other good things.



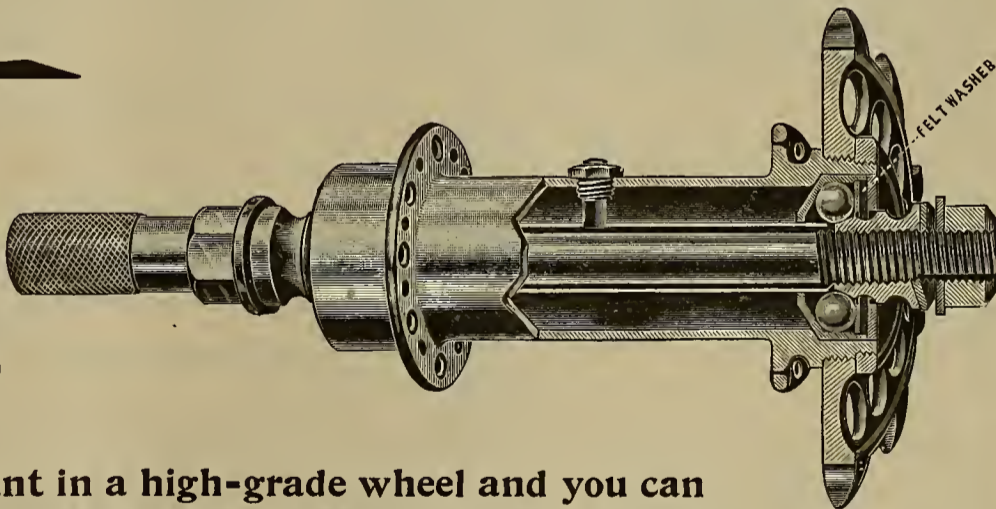
**The Black Mfg. Co., Erie, Pa.**

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# Avoid Useless Trouble and Expense

BY ADOPTING  
THE

**SMITH**  
...1899 **HUB**



Good bearings are all-important in a high-grade wheel and you can better afford to pay a trifle more for a first-class hub, than to buy some of the "cheap" varieties that will cost you more in repairs than you save in the first cost.

Cones hardened by our new process will outwear any other part of the wheel.

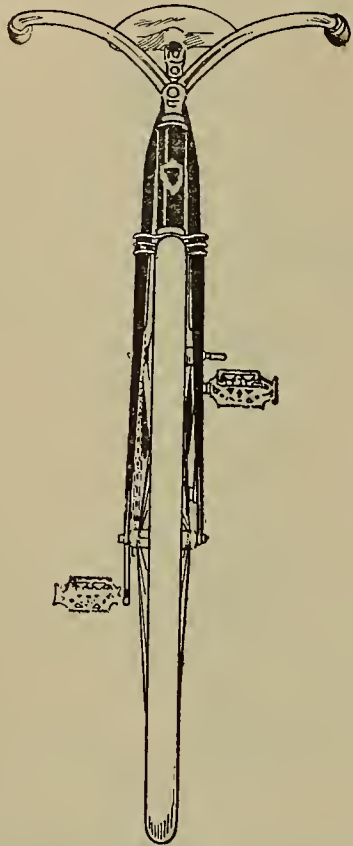
**C. J. SMITH & SONS CO.**

R. B. McMULLEN & CO.,  
CHICAGO and NEW YORK, U. S. Sales Agents.

MILWAUKEE, WIS.

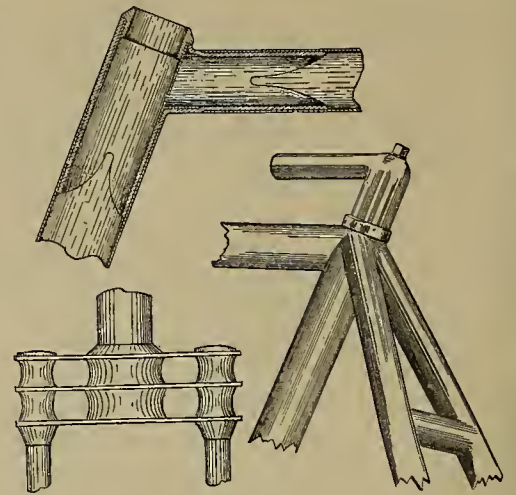
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# The '99 Olive



IS MEETING WITH POP-  
ULAR FAVOR ❁ ❁ ❁ ❁  
EVERYWHERE BECAUSE

“True Merit Always  
Wins Recognition.”



## A PROFITABLE LINE FOR LIVE DEALERS

Quality is our key note. Comparison is what  
we ask. An inspection will prove our many  
claims of superiority. ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁ ❁

The Olive Wheel Company

Catalogue ❁ ❁  
Sent on Application.

SYRACUSE, N. Y.

# Headquarters for “THOR” Goods

SOLE UNITED STATES AGENTS

We are ready to deliver 

Hangers, Eccentric and Regular.

Hubs, Perfection and Special.

Expanders that Hold.

Saddles, Pedals, Chains, Rims, Spokes,

Nipples and Chainless Parts.

Send for Our New Catalog  Just Out

101 Reade Street, New York IVEN BRANDENBURG CO. 131-133 Lake Street, Chicago



# JUST ONE!

**T**HE word "one" as indicating number or quantity does not mean a great many. Sometimes it is used to call attention to some particular article or thing which is different or in a distinct class by itself.

As, for example, we frequently allude to the **Cleveland** as being "The '**One**' bicycle or line of bicycles, to show improved construction for the season of 1899." In this case the word "One" adds emphasis to the statement following it.

Then again—we say "There is **one** bicycle on the '99 market which runs easier, therefore requiring less effort to propel it than others and that "**One**" is the **Cleveland** fitted with Burwell Ball and Roller Bearings." **More emphasis!**

And again—we say "The **Cleveland** is the **One** bicycle which affords the retailer a liberal margin of profit and at the same time gives the rider his money's worth in real value with a generous 'surplus' in satisfaction and comfort."

You see the little word "**One**" may not mean a **great many** but may mean **much**. Perhaps the **Cleveland** is the **One** bicycle you need to bring prosperity for the New Year.

## H. A. Lozier & Co.

Mrs. Cleveland  
Bicycles. 

CLEVELAND, OHIO.

**Branch Houses and Distributing Points**—New York 337 Broadway; Philadelphia, 830 Arch St.; Chicago, 307-309 Wabash Ave.; Boston, 396 Boylston St.; Buffalo, 615 Main St.; Detroit, 344 Griswold St.; San Francisco, 304-306 McAllister St.; Toronto Junction, Ont.; London, W., 24 Orchard St., Oxford St.; Paris, 6 Place de la Madeleine; Hamburg, Neuerwall 36.  
**Factories**—Toledo, Ohio; Westfield, Mass.; Toronto Junction, Ont.; Thompsonville, Conn.

# Remember

SOMEBODY WILL  
SELL . . .

# REMINGTON BICYCLES.....



The Shield of a Great  
Name.

IN YOUR TOWN.

If you want this business write us at once for the agency.

## Remington Arms Co., Ilion, N. Y., U. S. A.

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# The Dietz.... Bicycle Lamp

IS THE RESULT OF  
FIFTY YEARS OF EXPERIENCE  
IN LAMP BUILDING.

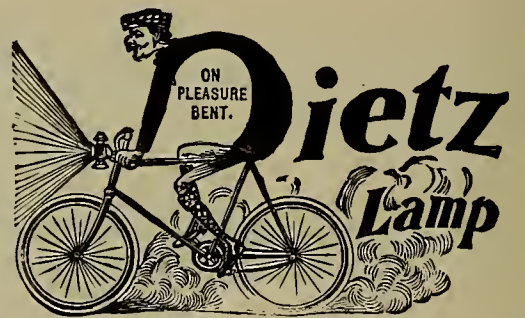
MR. JOHNSTON SAYS:

"We will push it because we know it is a 'good one'" and he knows.

G. R. JOHNSTON COMPANY,  
Bicycles and Bicycle Sundries,  
105-107 Chambers St., 91 Reade  
St., 33 Warren St., cor. Church,  
New York.

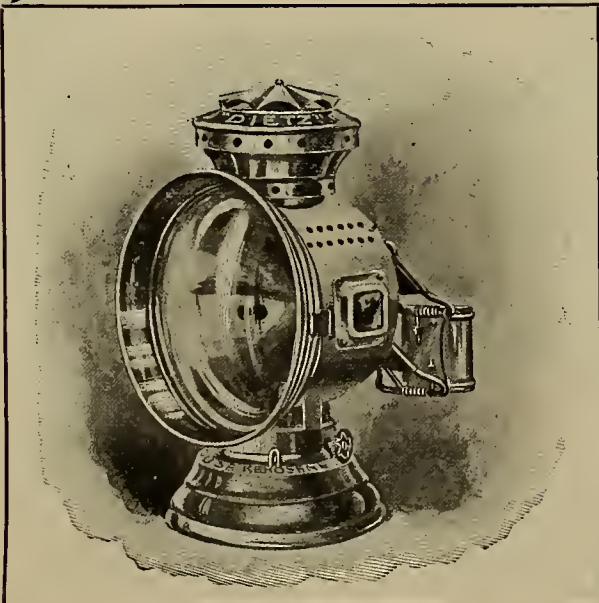
R. E. Dietz Company:

We take pleasure in saying that the Dietz Bicycle Lamp has given first-class satisfaction. We have never received a complaint in reference to same, and that is more than we can say for a great many lamps which we have handled. It is just the lamp we could expect the R. E. Dietz Company to put on the market, and we shall continue to push it because we know it is a good one.



Very truly yours,

G. R. JOHNSTON CO.,  
per G. R. Johnston.



It stays alight. It is handsome in appearance.  
It will not smoke. Perfect combustion.  
It gives more light. Light white and intense.  
Parabolic reflector throws light straight ahead.  
No details of construction neglected.

All Jobbers Should Catalog It. Electros on Application.

## R. E. DIETZ COMPANY

(Manufacturers of Lamps and Lanterns since 1840)

72 Laight Street, - - New York City.

**DEALERS** who have sold Imperial Wheels for the past ten years, knowing their superior qualities and the satisfaction they give the rider, are contracting for '99.

**DEALERS** who have not handled them can make no mistake and will increase their business and make money by contracting for the

**OLD RELIABLE**

# Imperials

*—the go-lightly kind.*

For the coming season.

**EXPERIENCE** is a valuable teacher and ten years' experience in wheel building, backed by ample capital, has enabled us to bring the Imperial to its present perfect condition. The '99 line is a money maker for any dealer.

Write for terms and discounts

**AMES & FROST COMPANY, Chicago**

Border Copyright '98.

# ELK BICYCLES

Built on correct lines of best materials, with finest equipments, comprise a line of wheels of superior merit. =====

.... PRICE LIST ....

**ELK ROADSTER, Models 10 and 11, \$50**

**ELK SCORCHER, Models 20 and 21, \$40**

—————Models 30 and 31, \$25—————

## The Arcade File Works

WORKS:

**New York:**  
97 Chambers Street.

**ANDERSON, IND.**  
U. S. A.

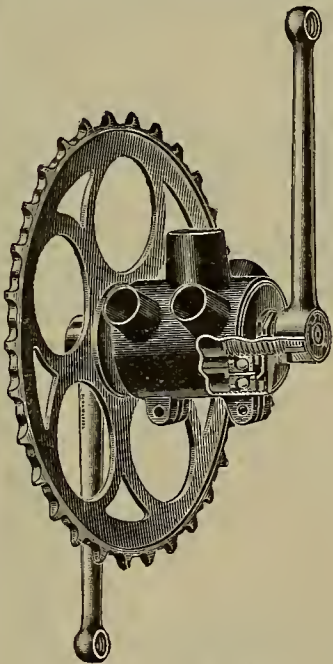
**Chicago:**  
118 Lake Street.

ALLERTON, CLARKE CO., Sales Agents.

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A. D. Meiselbach,  
North Milwaukee, Wis.,  
U. S. A.

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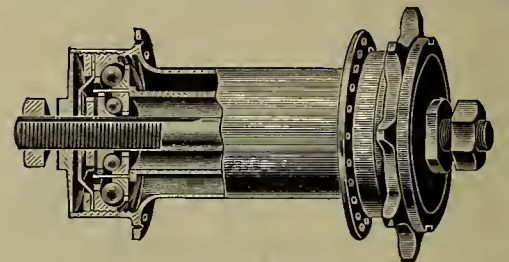


Pat. Dec. 28, 1897.

THE SCIENTIFIC AND PRACTICAL

# BEARINGS

OF FUTURE HIGH GRADE BICYCLES.



Pat. Dec. 28, 1897.

## Why?

The Revolving Inner Sleeve—like a sidewalk that moves as one walks—increases speed. The construction—see cut—produces easy running always. No dust can enter into the bearings. The oil feeder lubricates automatically for a complete season. Only light oil used. No clogging with dirt and grease. Only one adjustment for one season. No breakage of cups and cones. Wears twice as long as ordinary tool steel bearings.

Whether speeding on the level, or “plugging” through sand and mud, or climbing hills, or racing—these bearings add 40 per cent. of ease or speed for the same expenditure of power.

PONDER—INVESTIGATE—THEN BUY

**THOMAS** REVOLVING HUBS  
AND HANGERS.

J. P. THOMAS & CO., 439-441-443 31st Street, Chicago, Ill., U. S. A.

Mention The Cycle Age

# Soudan Mfg. Co.'s Wheels

will not be seen at the Chicago Cycle Show. ❁ ❁ ❁

## Reason Why?

Too busy at our factory. Will be pleased to show our goods at our office You are cordially invited to call.

### The Soudan Mfg. Company

488 Carroll Avenue, Chicago, Ill.

Mention The Cycle Age

# 1899—Pierce Special Bicycles—1899

MODEL 121, 21 in.; 122, 22 in.; 123, 23 in.; 124, 24 in.; 125, 25 in.  
MEN'S, \$50.00

MODEL 127, 20 in.; 128, 22 in.; 129, 24 in.  
WOMEN'S, \$50.00



—SPECIFICATIONS—

Frame flush throughout. Color—black or carmine. Forks—full nickel. Crown plate, nickel. Rims—purple or carmine. Tires—1½ in., Hartford 80, or Morgan & Wright. Hubs—Special tubular. Handle Bar—reversible or Kelly No. 3. Saddles—Mesinger Special, Wheeler Extra or Garford Brown. Cranks—6½ or 7 in. Drop—3 in. Pedals—Star. Gear—74, 77, 80, 84. Chain—3-16 Indianapolis. Lamp brackets, foot rests optional.

—SPECIFICATIONS—

Frame flush throughout. Color—black or carmine. Forks—full nickel. Crown plate, nickel. Rims—purple or carmine. Tires—1½ in., Hartford 80, or Morgan & Wright. Hubs—Special tubular. Handle Bar—up turn. Saddles—Mesinger Special, Wheeler Extra. Cranks—6 or 6½ in. Drop—3 in. Pedals—Star rubber. Gear—68, 70, 72, 77. Chain—¾ Indianapolis. Lamp bracket, foot rests and internal brake optional.

... Write for Advance Sheets.

**The George N. Pierce Company**

Buffalo. New York. Boston.

MORROW COASTER AND BRAKE AT USUAL EXTRA.

# Favorite JUVENILE Bicycles

Are recognized by the trade to be the Best  
Juvenile Bicycle ever put on the market.  
(Confirmed by our catalogue specifications.)

The largest and best dealers in the country have learned this fact  
from past experience and the majority are with us for '99.

We are also making a specialty of Stripped Adult Bicycles for '99.  
If you are interested in a \_\_\_\_\_

If your  
Jobber does not  
handle....

**"FAVORITES"**

Write Us.  
We are  
Price Makers

**High Grade Stripped Wheel  
at a Low Price**

Communicate with us. \_\_\_\_\_ '99 Catalogue now ready.

Excelsior Needle Co.'s Spokes and Nipples at  
BOTTOM PRICES.

**THE TOLEDO METAL WHEEL CO., - Toledo, Ohio.**

Mention The Cycle Age

**"Handsome Is as Handsome Does"**

AND THE \* \* \* \* \*

# Handsome Viking

\_\_\_\_\_ Does all that is claimed for it.

It looks well, rides well, wears well and sells well,  
and the dealers who sell it are treated well. \* \* \*

\* \* DO YOU THINK YOU  
WOULD LIKE TO SELL A  
WHEEL OF THE SORT?



**Viking Manufacturing Co.**

\_\_\_\_\_ Toledo, Ohio.

1899

# MONARCH AND DEFIANCE BICYCLES

Are the best that money can build and our prices are lower than those quoted on many wheels of inferior quality. . . .



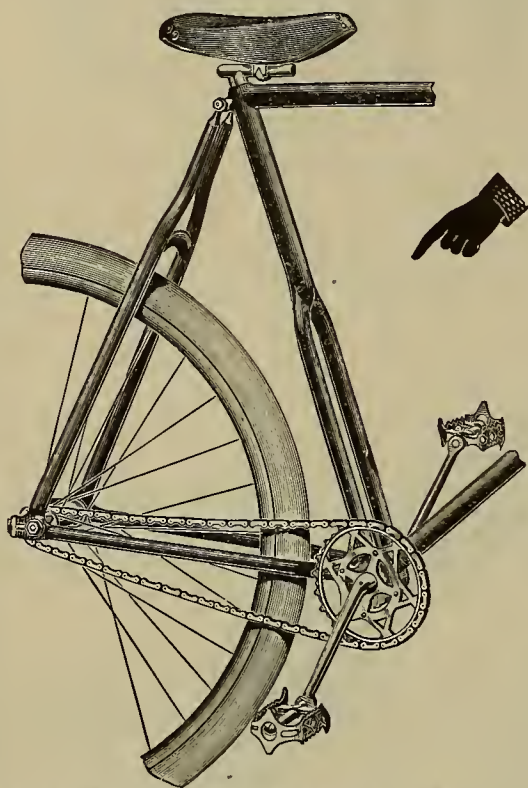
Our KING and QUEEN Models are absolutely the finest pair of bicycles on the American market which can be retailed at \$25.00 and afford a good profit to the dealer. High grade equipment and manufactured from first-class material throughout. You will regret it if your competitor secures our line for 1899. Applications for agency in open territory will be given prompt attention. Send for 1899 complete catalogue now ready.

"RIDE A MONARCH AND KEEP IN FRONT."

**MONARCH CYCLE MFG. CO.** LAKE, HALSTED and FULTON STS. **CHICAGO**  
NEW YORK LONDON HAMBURG

# TO AGENTS

If you want to make money and give satisfaction to riders, you had better secure a distinctive and meritorious line for 1899. You have undoubtedly heard of ❀ ❀ ❀ ❀ ❀



## The America "Truss Frame"

bicycle, which is the most rigid, strongest and graceful bicycle built. Riders declare it is worth double the price of the ordinary frame bicycle

The "America" is the Only Truss Frame Sold by Agents.

Gents' and Ladies' Models.....List Price, \$50 00

The BRADLEY, 30-inch Special, Model No. 33 .....List Price, 45 00

The BRADLEY, 28-inch, Models Nos. 31 and 32 .....List Price, 40 00

The Bradley wheels combine all the latest improvements, including the "One-Piece Fauber Crank," etc.

The ORIOLE, Gents' and Ladies' Models Nos. 29 and 30.....List Price, 35 00

The Oriole models combine all of the up-to-date features, including Seat Post and Handle Bar Internal Expanders, etc.

We also make the AMERICA Truss Frame Tandems, Models No. 25 Double Diamond, and No. 26 Combination Frame, with center-drive attachment which is pronounced by all riders to be the easiest running tandem made .....List Price, 100 00

The above is a complete line. Any agent can sell rapidly. We want good representatives in United States and foreign countries. Write us for particulars.

Export Department: 5 Broadway, New York City.  
David Bradley & Co., Council Bluffs, Iowa.  
Bradley, Clark & Co., Minneapolis, Minn.  
Bradley, Wheeler & Co., Kansas City, Mo.

DAVID BRADLEY MFG. CO. Bicycle Department,

73 to 77 FULTON STREET, CHICAGO, ILL., U. S. A.

# To the Jobber

That Has Not Yet Issued His '99 Catalogue.

**H**AVE you made your arrangements to job our line of transfers for the coming season? Do you know that we have our '99 line of bicycle name plates and frame decorations complete, that we furnish electro cuts to the jobbers free, that we furnish samples for traveling men to sell from, without charge, that we guarantee absolutely the quality of the goods we sell, and furthermore, that it's a nice little specialty for any jobbing house to handle, that the trade is most decidedly on the increase with the dealers and repair men? If you have not yet done so, GET IN TOUCH WITH US.

Some of the jobbers of our goods have sold upwards in the thousands of dollars' worth last year, so you see the field is not so small as it apparently might appear to the casual observer.

Our line of name plates to be sold to the dealer and repairman is in the nature of beautifully colored name plates which can be furnished with the dealer's name and address in the design; that is, they are so made that we can afford to sell them at a low rate and it is a splendid item for the jobber to handle and to catalogue. Write for Catalogue, Samples and Prices.

## The Meyercord Co., Inc.

American Manufacturers, Guaranteed Decalcomania Transfers,

ST. LOUIS OFFICE:  
621 Holland Bldg.

Main Office: Chamber of Commerce Bldg., Chicago.

NEW YORK OFFICE:  
805 St. James Bldg.



# The Liberty

CYCLE COMPANY

## List

...IS **\$50**

For All Single Road Wheels. \* \$60 for Track Racers.  
\$75 for Tandems.

### AGENTS

LIBERAL OPTIONS AND  
LIBERAL TREATMENT

Address.....

The Liberty Cycle Co. BRIDGEPORT, CONN., U. S. A.

Your choice of flush joints or outside connections \* \* \* \* \*  
Your choice of arched or square "Liberty" crowns \* \* \* \* \*  
Your choice of colors: Royal Blue, Myrtle Green or Black  
Your choice of tires: Palmer, Goodrich, M. & W. or  
"Liberty" and \* \* \* \* \*  
Your choice of special features only on "America's Representative Bicycle." \* \* \* \* \*



## CUT THIS OUT

### A GOOD RECIPE FOR MAKING BICYCLES....

Take plenty of ripe experience; the largest and finest equipped factory in existence for the manufacture of bicycles; the most expert workmen known to the business; abundant capital; add to these the best materials and supplies that are to be had—put the whole together scientifically, and bake their product in a hot steam enameling oven for three hours, and the result will be

1899

# KEATING BICYCLES

The....  
Lightest  
Wheels  
Built

"365 DAYS AHEAD OF THEM ALL."

Equipped with the unequalled "KEATING NOISELESS DOUBLE ROLLER CHAIN."

Four Grades of Bicycles at: \$75.00, with "that curve."  
\$50.00, with or without "that curve."  
\$40.00, with "that curve."  
\$35.00, without "that curve."

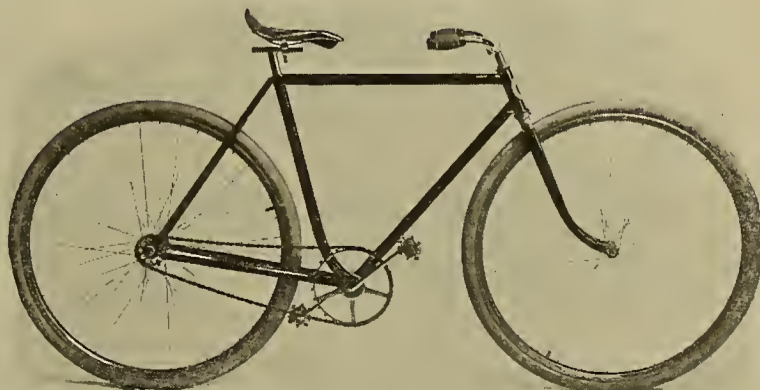
And the "KEATING PNEUMATIC TIRED CARRIAGE" with tubular steel gear, constitute our new line.

"First come, first served." Write for prices TO-DAY.

KEATING WHEEL CO. MIDDLETOWN, CONN.  
U. S. A.

Eastern Distributing House: Smith, Patterson & Co., 52 Summer St., Boston Mass., for all trade in Maine, New Hampshire, Vermont, Rhode Island, and Massachusetts (east of Worcester), and the Dominion of Canada.

Western Distributing House: The Brown-Lewis Co., 293 Wabash Ave., Chicago, Ill., for trade west of Chicago. Mention The Cycle Age



# CYCLE SHOWS

IT will pay every dealer in the United States to see our line for 1899. Don't fail to look us over at the Chicago Cycle Show, January 7th to 14th, spaces 7 and 8. New York Cycle Show, January 22nd to 28th, spaces 66 and 68. We will show you the Stormer, chain and chainless, the Pennant and the Mars. You cannot afford to buy your '99 lines without having seen ours.

## Acme Manufacturing Co.

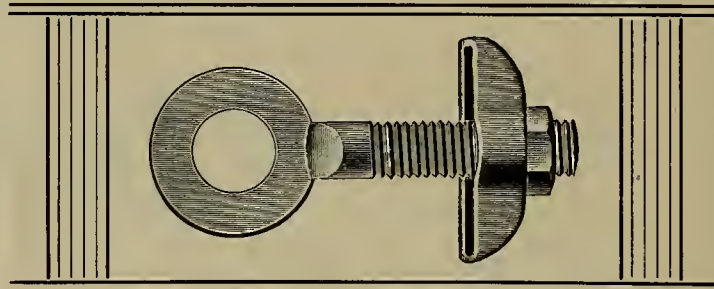
READING, PA.

The James Balley Co., Portland, Me., the state of Maine; Lockwood Taylor Hardware Co., Cleveland, Ohio, for Ohio, S. Michigan and N. Indiana; McDonald Bros., Minneapolis, Minn., for Minnesota, North and South Dakota and Montana; The Congdon & Carpenter Co., Providence, R. I., the state of Rhode Island. Mention The Cycle Age

If you are  
Manufacturing Bicycles

..Our **NEW** Booklet

illustrated in colors  
will help YOU



ELECTRICALLY WELDED  
BICYCLE PARTS, TUBING

## The Standard Tool Co.

CLEVELAND, OHIO, U. S. A.

Mention The Cycle Age

New York Office, 94 Reade Street.

3-Arch Crown Models 28 and 30-in. Wheels  
All Sizes and Styles

## COLTON CYCLE Co. TOLEDO, OHIO, U.S. A.

MANUFACTURERS FOR JOBBERS  
AND EXPORTERS ❀ ❀ ❀ ❀ ❀ ❀

'99 MODELS NOW ❀  
READY ❀ ❀ ❀ ❀ ❀ ❀

UP-TO-DATE LOWEST PRICES RELIABLE

THE VIM BICYCLE CO.,  
56 5th Ave., Chicago, Representatives.

Mention The Cycle Age

# Brazing Furnaces for Immersion

WE BUILD THEM  
38 IN SUCCESSFUL OPERATION  
SAVES WORK AND MONEY

Among the firms using our furnace, who will answer any questions in relation to the same, are: G. Pierce, Buffalo, N. Y.; White Sewing Machine Co., Cleveland, Ohio; Hoffman Cycle Co., Cleveland, Ohio; O. Konigslow, Cleveland, Ohio; Snell Cycle Fittings Co., Toledo, Ohio; Union Mfg. Co., Toledo, Ohio; Kirk Cycle Co., Toledo, Ohio; Gormully & Jeffery Mfg. Co., Chicago, Ill.; The Sudan Mfg. Co., Chicago, Ill.; Eclipse Bicycle Co., Elmira, N. Y.; Gendron Wheel Co., Toronto, Ont.

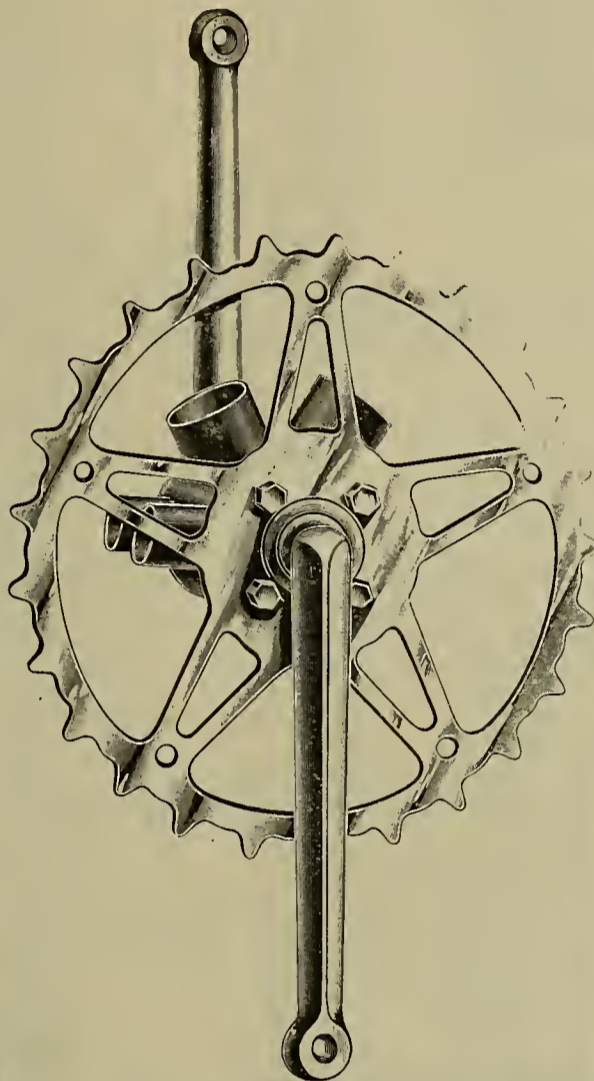
## Chicago Brazing Furnace Construction Company

210 S. Green Street, Chicago, Ill.

# Special Announcement!

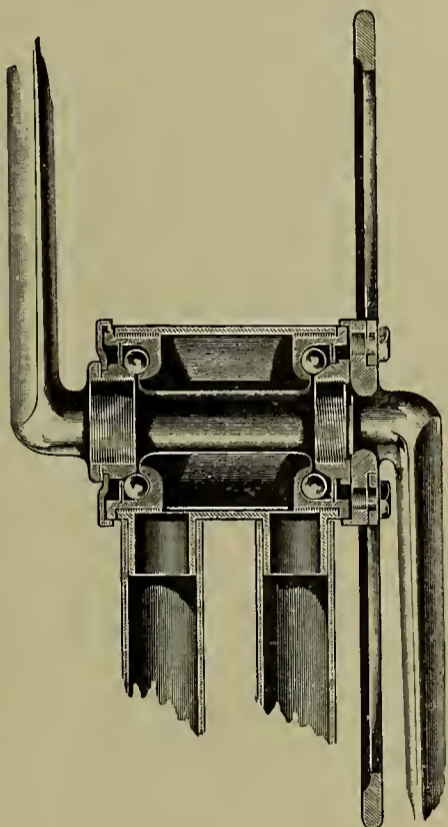
STAR AND  
LEAF  
PATTERN  
SPROCKETS

FOR 3-16 INCH  
AND 1-4 INCH  
CHAIN



HANGER  
SHELLS,  
CRANKS AND  
SPROCKETS

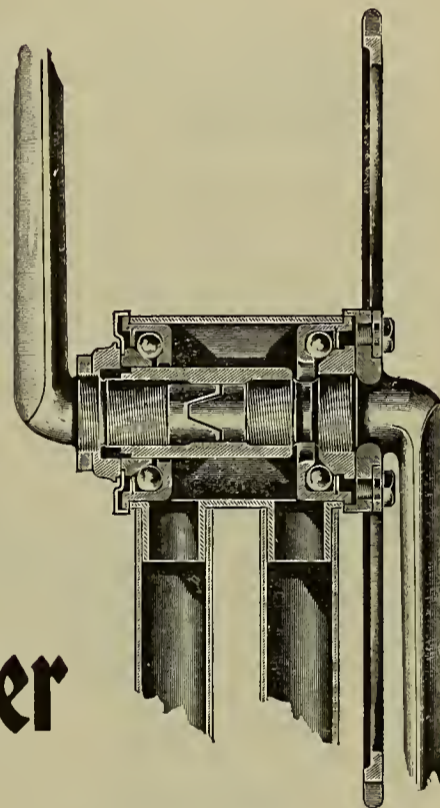
Are Steel Drop Forgings,  
being the only Hanger on  
the market with these fea-  
tures, costing you less money  
than any other Hanger of  
its class.



We want all the trade to positively understand  
that we guarantee protection in the use of our

## Springfield One-Piece Hanger

And have a large stock of both



**1** ————— **AND** ————— **2**  
**Piece Ready for Immediate Shipment**

Our Drop Forged Steel Bicycle Wrench still maintains the lead in quality and price.  
Write for descriptive circular and prices.

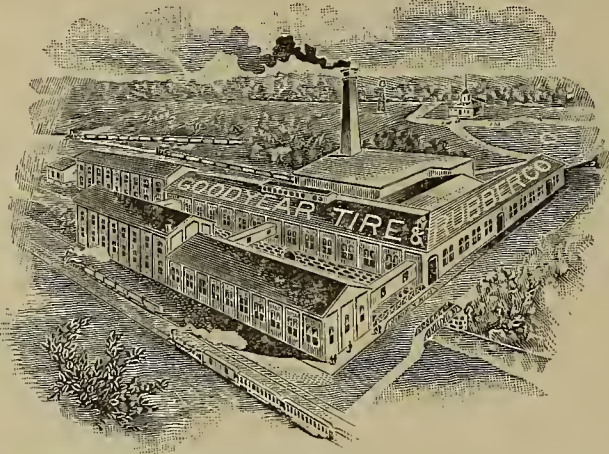
**Crosby & Mayer Co.**  
SELLING AGENTS  
BUFFALO CHICAGO NEW YORK LONDON

**Springfield Drop Forging Co.**

(P. O. Address  
BRIGHTWOOD.)

**Springfield, Mass., U. S. A.**

Mention The Cycle Age



**T**HE above is an exact photograph of our factory. It has the best and most improved machinery and is without exception the finest equipped tire factory in the world. Our employees are old in tire experience—the best the country affords. By reason of our fine equipment and experienced mechanics we are able to manufacture better tires at a lower price than any other factory. Our capacity is 1500 pair per day. Our line: tires, tire tape, inner tubes, valve stems, pedal rubbers, frame buffers, etc., etc. It is to your interest to make no contracts before hearing from us. Write for prices and catalogue.....

**Goodyear Tire & Rubber Company, Akron, Ohio.**

The Speeder Cycle Company

**Guarantee**



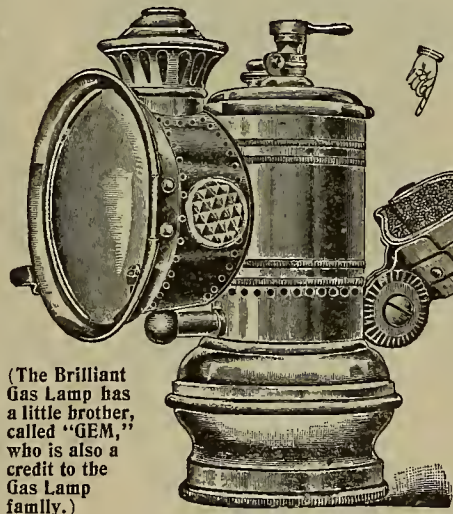
That they will not build over 3,000,000 wheels for 1899.  
 That they will not build any wheels out of material that they have bought at 25 per cent on the dollar.  
 That they have the best and most complete line of wheels that will be on the market for 1899, and are now in position to fill orders promptly.

ALCAZAR, 30-inch Model.....	\$55.00
ALCAZAR, 28-inch Model, Men's .....	50.00
ALCAZAR, 28-inch Model, Ladies'.....	50.00
<small>3-Crown Models, Handsomely Nick led.</small>	
NEW CASTLE, 28-inch Models, Men's....	40.00
NEW CASTLE, 28-inch Models, Ladies'..	40.00
<small>With Diamond Shaped Front and Rear Forks.</small>	
ATLAS, A Work of Art in Both Ladies' and Gents' .....	35.00

Our catalogue has gone to press and if you will send your name we will mail you one.

**THE SPEEDER CYCLE CO., NEW CASTLE, IND.**  
 CUTS WILL FOLLOW. WATCH THIS SPACE.

**THIS IS THE LAMP THAT IS NAMED**



THE "Brilliant"

THAT BURNS GAS.. ..

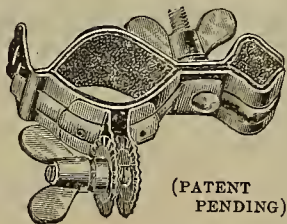
that does it well; that gives the best light; that makes no trouble; that never goes out; that burns cool; that is easy to charge; that is "dead-easy" to clean; that looks best; that takes loose carbide; that also takes cartridges; that sells at the right price, and—that stays sold!

(The Brilliant Gas Lamp has a little brother, called "GEM," who is also a credit to the Gas Lamp family.)

(Patented Nov. 21, '98. Other Patents Pending.)

**This is the Bracket**

That comes with the Lamp;  
 That's named the "Brilliant";  
 That is built so well.



**This is THE Bracket**

That fits ANY head-post, or ANY fork, or ANY buggy dash; that releases the lamp on the turn of a screw, and—this is the Name of the Makers, who will state the price, that is asked for this lamp; that has these good points—

**MANHATTAN BRASS COMPANY**

Western Department:  
 132-134 Lake St., CHICAGO.

Factory and Main Office:  
 338 E. 28th St., NEW YORK.

**WE DO NOT**

claim to manufacture the best bicycles in the world

**BUT WE DO**

manufacture three grades of bicycles; any one of them will compare with a hundred so-called bests.

**OUR PRICES**

are favorable to the buyer, and our discounts are liberal to the dealer.

Model A, 30-inch.....	\$50 00
Model B, 28-inch.....	35 00
Model C, 28-inch.....	25 00

FOR FURTHER INFORMATION ADDRESS

**THE S. G. MORRIS FITTINGS Co.**

CLEVELAND, OHIO.

**Closed to Argument.**

Any question as to the superiority of a running gear which not only offers less resistance than another under conditions most favorable to the latter, but which is always at its highest efficiency while the other may run easily today and hard tomorrow, is closed to argument. There can be but one answer, and it is as stable as the solution of a problem in exact science. From it there can be no appeal. There are excellent chain-driven bicycles, but none of them is comparable to the Columbia Bevel-Gear Chainless, which is not only easy running, sure and speedy when circumstances are favorable, but which will carry you with equal certainty through every state of weather or road, which must of necessity run tomorrow as it runs today, and which is always completely ready to ride so far as its running parts are concerned. The superiority of this machine is demonstrated in many other ways, notably in the comparative ease with which it takes grades, in the immunity of its rider from many of the accidents which most frequently happen, and in its cleanliness, which renders precaution against soiling the clothing entirely unnecessary.

**Two New Columbias.**

The Pope Manufacturing Company has in no wise relaxed its attention to the improvement of chain-driven machines, as is very plainly evidenced by the fine points of Models 57 and 58, two new members of the Columbia family which combine every excellence that can possibly enter into the building of bicycles of their kind. Some of the Columbia features seen for the first time in these machines are worth special comment. In design the latest and most approved lines have been followed in every particular. The large (1¼-inch) main tubes, the improved flush joints, the wheel base affording room for as large sprockets as may be wished, the special cutting of the sprockets to guard against loss of power through sliding of the chain, the internal expanders at head and seat post, and the handsome finish, which includes black enameled, gold-striped rims, are improvements which must strongly appeal to every practical wheelman or wheelwoman.

**Good Qualities Everywhere.**

Very handsome in line and finish are the 1899 Hartfords. And that these machines are not lacking in the more essential qualities of durability, strength, and ease of running, is abundantly evidenced by the character of the material and workmanship which enter into their construction. For many years the Hartfords have been popular, and for many years they have had a higher place in the estimation of thousands of practical riders than many other wheels which have been sold at higher prices. The Hartford rider has the habit of remaining a Hartford rider, unless he or she discards the Hartford in favor of the Columbia.

**Something About the Forty-Nines.**

Very popular among road riders last year was the light, free-running Columbia Model 49. The same "Forty-nine" with 1899 improvements is offered again this year. Chief among the changes is the new construction at the head, which very materially adds to the strength of the machine. Model 49 is in every way a desirable mount and at its new price will be a quick seller.

# Don't Waste Your Energies

in trying to sell bicycles that are "Just as good, but not so well known." The better known an article is, the easier it is to sell especially when offered at popular prices.

## The Columbia Chainless, \$75

is within the reach of almost everyone. That it is superior to any chain-driven wheel is no longer open to argument. Any unbiased person who has ridden the Columbia Chainless 100 miles or over will testify to this.

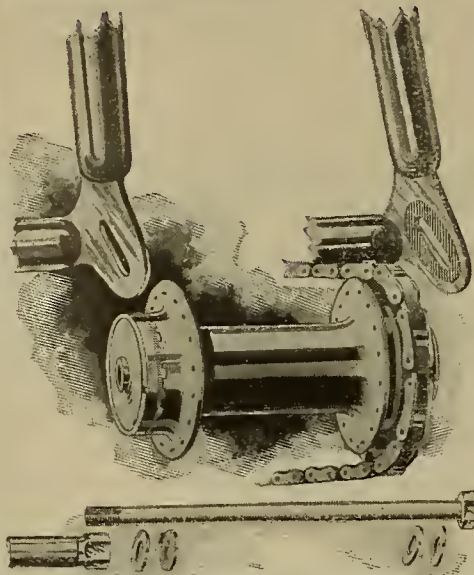
## The Best Columbia Chain Wheels, \$50

Models 57 and 58 are new 1899 models. We have no "SPECIALS" with higher list prices. Every advanced idea that can aid in bringing the chain-driven bicycle to the highest point of development is expressed in these two models. Improved flush joints, wheel base affording room for sprockets as large as may be wished, special cutting of the sprockets to guard against loss of power through sliding of the chain, internal expanders at head and seat post, improved finish, with black enameled gold-striped rims are a few of their good points.

**Hartfords, \$35      Vedettes, \$25, \$26**

complete the line most desirable for any bicycle merchant. Write to our nearest Branch House at once.

**POPE MFG. COMPANY,      Hartford, Conn.**



# Hubs

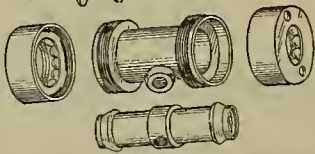
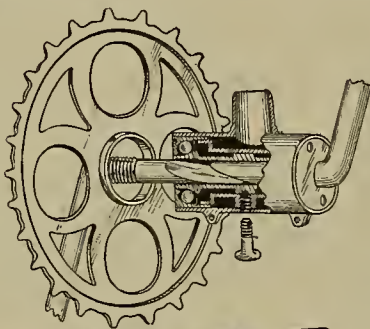
TO SMALL  
MANUFACTURERS  
AND  
REPAIRMEN :

We have just finished up about one thousand pair of Shirk Hubs and Two-piece Hangers. We have materially improved on the original Shirk construction. The goods are made right and finish is perfect.

The hubs once adjusted are always adjusted. Axles removed without interfering with adjustment of bearings. Front wheel put in or removed without spreading forks, disconnecting chain, or affecting alignment of wheel. 5-16 balls front and rear.

# HANGERS

The hanger is a marvel of mechanical perfection and especially adapted for repairmen. Its use will characterize a wheel as of the highest grade and add at least \$10 to its selling price. Do not complete your arrangements until you get full particulars and prices. Will have goods on exhibit at space 34, Chicago Cycle Show.



Chicago Handle Bar Co.

312-314 5th Ave., CHICAGO.

Without a Peer for '99

# THE "APOLLO"

Highest Grade & Finest Finish.  
28 or 30-inch Wheels

# THE "VESPER"

Finest Medium Grade Bicycle on the Market.

# THE "DEVON"

A Good, Cheap Grade with Up-to-Date Features.

## BICYCLE SUNDRIES

Good Agents Wanted Everywhere. Catalogues  
Ready January First.

EDW. K. TRYON, JR., & CO.

PHILADELPHIA, PENN.



# Pocket Book Pointers for Saddle Buyers

You are making and selling wheels for the money in it. If you build high grade wheels you wish to equip them with the best saddle on the market.

Gilliam Saddles are practical and give the best of satisfaction to the rider.

Gilliam Saddles are not only attractive saddles but are sold at attractive prices.

Before closing 1899 contracts let us show you our sample line.

Gilliam Manufacturing Co.

CANTON, OHIO

# STEEL BALLS



TRADE MARK.  
REGISTERED.

We are the ONLY makers that turn out Uniformly Perfect Balls.

## THESE ARE OUR GUARANTEES:

- First—That every ball is A PERFECT SPHERE.
- Second—That every ball is within 1-10,000 of an inch of exact size.
- Third—That the surface of the balls is absolutely smooth and is free from scratches and pit marks.
- Fourth—That balls bought from us at one time will be exactly like balls of a similar size bought from us at any other time.
- Fifth—That the balls are made of the best grade of ball steel that can be bought.

OUR BALLS MAKE EASY RUNNING WHEELS.

YOU WON'T FIND on our boxes a caution not to mix balls.

OUR PRICES ARE THE CHEAPEST. OUR BALLS ARE THE BEST.

THE STEEL BALL CO.

39 W. RANDOLPH ST., - - CHICAGO, ILL.

Mention The Cycle Age



OUR NEW PATENTED TWO-PIECE HANGER IS THE MOST PRACTICAL AND MECHANICAL HANGER EVER PUT OUT.

# THE Manson

THE ORIGINAL 3 CROWN WHEEL

EUROPEAN OFFICE  
149 STRAND, W. C.  
LONDON



Pacific Coast Agency  
642 GOLDEN GATE AVENUE  
SAN FRANCISCO

LIST PRICE ON  
30-INCH WHEELS, \$5.00  
EXTRA.  
Furnished in either model.

IF DEFECTIVE PARTS ARE FOUND IN  
**THE MANSON BICYCLE**  
WE WILL REPLACE FREE AND PAY ALL EXPRESS CHARGES  
MANSON CYCLE CO. 153-5 W. JACKSON ST. CHICAGO.

3 MODELS  
\$30—\$40—\$50

Mention The Cycle Age

# YALE BICYCLES

WILL BE EXHIBITED AT  
BOTH CHICAGO AND  
NEW YORK.

WE have a proposition especially interesting to agents and our line certainly is most attractive both in price and quality. Our men are now on the road and will call on you if you send us your name and address.



The Kirk Mfg. Co.  
TOLEDO, OHIO

## IF WE COULD PRINT

What is said by Agents about the quality of the "every day"

# ARIEL

it would be the most satisfactory "adv." ever printed—and the longest—  
For '99 we are alive to the requirements of popular prices.

9 Different Models—from \$40 up to \$65 for chain wheels; \$75, two models, Chainless; and \$75, double diamond chain tandem; and \$85, front diamond and rear drop tandem.

We will send our representative if interested.

ARIEL CYCLE MFG. CO.  
GOSHEN, IND.

# '99 HOFFMAN LINE



BRAND NEW  
AND UP-TO-DATE.  
ALL THE LATEST  
FEATURES.

Our \$50 Road Wheel is well worth your consideration.

INTERESTING PRICES TO AGENTS.

Write for catalog and prices

THE HOFFMAN BICYCLE CO.

CLEVELAND, OHIO, U. S. A.

Mention The Cycle Age

Why Not Get Into Line?  
You Want the Best



BURNS ACETYLENE GAS

WRITE US FOR DETAILS.

Edward Miller & Co. Meridan, Conn.



A LITTLE TALK ABOUT ACETYLENE LAMPS.

At the beginning of the season just passed there were sixteen Carbide Gas Bicycle Lamps offered to the purchasing public, each individually claiming to be the greatest and only perfect lamp on earth. Many of them possessed marvelous attachments for regulating the flame, purifying and cooling the gas, automatic self-acting water valves, anti-explosive attachments, smoke consumers, refrigerator coolers, safety valves, etc. They all fell by the wayside and demonstrated their inability to work before the season was one-quarter advanced, with the exception of the Electro, which was universally conceded to be a decided success and the best all-around lamp on the market, and one other.

A Carbide Lamp that will burn perfectly and is easily managed and regulated by a novice is a more difficult article to construct than most people are aware of. Aside from the mechanical ingenuity, which, of course, is an absolute necessity, the inventor requires a wide range of knowledge as to the peculiarities and characteristics of carbide gas, which can only come through long and intimate association with it. Any bright designer can make a lamp on paper that looks remarkably well, and theoretically will work to perfection. The carefully made, hand constructed model will work nicely on one's desk; but a lamp that can be turned out from the factory by the thousand, and each and every one work satisfactorily on the wheel of a rider, who, as in most cases, has little if any ingenuity, is a vastly different proposition which most manufacturers have discovered to their sorrow.

The Electro Lamp Co. feel that they have now struck the key note in their new 1899 model of the Electro, which they are now introducing to the trade through their exclusive selling agents. Their lamp of last year, as we remarked before, was the success of the season. They sold 15,000 of them in the city of New York alone that are now in the hands of delighted riders. One year's experience, however, has developed the fact that while the lamp was universally admired and eagerly sought for, there was still opportunity for improvement. They discovered a few weak points mostly in the lack of strength in construction, which they have entirely remedied in their new model. Several new features advantageous to the lamp have been added, in the way of an aluminum reflector and a new method of conveying the water direct to the carbide in such a manner that the lamp may be jarred or jolted over any form or condition of road bed, and the flame will still maintain its uniform height. In fact the lamp as it now stands represents the acme of perfection. Beautiful in construction and finish; small in size, weighing less than a pound; particularly strong and serviceable; and certain to give absolute satisfaction wherever it is introduced.

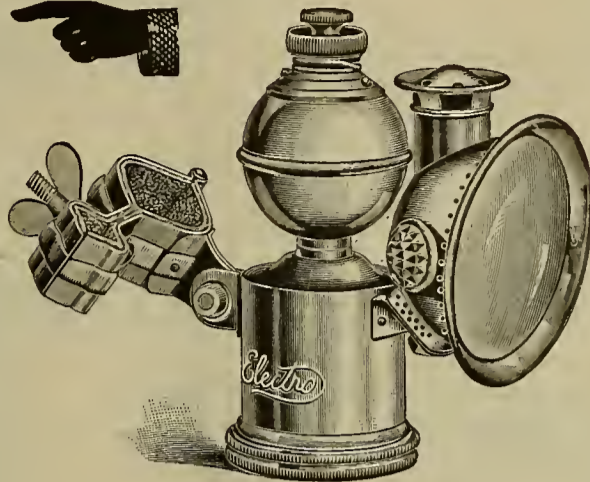
The only way to thoroughly appreciate our lamp is to order a sample, test it in a practical way, and you are certain to become an enthusiastic admirer.

Any jobber who handles the Electro may have the satisfaction of knowing that a dozen lamps shipped to a customer means a dozen sold, and that his response to his bill for the same will be a check for settlement in full, and not returned lamps as payment, with the comment that they are worthless and can't be sold. He will have an appreciative customer on his books who will be constantly sending in re-orders, rather than an indignant one who feels he has been imposed upon, which is certain to be the case if worthless lamps are shipped him.

Our advice to the trade is, don't buy any Carbide Lamps, the Electro included, until you find out positively by actual test that the lamp works satisfactorily, and will do what its makers claim for it. It is generally conceded by people who know a thing or two in the bicycle business that the Carbide Lamp is the coming lamp, and their trade this season will undoubtedly be far in excess of the oil lamp trade; except in the case, perhaps, of very cheap ones.

One important item for consideration with the jobber is the fact that the Electro Co. this season have two large factories which will be devoted entirely to the manufacturing of their lamp. This will place them in a position to fill heavy orders, which they are certain to receive, and to fill them promptly, and at the same time keep pace with duplicates as the season advances. They have lamps in stock to-day and their factories are turning them out at the rate of 3,000 per week, with the possibility of increasing their output if the trade demands. Last year they were handicapped by having only one factory, which accounted for their inability to fill more than one-half of their unsolicited orders, and their apparent lack of energy in making no attempt to introduce the Electro outside of their immediate vicinity. Prices are certain to be sustained, as there is but one source of supply, and they have a thorough appreciation of the importance of so doing. You will notice that there are three exclusive distributing agents. All correspondence relating to the Electro, samples, electrotypes, printed matter, etc., can be addressed to the concern who handles the lamp in the territory in which you reside.

Our carbide cartridges for the coming season will be put up in such a manner that their con-



TRADE MARK  
*Electro*  
REGISTERED.

Acetylene  
Bicycle Lamp

Universally conceded to be the best lamp of last season. Our new 1899 model now in stock. Ready for delivery. Improved in every detail. New features added. It represents in its present form absolute perfection.

Retail Price: \$3

A few first-class jobbers wanted as agents in each state. Address all communications to the exclusive manufacturers' agents who control your territory as listed below

GREENE & HASKELL

Lincoln Building, Nos. 1 and 3 Union Square, NEW YORK CITY

New York, Connecticut, Massachusetts, New Jersey, Rhode Island, Ohio, Indiana, Maryland, Pennsylvania, Maine, New Hampshire, Vermont, Virginia, West Virginia, North Carolina, South Carolina, Kentucky, Tennessee, Georgia, Florida, Alabama, Mississippi and Louisiana.

W. J. BUCKLEY & CO.

No. 204 Dearborn Street, - - - CHICAGO

Illinois, Michigan, Wisconsin, Minnesota, North and South Dakota, Indian Territory, Missouri, Kansas, Nebraska, Texas, Arkansas and Iowa.

N. PENDLETON ROGERS

No. 106 Wall Street, - - - NEW YORK CITY

Colorado, California, Idaho, Oregon, Montana, Wyoming, Utah, Nevada, Arizona, New Mexico and Washington.

Mention The Cycle Age

tents will not deteriorate or evaporate by being carried too long in stock, which was a source of more or less annoyance during the past year.

An additional feature of importance is a metallic cartridge that can be reloaded with any form of loose carbide which will appeal to the rider who appreciates economy more than convenience and absolute cleanliness, which is the beauty of our other cartridge. Our reloading cartridge, however, is a vast improvement over the old method utilized by some makers of using loose carbide in the base of the lamp. Those who have attempted to clean such a lamp preparatory to reloading, realize what a nauseating job it is to the cleaner, as well as suffering the loss of the companionship of friends, who decide to withdraw from the building or immediate vicinity until the operation is complete

and the atmosphere has a chance to clear itself.

We want a few good jobbers in each state who will take hold of the Electro energetically. We do not care to sell too many in the same vicinity, as it only results in price-cutting, and retards rather than aids the welfare of the lamp.

The season is rapidly advancing, and now is the time to come to a decision as to what carbide lamp you are going to handle. It costs no more to have a lamp that you can rely on and have absolute confidence in, than it does to gamble in uncertainties. The Electro has been tried and never found wanting. The new lamp is far better than the old one, and to make a long story short, why not send us your order for a sample lamp immediately?

**Lovell**  
**"Diamond"**  
**Bicycles**  
**are**  
**Supreme**

The Western Review of Commerce (one of the most reliable commercial papers in this country), after a thorough and complete examination of the 37 leading bicycles of the world, to determine "**Which is the best bicycle,**" says editorially: "The unanimous verdict was in favor of the Lovell 'Diamond,' manufactured by the John P. Lovell Arms Co. of Boston, Mass."

We want every reader of this magazine to read this editorial, and will send, postpaid, a copy of the Western Review of Commerce, containing this article, to any who will write us for it.

**John P. Lovell Arms Co.**

131 Broad Street,  
 Boston, Mass.

Agents almost everywhere. If there is none in your town write to us. Our catalog, "Famous Diamonds of the World," free for the asking.

## A WONDERFUL SUCCESS

will be the result if you secure the exclusive agency for our full line of.....

**Hudson,**  
**Lenawee**  
 ....and **Noxall**

=====**BICYCLES**=====

ELEVEN NEW MODELS—BEST OF MATERIAL AND WORKMANSHIP.

**BEFORE YOU BUY**

see our new Model 30, beautifully enameled in scarlet, rims to match. Built with **three royal arch crowns** and 30-inch wheels. Equipped good as the best.

Our salesmen are in the field. Write for catalog and liberal discounts.

**BEAN-CHAMBERLIN MFG. CO.**

HUDSON, MICH.

Pacific Coast Branch: . . . THE BEAN SONS CO., San Jose, California.

Mention The Cycle Age

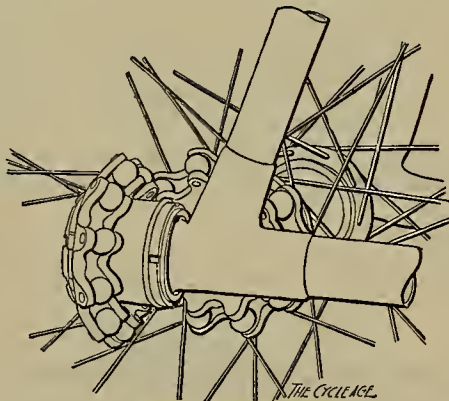
**"The Earth Revolves Upon Its Axis"**

AND SO DOES EVERY  
 BALL IN

## The Bullis Ball Gear

**WHICH  
 MEANS THAT—**

Contact surfaces changing at every revolution insure long and even wear of gear.....



"THE BALL BEARING GEAR."

Replacement of every ball in the gear accomplished as easily as chain repairs.

Every ball capable of independent adjustment insuring entire absence of "back lash" and consequent rattle. Address us for prices, information, etc.

**The Bullis Ball Gear Co.**

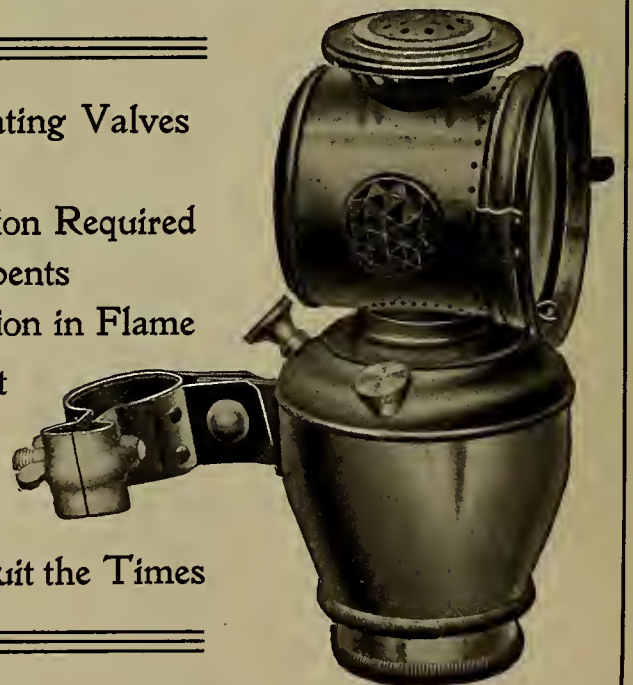
Offices, 38 East Avenue. 353-355 East Main St., Rochester, N. Y.

On Exhibition at both New York and Chicago Shows.

## THE "AUTOMATIC"

Bicycle and Carriage Lamp

No Regulating Valves  
 No Wicks  
 No Attention Required  
 No Absorbents  
 No Variation in Flame  
 Burns Best  
 When  
 Left  
 Alone



Prices to Suit the Times

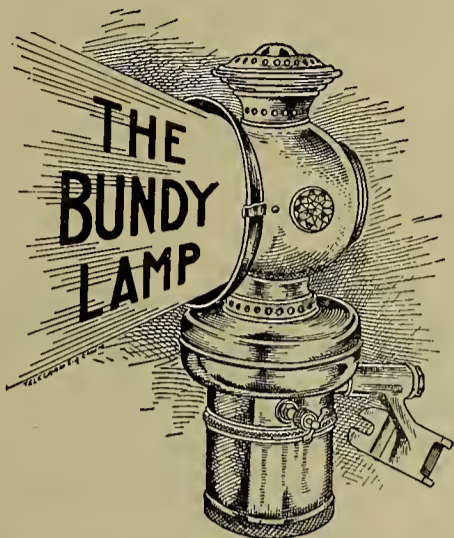
## BURNS • ACETYLENE • GAS

The Plume & Atwood Mfg. Company

NEW YORK AND CHICAGO.

# DOLLARS

FOR  
YOUR-  
SELVES



FOR  
YOUR  
CUSTOMERS

## ECONOMY and BRILLIANCY

INSURANCE PROOF. Approved by the N. Y. State Board of Underwriters.

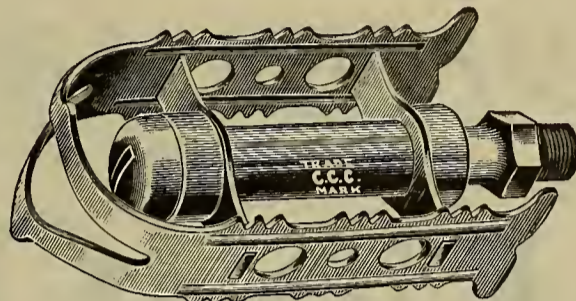
## The Bundy Gas Lamp

There is nothing else "Just as Good."  
Price \$3.50.

### The Frank E. Bundy Lamp Co.

Drawer A, ELMHRA, N. Y., U. S. A. Electro Free.  
N. Y. Show, space 124. Write for Booklet on Acetylene Gas. Mention The Cycle Age

## THE Successful Pedal ...OF '99...



Stamped from best grade Steel; no castings used; the balls, cones and axles are made from Tool Steel, hardened and ground. All parts are heavily coppered and nicked and INTERCHANGEABLE.....

### CYCLE COMPONENTS CO.

Mfrs. of PEDALS ONLY. 9-13 Maiden Lane, N. Y.

Sole Selling Agents: ROGER B. McMULLEN & CO.,  
88-90 Lake St., Chicago, Ill. New York: 309 Broadway.

Mention The Cycle Age

# SOLAR

## Cycle Lamps

...ARE....

**STANDARD** BECAUSE **SATISFY**  
THEY.....

AND FOR THAT REASON

**MORE** HAVE BEEN **COMBINED**  
SOLD THAN ALL OTHER GAS LAMPS.....

OUR

## '99 Lamp Wonder

IS SIMPLE, SAFE AND SUPERB.

Beware of Worthless Imitations  
and Experiments. . . . .

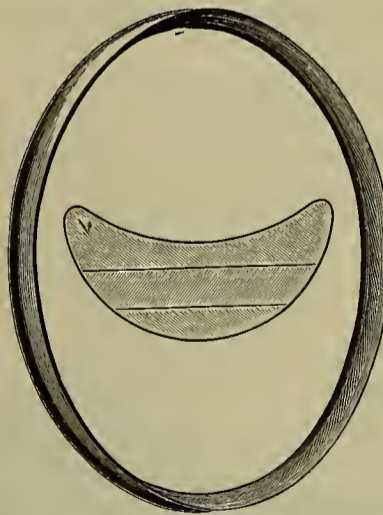
BADGER BRASS MFG. CO., Kenosha, Wis.

Mention The Cycle Age

# Olds Wagon Works

Fort Wayne,  
Ind.....

Manufacturers of  
Single Piece  
and  
Laminated



## Wood Rims

—ALSO—

## Mud and Chain Guards

Don't buy your '99 Rims until you have seen our line. Our prices are right. Drop us a line and we will be pleased to call and submit samples and make prices.

WE ARE LICENSED TO MANUFACTURE THE DUNLOP LAMINATED RIM.

### JOHN CALDWELL & CO.,

612 Consolidated Exchange Bldg., CHICAGO.

Mention The Cycle Age

# THE VANGUARD IS ALWAYS IN THE FRONT RANK, OF COURSE.

**Look!** Two SUPERB WHEELS, listing at \$25.00 and \$35.00.

We are not putting our surplus in a fancy catalogue, expensive traveling men, shows, etc., but into our wheels, and dividing it with the dealer. Get our prices and satisfy yourself.

## VANGUARD CYCLE CO.,

140 South Capitol Avenue, Indianapolis, Ind.

# The UNION ROLLER GEAR CHAINLESS

Represents the Highest Type of Bicycle Construction. The Swiftest Bicycle Built. The UNION has always been heard from, but never as it will be in 1899. The AGENCY IS VALUABLE.

UNION REDHEAD .....	List \$50	} UNION "P"ERFECTION. UNION "D"URABILITY. UNION "Q"UALITY.
UNION WHITEHEAD .....	" 65	
UNION ROLLER GEAR CHAINLESS, .....	" 75	

"BUILT ON A GOLD BASIS."

UNION CYCLE MFG. CO., = = Highlandville, Mass.

## SCHRADER UNIVERSAL VALVE

Trade-Mark Registered April 30, 1895.

### NOTICE.

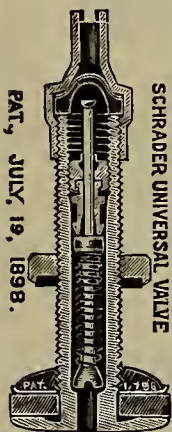
Manufacturers of Bicycles,  
Jobbers and Dealers. \* \* \*

In order to facilitate the obtaining of

Parts of the Schrader Universal Valve

I have concluded to sell parts  
only to the general trade.

Parts 99-1, 99-2, 99-3, 99-4, may be had from all  
tire-makers, or from A. SCHRADER'S SON. Price-  
list and descriptions sent on application.



SIMPLE AND  
ABSOLUTELY AIR-TIGHT

MANUFACTURED BY

A. SCHRADER'S SON

Established 1844.

30 and 32 Rose St.,  
NEW YORK, U. S. A.



# 1899

# VIM TIRES

HAVE MANY  
NEW FEATURES



WRITE FOR  
QUOTATIONS

BOSTON WOVEN HOSE & RUBBER COMPANY,

CAMBRIDGEPORT,  
MASS.

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# EVERYTHING FOR BICYCLES

Our new address is

## 88-90 Lake St.

We occupy five floors which contain the **largest and most complete assortment of**

## Everything for Bicycle

## Builders and Dealers

ever shown in America.

Our prices and terms are right and if you will give us your business we can do you good and help you to make money.

=====ESTABLISHED 1876=====

## Excelsior Supply Co.

**WE** have purchased the Entire Stock, Fixtures and Accessories of Manufacturers' Agents & Supply Co., formerly 115 Lake St., and removed same to above address, and we extend a special invitation to their former customers to call and see us.

**EXCELSIOR SUPPLY CO.**

88-90 Lake St., CHICAGO.

# Fauber 1899 Hanger.

NEW IDEAS—NEW PRICES.

**MANUFACTURERS** who used Fauber Hangers were very successful and well satisfied.

**DEALERS** found them good sellers and bicycles fitted with them not dead stock.

**RIDERS** appreciate the simple and practical construction of the Fauber Hanger and the advantage of a standard article for which you can get any necessary repairs.

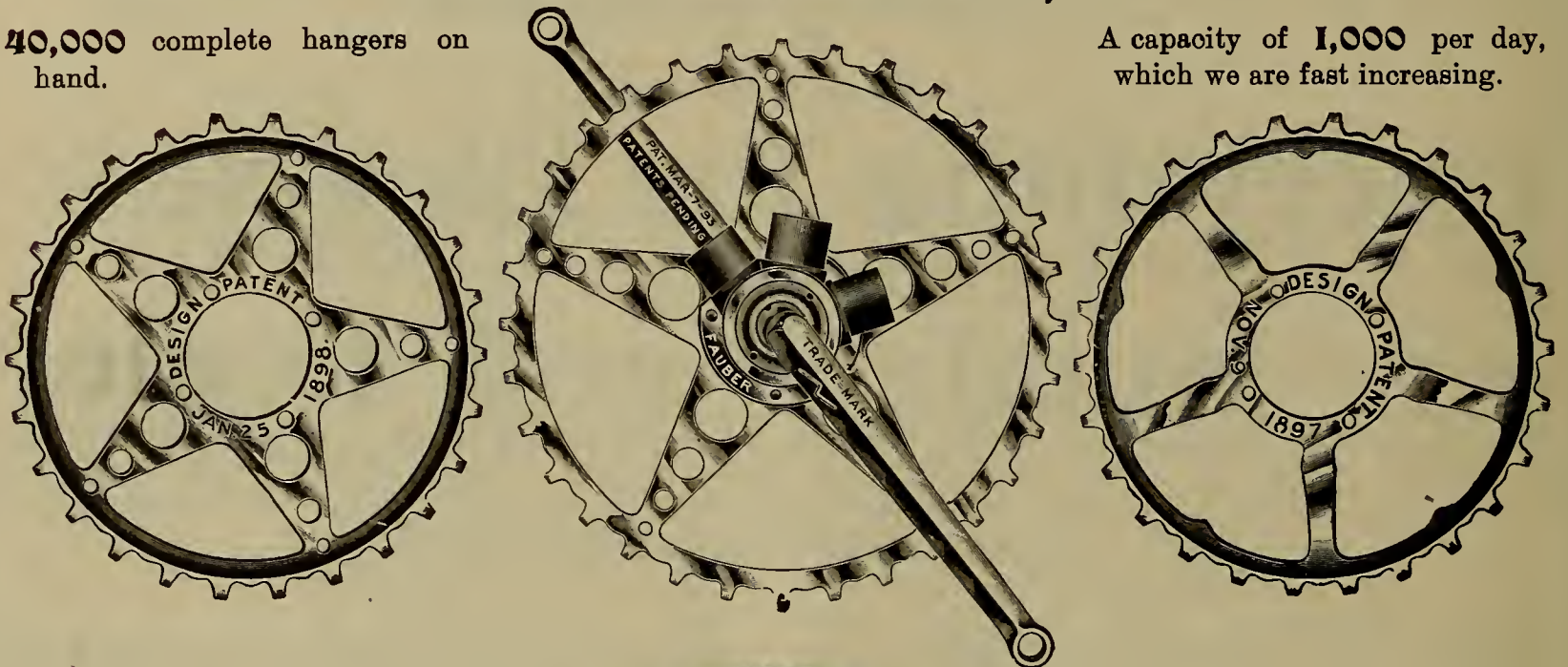
We are **Pioneers** in the manufacture of **One-Piece Crank-Axles** and own more than twenty allowed and pending patents. The **Success** of the Fauber Hanger is **unparalleled** in the bicycle trade.

## OUR RECORD.

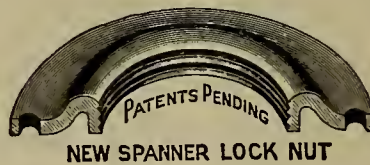
1895	Output over	200
1896	"	9 000
1897	"	30 000
1898	"	100 000
1899	Output estimated	300,000

40,000 complete hangers on hand.

A capacity of 1,000 per day, which we are fast increasing.



Our improved Spanner Lock Nut makes Note this is our



the end of the hanger flush and dust-proof, special construction.

## IMPROVED FAUBER REAR FORKS AND BACK STAYS.

FORK COMPLETE.

PIECES SEPARATE.



**THE COMING CONSTRUCTION**—These forks are made of three pieces ; the neck tube is slotted ; the ends overlap in the joint, making it flush and reinforcing the bend. We furnish the forks ready to assemble. They line up, are easily brazed, finished, strong and light. The shape and style of this fork are perfect. To supply a part of our trade for '99 we have contracted for 500,000 feet of Shelby Tube.

## W. H. FAUBER,

Manufacturer,

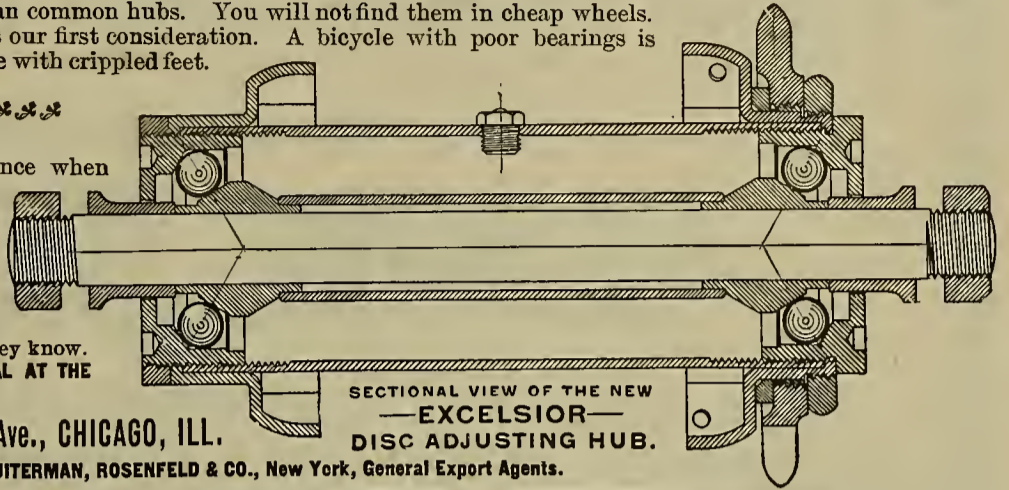
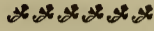
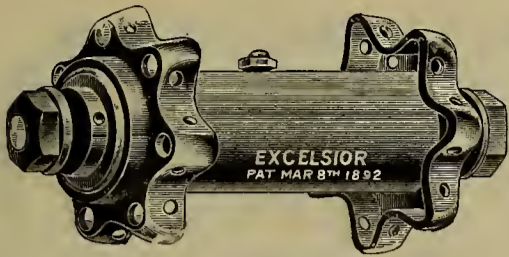
Jackson and Clinton Streets, Chicago.

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# EXCELSIOR HUBS

FOR STRAIGHT TANGENT SPOKES

Cost more than common hubs. You will not find them in cheap wheels. **QUALITY** is our first consideration. A bicycle with poor bearings is bad as a horse with crippled feet.



SECTIONAL VIEW OF THE NEW  
—EXCELSIOR—  
DISC ADJUSTING HUB.

No hub in the world presents such a handsome appearance when in a bicycle as the **EXCELSIOR**.

It's the progressive, up-to-date manufacturer that finds a ready market for his product. The other fellow works hard, spends thousands and wonders.

The Excelsior Hub has been used exclusively on the "Sterling" under a license issued to the Sterling Cycle Works. It has always been a distinctive feature of that wheel, and has done more to make it popular than all others combined. Ask Sterling Agents; they know.

**THE ONLY HUB THAT RECEIVED SPECIAL COMMENDATION AND MEDAL AT THE WORLD'S FAIR.**

CHAS. F. STOKES & SONS, Manufacturers, 56 Fifth Ave., CHICAGO, ILL.

SAMUEL BUCKLEY & CO., New York, Eastern Sales Agents.

GUITERMAN, ROSENFELD & CO., New York, General Export Agents.



STYLE A. NICKEL STEEL BLOCKS & PLATES.



STYLE C. NICKEL STEEL BLOCKS, HIGH CARBON PLATES.

Mention The Cycle Age

### STYLE A.

Made in 3-16-in. or 1/4-in. blocks and plates hardened and drawn to a straw color. The cheapest finish has plates polished on the edge. Six finishes in both qualities.

### STYLE C.

This is the same chain as above as regards accuracy and durability, the only difference being that the plates are made of hard-rolled high-carbon stock instead of nickel steel.

*The blocks of all our chains are made of nickel steel.*

POWER MFG. CO., - Bloomfield, N. J.

# PEERLESS AND CORBIN BELLS



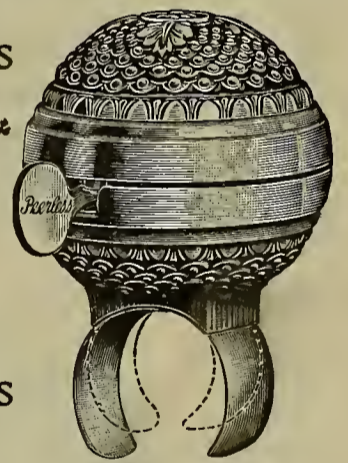
ADJUSTABLE  
LEVERS  
—  
SCREWLESS  
—  
**NEW**

MUST BE SEEN  
TO BE  
APPRECIATED



ADJUSTABLE  
PUSH BUTTONS  
—  
CLAMPS \*\*\*  
—  
**NEW**

CATALOGS  
ELECTROTYPES  
NOW READY



Mention The Cycle Age

THE BRISTOL BELL CO., BRISTOL, CONN., U. S. A.

# SEAMLESS STEEL TUBING

Superior Quality. Anti-Combination Prices.

HERMANN BOKER & CO., 101-103 Duane St., NEW YORK

Sole Selling Agents for the Ellwood Ivins Tube Co., Philadelphia, Pa.; also handle Mannesmann, and Weyersberg, Kirschbaum & Co. Tubing.

Large Stock of All Current Sizes Carried in New York and Chicago.

Mention The Cycle Age

Represented in Chicago by F. A. HASTINGS & CO., 159 Lake Street.

A Good Thing for Large Dealers to Know.

When you contract for

ELMORE BICYCLES

You may be certain that your orders will be promptly filled. We are getting in large consignments of stock now, and are fully able to take the best care of our trade. We have the best wheel on the market, for the price, and want a chance to show it to you.

ELMORE MFG. CO., Clyde, Ohio.

Mention  
The Cycle Age



"Just Hear Dem Bells"!

THE LATEST NEW DEPARTURES.  
Handsomely Modeled and Finely Hand-Chased.

Finished in Antique Statuary Bronze.  
Richest and Handsomest Thing Out.

Brilliant Jewelled Eyes

THE LION. THE SERPENT. THE TURTLE. THE DRAGON.

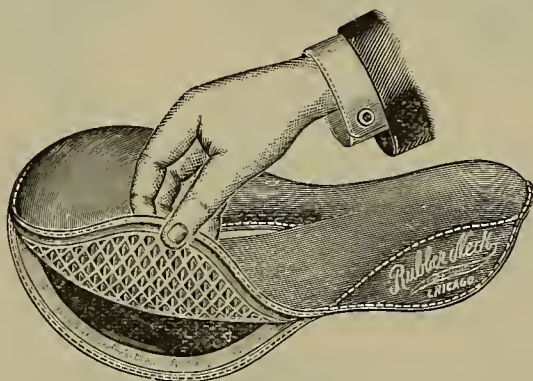
If your dealer does not have them send one dollar and we will mail you a beauty

The New Departure Bell Co., Bristol, Conn.

"RUBBER NECK"

ONLY  
SADDLE IN  
THE WORLD

DOES  
YOUR  
SADDLE  
HURT?

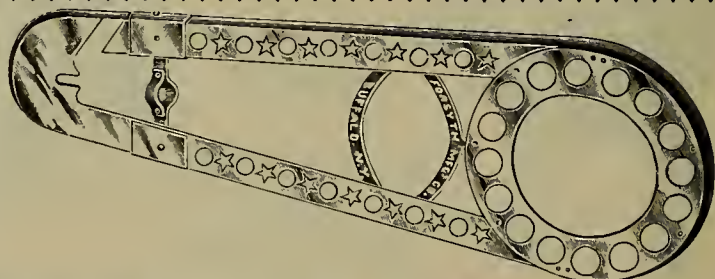


THEN  
TRY  
OURS!

Manufactured by THE BUNKER SADDLE CO.,

Mention  
The Cycle Age

63, 66, 67, 69 and 71 Milwaukee Ave., CHICAGO, ILL



THE ONLY CHAIN GUARD

that is made adjustable to stretch of chain and differences of length between centers of axles. The name "Forsyth" is known only in connection with first quality goods.

FORSYTH MFG. CO., Buffalo, N. Y.

Mention The Cycle Age

"Famous" Three-Crown



Milwaukee Engineering Co.  
Milwaukee, Wis., U. S. A.

Bicycles for 1899



# The Century

OUR MOTTO:

QUALITY FIRST AND ALWAYS

WE HAVE A FULL LINE OF

## High Grade Bicycles

FOR WIDE-AWAKE DEALERS AT JOBBERS' PRICES

MILWAUKEE CYCLE CO., 249-251 Lake Street, MILWAUKEE, WIS.



Send 25c for Detachable Repair. Readily replaces a broken link. No tool bag complete without it.

Our No. 4 Chain is a world beater for '99.



No sprocket climbing, and a beauty

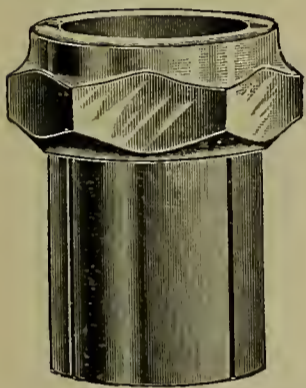
QUALITY, QUANTITY and PRICE



Send 25c for Aluminum Feb. Gold plated \$1.00

INDIANA CHAIN CO., - Indianapolis, Ind.

EXPERIENCE IS THE BEST TEACHER



75,000

## Meilink Expanders

IN USE

Compare our Expander with all others and then decide for yourselves

MEILINK MFG. CO., Toledo, O.

## Star Foot Power Lathes

9 and 11-inch Swing.  
24, 36, 48 and 60 inches  
between centers.

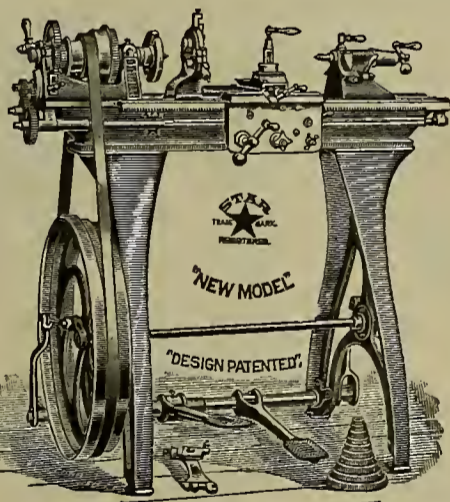
Complete Screw Cutting, Engine Lathes, with Automatic Cross Feed, with or without Compound Rest, Friction Countershaft, etc., for Bicycle and Electrical Work, Tool Makers and Gunsmiths, Technical Schools and Fine Accurate Machine Shop Service.

Send for Catalogue B.

Seneca Falls Mfg. Co.

400 Water St., SENECA FALLS, N. Y., U. S. A.

Mention The Cycle Age



FRAME FITTINGS

## WE MANUFACTURE

everything to make first-class, up-to-date frames for Singles, Tandems, Triplets, Quads and Quints, adapted for 28 and 30-inch wheels. Our 30-inch line for '99 will be the best out.



HUBS

## AND WE SELL

everything to equip these frames in a first-class manner.

## THE BEST CRANK HANGER MADE

is the Armstrong "A" Hanger. You can't afford to use it unless you want the best! The only rim made that is good enough to use in 30-in. wheels is the KUNDTZ. We are their Chicago distributors.

FREE: Send for Wall Sheet and complete catalog showing Working Drawings for over 25 of our '99 Models.



TOOLS

## ARMSTRONG BROS. TOOL CO.

97 West Washington Street,  
CHICAGO, ILL., U. S. A.

New York Distributor: C. Murray Rice,  
105 Chambers St.

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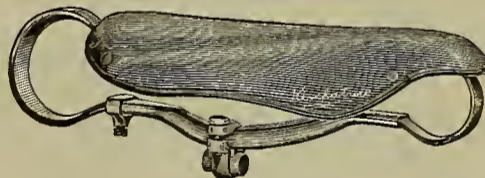
HANGERS

"A THING ONCE SCIENTIFICALLY CORRECT IS FOREVER CORRECT."

Therefore we Announce the Same Line for 1899 and Continue to Make the

## FAMOUS OLD KIRKPATRICK SADDLE

Not a Fad!  
Not a Freak!



Scientifically Correct!

FINEST QUALITY SADDLE EVER MADE.

Tested and Approved by Thousands of Riders for years, now Made Better Than Ever.

PRICE: ALWAYS AND EVERYWHERE, \$4.00

Have it on your wheel for 1899. Jobbers and dealers can supply it. Send for booklet, "Scientific Saddle Making."

KIRKPATRICK SADDLE CO., SPRINGFIELD, OHIO.

# Bicycles

A full line 28-inch, 30-inch and three-crown. Handsomest, best and latest. We have an offer to make you the coming season that will pay to investigate. Send for catalogue.

CHICAGO TUBE COMPANY, Makers,

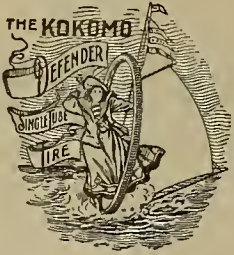
217 E. Washington St., Chicago, Ill.

# .Frame Sets.

For making 28-inch, 30-inch and three-crown bicycles—latest styles. We sell more frame sets and frames than any house in the West. We issued an advance catalogue November 1st but have now ready our regular catalogue of sets, equipment and sundries, hangers, hubs, spokes, saddles, handle bars, etc. Send for it. Bargains now. Frames either enameled or not enameled.

CHICAGO TUBE COMPANY, Makers,

217 E. Washington St., Chicago, Ill.



## Whether Sailing or Wheeling

You Need Defense.  
Put on Our Guaranteed

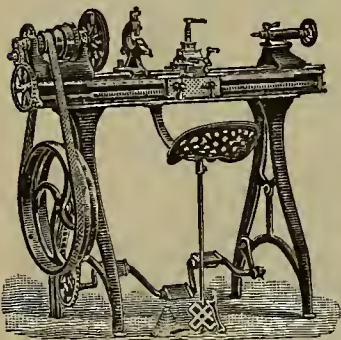
# Defender Special

And You Will Save Expense.

**KOKOMO RUBBER CO., Kokomo, Ind.**

Chicago Branch, H. W. Coolidge & Co., 135-7 Lake St.  
Philadelphia Agent, George W. Nock, 126 North Fourth St.  
Denver Agent, E. T. Weiant, 501-3 Sixteenth St.  
New York Agency, 944 Eighth Ave.

## A Foot-Power Lathe and Outfit of Tools



Our No. 5 Lathe is a right and left-hand screw-cutting lathe, swings 11 inches on face plate; 84 inches between centers. Is back-geared and has hollow spindle. Has set-over tail-stock and swivel tool carriage for tapering and boring.

### SPECIAL OFFER!

The list price of No. 5 lathe is \$90. We will furnish the lathe with set of slide rest tools, three lathe dogs, 5-inch chuck with two sets of jaws, lathe arbor and set of Morse twist drills 1-16 inch by 1/2 inch by 32ds, in all amounting to \$110, for \$90 cash. Goods carefully boxed and delivered on board cars, Rockford. This gives the best lathe made, with full equipment of tools, for less money than you can buy an inferior machine.

Full Descriptive Catalogue Free on Application.

**W. F. & JNO. BARNES CO.**

233 RUBY ST., ROCKFORD, ILL



No. 36 and No. 42 Neck and Neck.

One, Last Year's Winner!

THE OTHER A New Finish for '99 Season!

Taking Big and Prices Right. If you don't get catalog you are losers.

**READING SCREW CO., 2720 HOPE STREET, PHILADELPHIA, PA.**

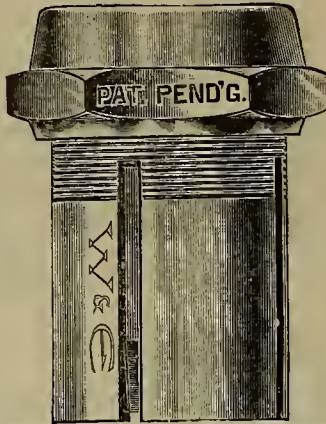
**J. J. WARREN COMPANY, Worcester, Mass., U. S. A.**

—MANUFACTURERS OF—

Bicycle Saddle Tops, Tool Bags, Leather Grips, Luggage Carriers, Lunch Boxes, etc. Send for catalogue.



# W AND E EXPANDERS



COMPARISON  
WILL PROVE THEY ARE  
BETTER THAN ANY.

ALL SIZES CARRIED IN STOCK.

Manufactured by

**WALKER & EHRMAN MFG. CO.**

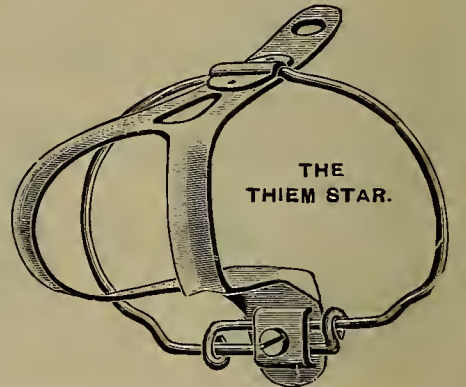
Washington and Union Sts.,

CHICAGO.

## LEADING TOE CLIPS:

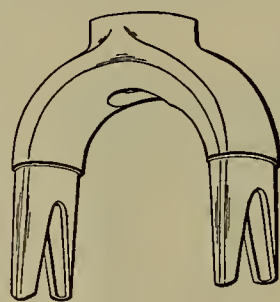
Nothing has been produced in the way of toe clips that has given such

universal satisfaction to the trade as the clips manufactured by us. Their success is assured. They are therefore offered for the season of '99 ABSOLUTELY WITHOUT CHANGE IN DESIGN, MATERIAL OR WORKMANSHIP. We also manufacture a line of LAMP BRACKETS for head and fork attachment, plain steel and wire TOE CLIPS, CYCLE FLOOR STANDS and the WEBER NEW DEPARTURE LUGGAGE CARRIER. The value offered in this line is recommended to the attention and scrutiny of the jobbing and wholesale trade, whose correspondence is invited. When writing mention this paper.



**THIEM & CO., 78-80-82 SOUTH ROBERT STREET ST. PAUL, MINN.**

## HOLLOW FORK CROWNS



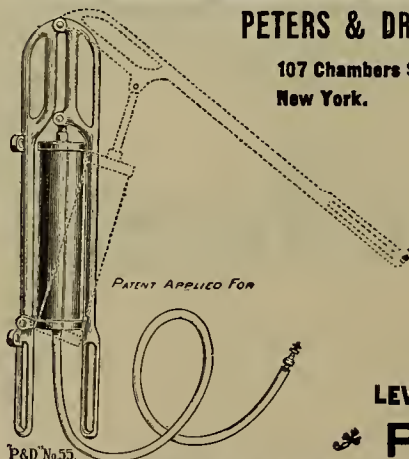
EXPANDERS  
COMPRESSION CLAMPS  
SEAT CLAMPS  
CASTINGS BEST QUALITY

MADE BY

**The Racine Malleable and Wrought Iron Co.**

J. P. DAVIES, PRES.

RACINE WIS.



**PETERS & DRAKE,**  
107 Chambers St.,  
New York.



LEVER  
PUMP.

Can be used by hand, or affixed to wall, bench or support.

An important advantage of this form of pump is that it can be operated by hand without being attached to a fixed support and possesses all the advantages of that class of pump known to the bicycle trade as lever pumps. 2 in. x 8 in., nickel-plated cylinder; arms japanned.

Price, \$3.50; to Dealers, \$2.60 net.



PUMPS.

# Complete Frame Sets Hangers, Handle Bars and Seat Posts; also Fittings..

MANUFACTURED BY

BUFFALO CYCLE SUPPLY CO., 820 to 830 Broadway, Buffalo, N. Y., U. S. A.



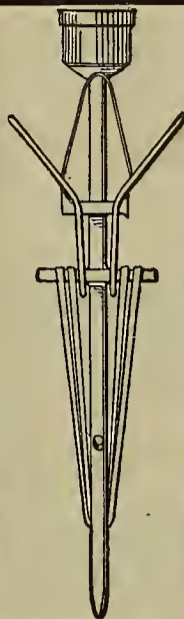
A DISTINCTIVE,  
STYLISH LINE OF

## Fittings In Sets

You can't afford to buy the "stereotyped" frame sets for sale everywhere. What you want is "talking points." Be distinctive and keep ahead.

**B. E. HARRIS & CO.**

Mention The Cycle Age CHICAGO



## CALLS INSTANTANEOUS REPAIR TOOL

Cures punctures quicker and better than any other device on the market. CAN BE CARRIED IN THE VEST POCKET. All you need besides the tool is a common rubber band, push it through the puncture and pinch the little clips, the rubber band slips off and tire is mended. We wish to call particular attention to the fact that **Calls Instantaneous Repair Tool does not enlarge the puncture.**

With each tool we send 1/2 doz. rubber bands and one tube of best cement. Price complete, 50c. Discount to dealers.



**J. H. Burt Mfg. Co.**

Exact Size.  
Patented Nov. 15, '98

Springfield, Mass., U. S. A.

Anyone USING, SELLING, MANUFACTURING, or CAUSING same to be MANUFACTURED within the United States will be PROSECUTED to the FULL EXTENT of the LAW. Mention The Cycle Age

HIGHEST

THE KUNDTZ BENDING CO., Cleveland, O.

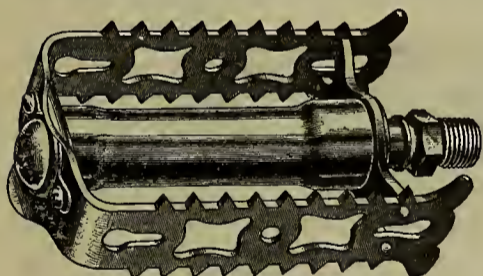
... MANUFACTURERS OF ...

# Kundtz Reinforced Laminated Rims

FOR DUNLOP OR CEMENT TIRES.

GRADE

## THE NATIONAL PEDAL



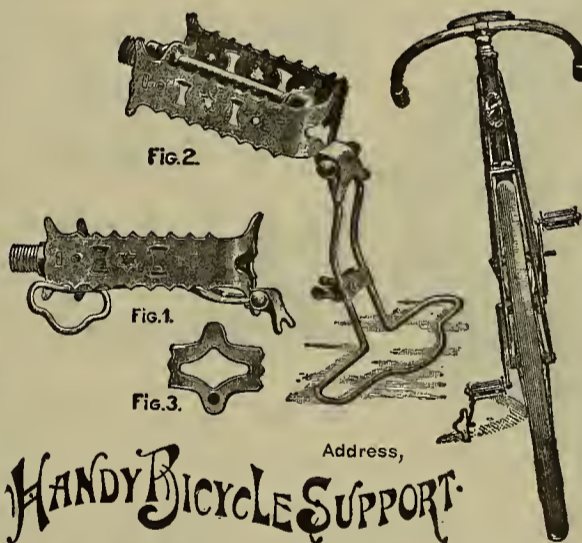
Constructed on Right Principles.  
High Grade in Every Respect.  
Fully Guaranteed.

Price, in cases containing 100 pairs, \$47.50.

WRITE FOR QUOTATIONS ON LARGE QUANTITIES.

**THE NATIONAL PEDAL AND MFG. CO.**

Postal Telegraph Building. Room 205, 253 Broadway, New York City



## EVERY JOBBER

should handle this very practical device. It is handsomely nickel plated.

PRICE, 50c.

Special Discount to the Trade

Electros for catalogs furnished on application.

Address,  
**HANDY BICYCLE SUPPORT**

WM. H. HART, JR., - 242-246 Chestnut St., - PHILADELPHIA, PA

# Honest Value

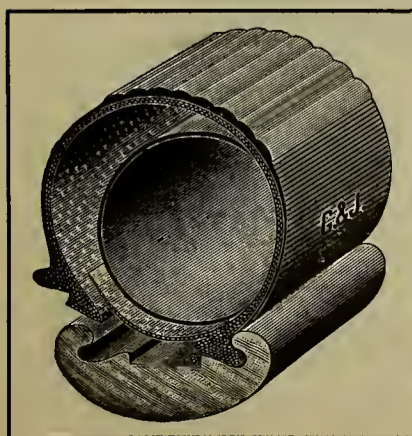


is what every buyer wants. You protect your riders when you buy

## G. & J. TIRES

Their first cost is, as a rule, the last cost. G. & J. tires can be repaired by any rider and it costs him nothing.

INDIANAPOLIS RUBBER COMPANY, Indianapolis, Ind.



# GOOD ROADS

Riders want them, but they also want  
a Bicycle Lamp

That Will Light Up These Good Roads

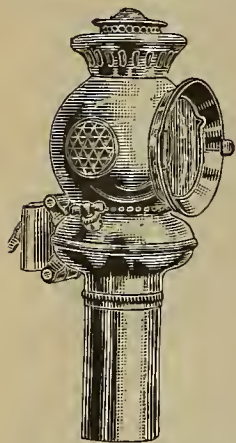
THE 1899

## "ACETYLITE"

fulfills all conditions. A combination  
of simplicity and perfect action ❀ ❀

THE OLDEST GAS LAMP ON THE MARKET.

Schumacher Acetylite Lamp Co., 84 La Salle St., Chicago, Ill.



## THE CODLING MFG. CO.

❀ ❀ BRISTOL, CONN. ❀ ❀

# Compressed Cork Bicycle Grips

Manufacturers  
of ❀ ❀  
First Quality

HAVE A CAPACITY FOR MAKING 5,000 PAIRS  
OF GRIPS DAILY.

Mention The Cycle Age ❀ ❀ ❀ WRITE FOR PRICES.



# STEEL BALLS

THE BEST IN THE WORLD.

EXCELSIOR MACHINE CO.,

Mention The Cycle Age

BUFFALO, N. Y.

## THE RICHARDS DETACHABLE SPROCKET RIM

"THEY WEDGE"

Always Fit,  
Quickly Put On,  
No Bolts or Nuts,  
Never Work Loose.

SEND FOR CIRCULARS  
AND PRICES.



THE MC ELWAIN-RICHARDS CO. INDIANAPOLIS



## BOURNE'S

### HARD RED TIRE CEMENT

One and Five Pound Cakes.

## LIQUID GUTTA PERCHA

One Ounce Tubes.- Four Ounce Cans.

The Retail and Repair Trade can get these from their Regular Jobbers or

HIBBARD, SPENCER, BARTLETT & CO., CHICAGO, ILL.  
H. T. HEARSEY CYCLE CO., INDIANAPOLIS, IND.

....IMPORTED BY....

The American Trading Co., 100 William St., New York

## YOUR '99 TRADE WILL WANT AN EASY RUNNING and DURABLE CHAIN



In our new **Twin Roller Chain** the rocker joint eliminates the friction from this point while the friction between chain and sprockets is avoided by the rollers which turn as the chain feeds off and on the sprockets. This gives you a frictionless and hence a durable chain.

This chain fits the standard 1-in. pitch sprockets and runs smoothly and noiselessly even in mud, water or dust. It makes friends wherever used and will be a great favorite for '99. Write for prices and full description.

MORSE CHAIN CO., TRUMANSBURG, N. Y.

## THE "RUSCH" SADDLES

Model No. 10



Model No. 10

THE ANOMALY OF THIS SADDLE IS THAT IT IS RESILIENT  
WITHOUT BEING SOFT.

The Rusch Bicycle Saddles. N. Schroder,  
91-93 Thompson St., New York City.

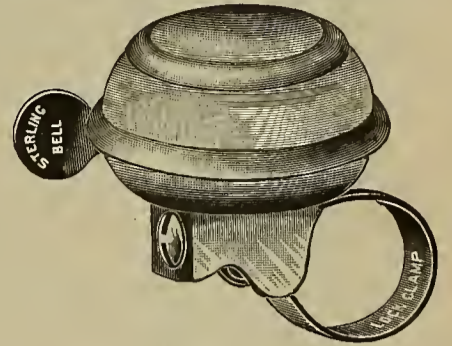
# STERLING AND DAISY BELLS



TRINITY  
CHIMES



CONTINUOUS  
RINGING



Catalogue containing 105 numbers now ready.

N. N. HILL BRASS CO., East Hampton, Conn.

# Baldwin Detachable Chains FOR 1899



are made in a large variety of styles, with finest finish, superior for correct construction, durability and smooth running. Our Special Racer, made of nickel steel, lightest and strongest chain made; our Special Tandem we guarantee to hold any multiple wheel made.

Buy the genuine and you will have the best. Look for our TRADE MARK stamped on each connecting link.

**Baldwin Cycle Chain Co., Worcester, Mass...**

Hibbard, Spencer, Bartlett & Co., 18-32 Lake St., Chicago, Ill., always have a full line in stock, and are Distributing Agents for Chicago and the Western States.  
K. Franklin Peterson, 159 Lake St., Sole Sales Agent. Mention The Cycle Age

Our twenty-five years' experience manufacturing Lefever Guns has won an enviable reputation for our

# LEFEVER ARMS CO. CHAIN



They are built on honor. Each link-block and pin fits perfectly. They are properly case hardened. They are accurate as to pitch. The elongation after use is imperceptible. Built in four grades.

OUR HIGHEST GRADE IS BUILT OF NICKEL AND TOOL-STEEL.

LEFEVER ARMS COMPANY, SYRACUSE, N. Y.  
CHICAGO. IVEN-BRANDENBURG CO., 101 Reade St., NEW YORK.

**Indianapolis Chain & Stamping Co.,**  
INDIANAPOLIS, IND.



.....MAKERS OF.....

# DIAMOND CHAINS

R. B. McMULLEN & CO., General U. S. Sales Agents,  
88-90 Lake St., Chicago. 309 Broadway, New York.  
NEW YORK DEPOT: J. S. LENG'S SON & CO., 4 Fletcher St.

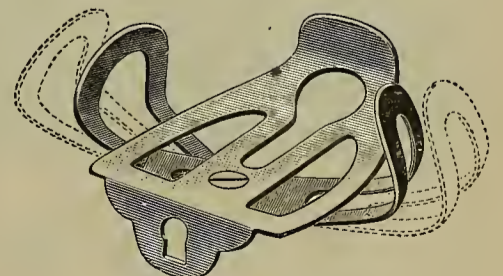
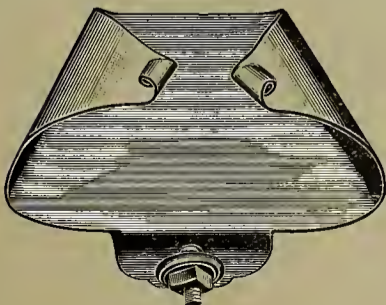
# NEW WABASH FAST TRAIN EAST

"The Continental Limited," a new fast train on the Wabash, now leaves Chicago daily at 12:02 noon, and arrives at Buffalo 5 a. m., New York 3:30 p. m. and Boston 5:50 p. m., next day, with through car service.

TICKET OFFICE, 97 Adams St., Chicago.

# SOMETHING NEW IN TOE CLIPS

Catalogue showing complete line, also full line of Bells now ready. ❀❀❀❀



EXCELSIOR SUPPLY CO.  
276 Wabash Ave., Chicago, Western Agents.

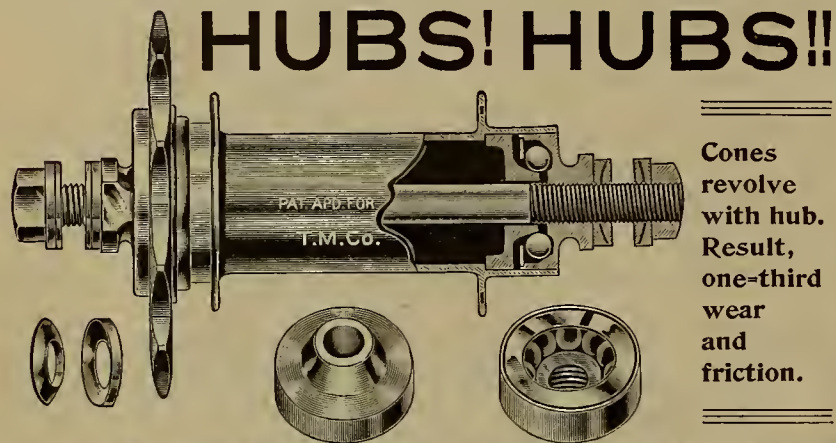
**BEVIN BROS. MFG. CO. EAST HAMPTON, CONN., U. S. A.**

Mention The Cycle Age

# Watch This Space

For more light on AUTOMATIC GAS LAMPS. Next week you will have some light on the dark cloud of Absolute Regulation for ACETYLENE GAS LAMPS....

**HINE - WATT MANUF'G CO.**  
14-16 N. CANAL ST.  
CHICAGO, - ILLINOIS.



Cones revolve with hub. Result, one-third wear and friction.

IT IS THE BEST HUB EVER PUT ON THE MARKET AND THE PRICE IS RIGHT  
We make two other Cheaper Styles, also a Special Racing Hub. Order samples. All hubs turned from the solid bar.  
See Exhibit 138 for Hubs and Per Petual Pedals.  
TUGWELL MANUFACTURING CO., 32 South Market St., CHICAGO, ILL.

WE MANUFACTURE



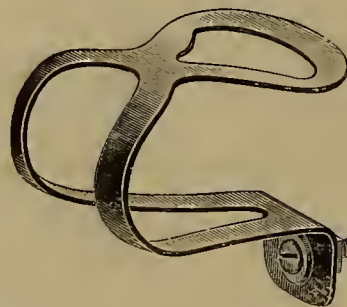
# Frames

For Jobbing Trade

OUR DESIGNS WILL PLEASE YOU. OUR PRICES WILL ASTONISH YOU.

**The Shone-Hanna Manufacturing Co.**  
29 SOUTH CLINTON ST., ROCHESTER, N. Y.

"Round Edge" Finish



"SCORCHER" TOE CLIP.....

The popular style. The only clips that cannot injure the shoes or feet. Send for catalog. Mention this paper

COE MANUFACTURING CO. 50 WARREN ST. NEW YORK CITY.

# NEW YORK TO BUFFALO

West Shore R. R.  
First-Class Service....



Copyright, 1898, by James Charlton. "GOOD BYE!"  
PERFECT PASSENGER SERVICE. **Chicago & Alton R.R.** AMERICA'S MOST POPULAR RAILROAD.  
The direct, best and only completely rock ballasted, dustless line between  
**CHICAGO and KANSAS CITY,**  
**CHICAGO and ST. LOUIS,**  
**CHICAGO and PEORIA,**  
**ST. LOUIS and KANSAS CITY.**  
Through Pullman service from Chicago to  
**HOT SPRINGS, ARKANSAS, DENVER,**  
**COLORADO, AND CALIFORNIA.**  
JAMES CHARLTON, General Passenger and Ticket Agent, CHICAGO, ILLINOIS.

**CALIFORNIA**  
FAST TRAINS  
equipped with Double Drawing-Room Sleeping Cars and Tourist Sleeping Cars  
THROUGH WITHOUT CHANGE  
Dining Cars and Buffet, Smoking and Library Cars  
Leave Chicago EVERY DAY.  
CITY TICKET OFFICE 212 CLARK ST. CHICAGO.  
IN 3 Days VIA THE **NORTH-WESTERN LINE**  
CHICAGO & NORTH-WESTERN RAILWAY.



THE DIRECT LINE TO



**INDIAN-APOLIS**



4 TRAINS DAILY.

Only line to West Baden and French Lick Springs.

...BICYCLES CHECKED FREE...

FRANK J. REED, CITY TICKET OFFICE  
G. P. A. CHICAGO. 282 CLARK ST

Mention The Cycle Age



# Vindex Bicycles

The top notch of bicycle construction  
reached in these models. ❖❖❖❖

**\$50** ————— **\$40** ————— **\$35**

**BROWN'S PATENT CRANKS.** Two-piece, simple and quick  
method of detaching. **STAR DISC ADJUSTING HUBS.**

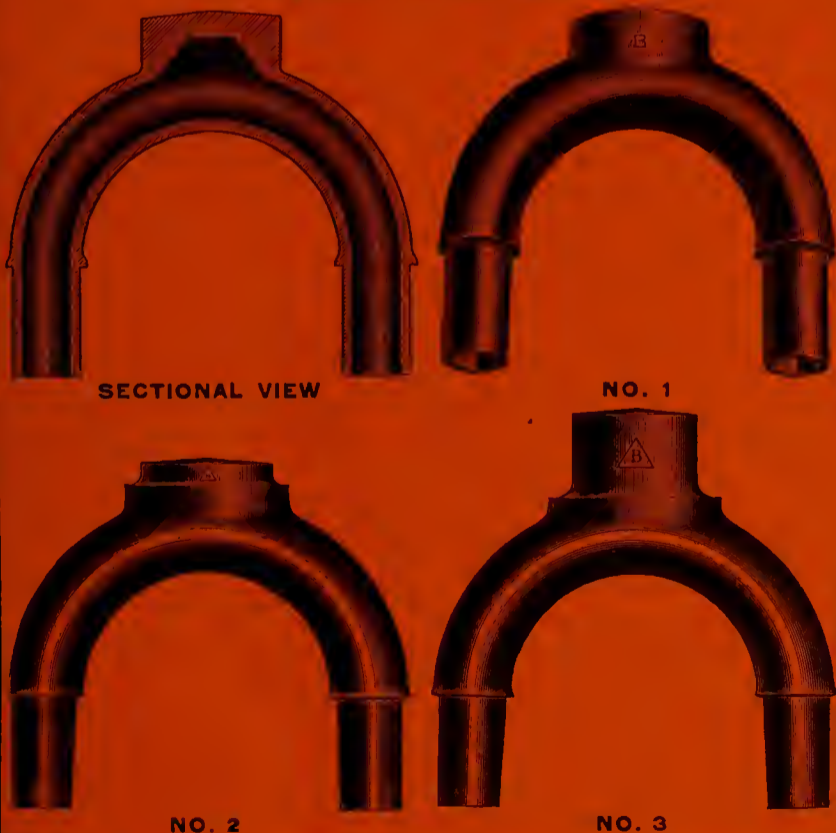
Correspondence solicited by good responsible agents.

**Reading Cycle Manufacturing Co.**

Mention The Cycle Age

Tenth and Exeter Streets, READING, PA.

THE B. & S.  
**DROP-FORGED HOLLOW FORK-CROWN**  
PATENT APPLIED FOR.



These Fork-Crowns are Drop-Forged hollow, without a weld or artificial joint of any description.

The walls are of uniform thickness and the forgings are made as light as is consistent with the great strength required at this particular point in the construction of a high-grade bicycle.

We particularly call attention to the fact that this Fork-Crown is **NOT EXPERIMENTAL**. Thousands of them were used on 1898 wheels. **NOT ONE** has ever broken and **NOT ONE** complaint has been made.

THE BILLINGS & SPENCER CO., Hartford, Conn., U. S. A.

# Wheeler Saddles

1899 MODELS



IT WILL BE WORTH YOUR WHILE TO  
CORRESPOND WITH

**HARTLEY & GRAHAM,**  
313 BROADWAY, - NEW YORK,  
SOLE N. Y. and EXPORT AGENTS.

Mention The Cycle Age

# Every Bicycle Dealer

TO MEET  
THE DEMANDS OF HIS TRADE  
MUST HAVE A

## Complete Line

# “Featherstone”

The  
“Complete  
Line” is ours.

It will insure your  
success during the coming  
season which promises to be a banner  
year in the bicycle trade. ❁ ❁ ❁ ❁ ❁ ❁ ❁



### “Be Wise”

SECURE THE  
FEATHERSTONE  
AGENCY

### LISTS

- Model A, 30-inch, Men's, \$50
- Model B, 28-inch, Racer, \$50
- Model C, 28-inch, Men's, \$40
- Model D, 28-inch, Ladies', \$40
- Model E, 28-inch, Men's, \$30

- Model F, 28-inch, Ladies', \$30
- Model ES, 28-inch, Men's, \$25
- Model FS, 28-inch, Ladies', \$25
- Model G, 24-inch, Boys', \$20
- Model H, 24-inch, Girls', \$20

Our 1899 Catalogue is now ready for distribution and will be mailed upon receipt of request for same. ❁ ❁ ❁

### !OUR 1899 POLICY!

In future we shall sell to the retail trade direct instead of through the medium of jobbers, as in the past, and intend to give to the retail merchant the benefit of every advantage made possible by the change.

The value of the “Featherstone” line is evidenced by the fact that the same large jobbers have marketed it for several consecutive seasons. Our 1899 line will be known only as “Featherstone”—the various Models being designated as A, B, C, D, etc.

General Offices and Works:  
**CHICAGO.**

# A. FEATHERSTONE & CO.

Eastern Branch: 32 Warren Street,  
**NEW YORK.**



# THE CYCLE AGE

## AND TRADE REVIEW

Vol. XXII—No. 19

CHICAGO, MARCH 9, 1899

New Series No. 68



## The Iver Johnson Leads

SUMMER—the season best adapted for the enjoyment of cycling—is close at hand and the riders are commencing to purchase their new mounts. Agents and dealers who have not yet closed for 1899 should write for prices, terms, etc., on our line, which is very complete, including models of chainless and 30-inch wheels with prices ranging from

\$40 TO \$75

Iver Johnson Cycles Have Drop-Forged Connections  
Throughout

Expansion fastenings for seat-post and handle-bar, divided crank axle, simple and effective chain adjustment, and many other good features fully described in our illustrated catalogue which we will gladly send on request. Send for agency application blank.

**B** RANCHES

NEW YORK: 99 Chambers St.  
BOSTON: 408 Washington St.  
WORCESTER: 304 Main St.



IVER JOHNSON'S ARMS AND  
CYCLE WORKS, FITCHBURG, MASS.

# READING STANDARD

READING STANDARD

READING STANDARD

## Investigation Wanted

**E**VERYONE can claim to have the finest line of Bicycles. READING STANDARD BICYCLES are sold on their merits solely, and the dealer who has not seen our line wishes he had. You can't afford to pay for the "nameplate," or excessive advertising and luxurious salaries, teams or other remnants of a golden past, without adequate compensation. If you do it, you lose at least the difference of what you might make, but don't. We think you want "quality," but you don't care to pay two prices instead of one, and maybe you don't. What you want to pay for is the best and most up-to-date Reliable Bicycle produced at the lowest moderate cost by skilled mechanics in an up-to-date and completely equipped factory, built for building bicycles economically. You can't find better material in the highest priced bicycles nor get better results than you do with "Reading Standards."

When you buy other goods you examine the quality and pay a corresponding price. You don't pay an excessive price because Mr. So-and-So makes the goods. You don't love him quite that much. Oh, no! you are not in business for love or your health. You say, "Mr. Dealer, if you are in business for profit and don't care to rob your customers, but keep their trade and good will by giving them goods worth the price, made by a reliable and responsible firm, you will not pay for the nameplate nor the goods any more than they are really worth." You will investigate and compare without prejudice. And we predict as the result that there will be one more satisfied Dealer added to the list of "Reading Standard Agents"—the agents who report no decrease, but an increase in business, in profits, and in satisfied customers. What are you in business for? Will you investigate, or don't you care to find out? If you do, write us.

Reading Standard Mfg. Co., Reading, Pa.

# READING STANDARD

Wheels of '99

—AT—

## Spring Cycle Show

FIRST ANNUAL CYCLE DEALERS' EXHIBITION

March 23 to April 1

1899

Grand Central Palace  
New York

RIDING EXHIBITIONS

NOVEL ATTRACTIONS

### Early Exhibitors

Include, among wheels:

COLUMBIA  
CLEVELAND  
CHICOPEE  
CRAWFORD  
DEFENDER  
FEATHERSTONE  
FRONTENAC  
HUNTER  
MARCUS  
LIBERTY  
MERCURY  
MONARCH  
MONITOR  
RACYCLE  
STORMER  
SHERMAN  
TRIBUNE  
VANGUARD  
WOLFF-AMERICAN

As Many More Promised

A long list of exhibitors of sundries and accessories

# Did You Ever Think?

When riding a bicycle did it ever occur to you how much the little steel balls and smooth bearing cups and cones had to do with your enjoyment? If you had ridden in the early days of cycling before these wonderful ball bearings were invented you would appreciate the full force of this inquiry. While all ball bearings may safely be said to be better than plain bearings, there is a vast difference in the results that are obtained. The curve of the cones, the shape of the cups, the points of contact of the balls, all are matters of the most vital importance if we wish to obtain the best results. In Tribune Bicycles these details are figured with the most careful exactness. The balls bear each on two points diametrically opposite and the curve of the bearings is such that no friction is caused by their movement around the cones. We illustrate herewith the various cups and cones used in a Tribune Bicycle, and would recommend all purchasers to examine these important parts before deciding on a wheel.



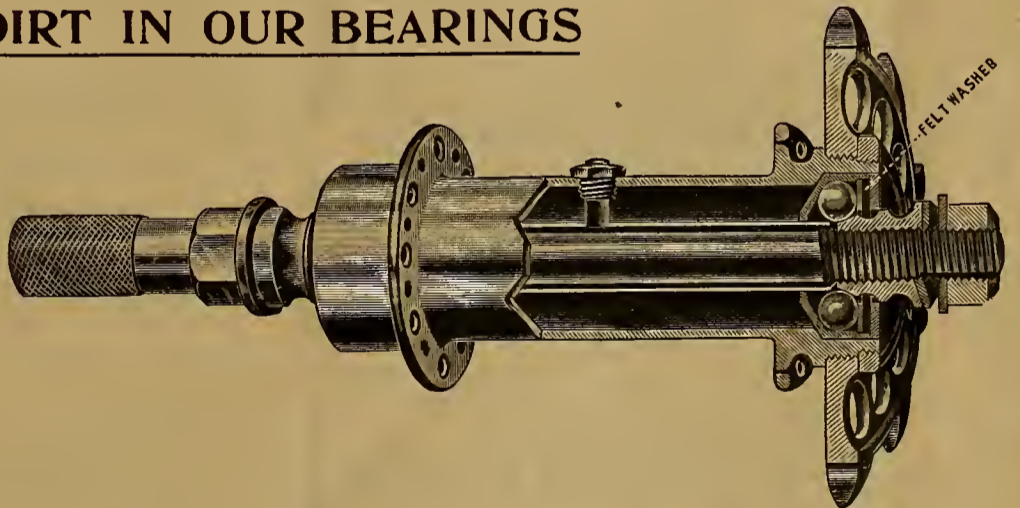
Write for large new catalogue.....

**The Black Mfg. Co., Erie, Pa.**

# "SMITH" HUB

NO DIRT IN OUR BEARINGS

**O**UR dust proofing arrangement makes it impossible for dust to get into the bearings and for oil to get out.



**C. J. Smith & Sons Co.**

MILWAUKEE, WIS., U. S. A.

R. B. McMULLEN & CO., Chicago and New York, U. S. Sales Agents.

THE  
A.B.C. Chain Cleaner  
AND... Filler



IF you once use it you would not do without it. TRY IT. IT does not go on the wheel but is easily fastened to the wall.

WITH A FEW TURNS OF THE CRANK

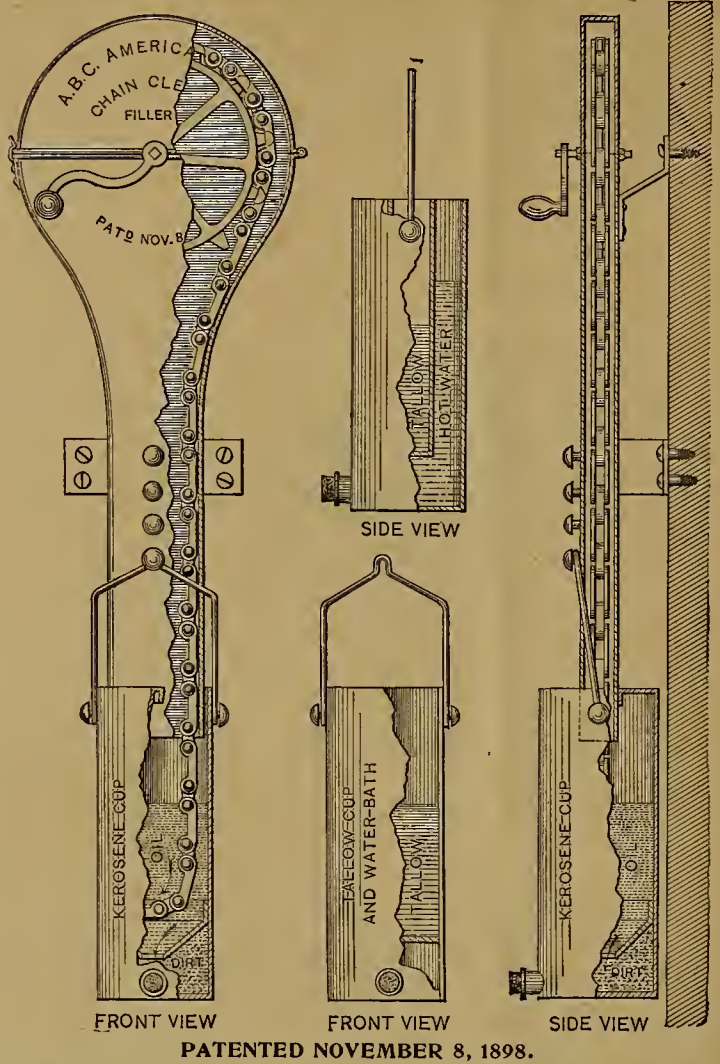
**IT** will clean any bicycle chain.  
will fill and oil the chain.  
will save the chain from wearing out.  
will make any bicycle chain run easy.  
will save time at home.  
will save hours of trouble on the road.  
will save your strength when wheeling.  
will save you soiling your hands.  
will keep you in good humor.  
will not get out of order.

WE wish to establish agencies with responsible persons. WRITE US.

FOR PARTICULARS ADDRESS

American Bicycle Chain Cleaner Co.

106 & 108 BEEKMAN STREET, NEW YORK.



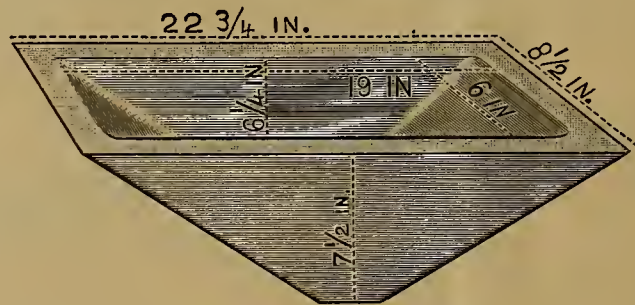
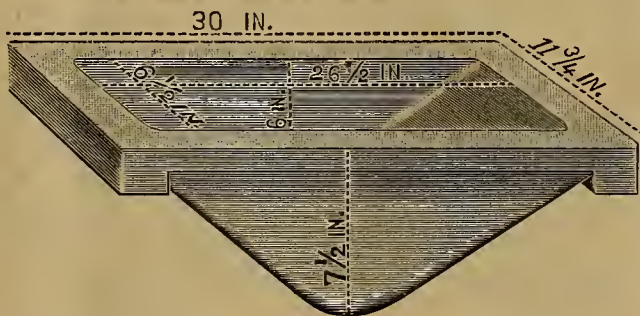
Mention The Cycle Age

The Great Success of the Season is



**LIQUID BRAZING**

BE progressive and experiment with a process that is everywhere taking the place of the steel-destroying flame. We make the



**Plumbago Crucibles**

IN TEN STYLES

Particularly adapted for this work. Write to us for particulars and prices.

BRIDGEPORT CRUCIBLE CO.

Bridgeport, Conn.

# Cleveland Bicycles!

STANDARD FOR EXCELLENCE

## Talking Points

**H**AVING given our agents in the '99 Cleveland more to talk about than ever before, we have made it unnecessary to do much talking. Rather paradoxical, but it's true. Improvements—genuine and valuable improvements—speak more emphatically and convincingly than anything else. Merit claimed does not always exist in fact; we've made it possible for the bicycle agent to demonstrate Cleveland merit. ❁

**Why Not Sell Cleveland Bicycles?**

## H. A. LOZIER & COMPANY

MANUFACTURERS ❁ ❁ CLEVELAND, OHIO, U. S. A.

BRANCH HOUSES

New York, 337 Broadway; Philadelphia, 830 Arch Street; Chicago, 307-309 Wabash Avenue; Boston, 396 Boylston Street; Buffalo, 615 Main Street; Detroit, 244 Griswold Street; San Francisco, 304-306 McAllister Street; Toronto Junction, Ont.; London, W., 24 Orchard Street, Oxford Street; Paris, 6 Place de la Madeleine; Hamburg, Neuerwall 36.

# SAIL==HO!!

M-I-S-T-E-R D-E-A-L-E-R! Yo=ur Sh-ip is in Sight!

If you have ordered it laden with **SNELL BICYCLES**—your fortune is assured. **THEY STAND FOR SUCCESS.**

Write for our Catalogue.

The Snell Cycle Fittings Co., Toledo, Ohio, U. S. A.

INDIA S—INDIA 3 M

## OBSERVE

OUR LINE OF SAFE GUARDS.  
THEY STAND

## IMMOVABLE

AGAINST  
THE ASSAULTS OF OUR

## COMPETITORS

Write us for some Hot Shot  
Prices.

**THE INDIA RUBBER CO.**

AKRON, OHIO

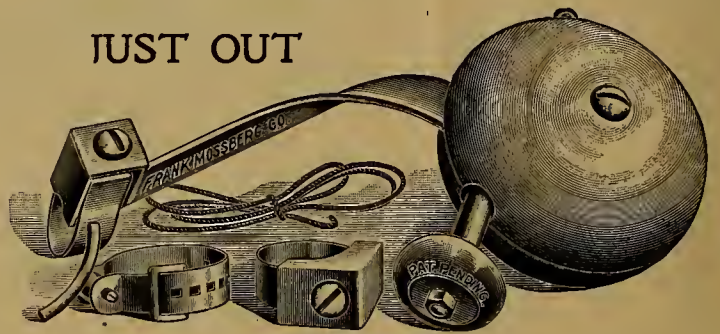
OUR SKIRMISH LINE

INDIA B  
INDIA CHASER  
INDIA TREAD  
INDIA T  
INDIA LEADER

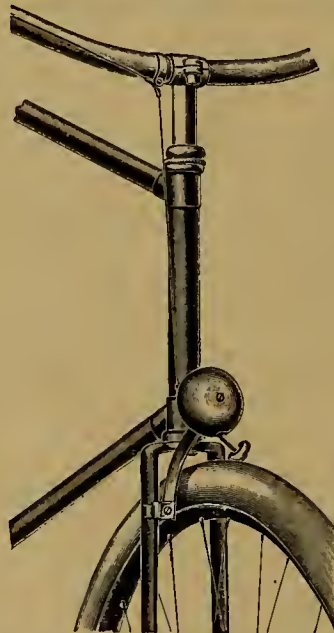
INDIA B  
INDIA CHASER  
INDIA TREAD  
INDIA T  
INDIA LEADER

## Mossberg Tire Bell

JUST OUT



No. 1.—CHIME.



NEW MECHANICAL  
PRINCIPLE

The Mossberg Bell  
is High Grade  
Price Low

No. 1 - Chime .....\$0.75  
No. 2—Single Gong ..... .50

Send to the Factory for Sample.

Handled by all Jobbers.

Manufactured by

**FRANK MOSSBERG CO.**  
627 Atwells Av., PROVIDENCE, R. I.

CoE Mfg. Co., 50 Warren St., New York,  
Selling Agents for U. S. A.

"Cool and Steady."

## M. & W. LAMPS

### M. & W. LANCASTER GAS LAMP

Gives brilliant white light 100 feet ahead, 50 feet wide; has patent water trap and gas seal, rendering unsteadiness impossible. No gas is wasted in heat, lamp always keeps cool. Charge can be graduated as desired; flame under instant control. Lamp easily cleaned.

### M. & W. '99 OIL LAMP.

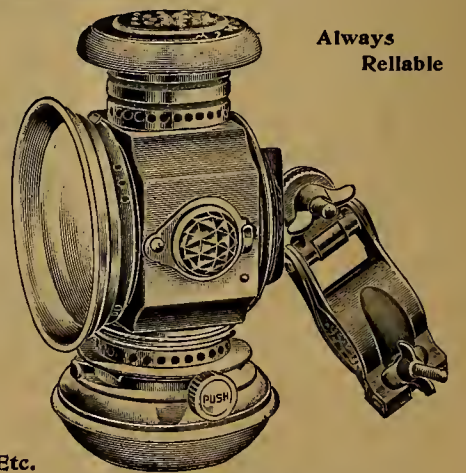
Improved in several important features; oil-pot lock; perfect combustion; absolutely automatic wick lock; the handsomest lamp ever put on a wheel.

Manufacturers of

M. & W. LANCASTER GAS and M. & W. OIL LAMPS.  
M. & W. COMBINATION PUMP and CARBIDE HOLDER.  
M. & W. "SILVERTONE" and MONOGRAM BELLS, Etc., Etc.



M. & W. "Lancaster" Gas Lamp.  
Burns Carbide in any form.



Always  
Reliable

M. & W. '99 Oil Lamp.  
Burns Kerosene.

**THE MATTHEWS & WILLARD MFG. CO.**

40 MURRAY STREET NEW YORK CITY.

WATERBURY, CONN.

**PROFITABLE  
RESULTS**

ARE OBTAINED  
BY DEALERS  
WHO HANDLE

—THE OLD RELIABLE—

**Imperials**  
—the go-lightly kind

The '99 models are the best sellers we have ever gotten out. All our old agents speak of them in highest praise and predict a successful season with them.

If you do not handle Imperials and want to make money in '99 write us. Our prices will interest you.

AMES & FROST CO. - - - CHICAGO, ILL.

Border Copyright '98.

**THIS DISTURBANCE IS OCCASIONED**

by the entrance of MARCH, which is the time Retail Sales commence in the bicycle business. You should not delay longer in sending for terms on

**KEATING BICYCLES**

as your line will not be complete without them. Our prices are \$75.00, \$50.00, \$40.00 and \$35.00, and discounts as satisfactory. Have you read or heard of our "SPEED SPECIAL" at \$75.00? The demand for this Incomparable Bicycle with 30-inch wheels far exceeds our highest expectations.



STRONG. LIGHT. EASY RUNNING. GRACEFUL. "365 DAYS AHEAD OF THEM ALL."  
Sell KEATINGS and be the leading Bicycle Dealer in your locality.

Eastern Distributing House: Smith, Patterson & Co., 52 Summer St., Boston, Mass., for all trade in Maine, New Hampshire, Vermont, Rhode Island and Massachusetts (east of Worcester) and the Dominion of Canada.

Western Distributing House: The Brown-Lewis Co., 293 Wabash Ave., Chicago, Ill., for all trade west of Chicago.

New York City: The H. & D. Folsom Arms Co., 314 Broadway.

Catalogue for the asking, fully describing our Excellent Line of Wheels and the Keating Pneumatic Tired Carriage.

**KEATING WHEEL CO.**

Formerly Holyoke, Mass.

MIDDLETOWN, CONN.



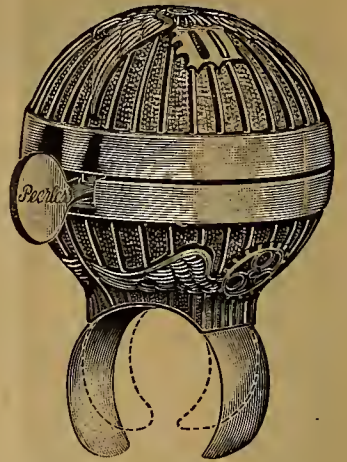
# Your Bell is not Up-to-Date

unless it has a lever or push-button

**ADJUSTABLE TO ANY POSITION**

Without the Aid of a Tool.

Send for our new Catalogue explaining this improvement so valuable to all riders....



THE BRISTOL BELL CO.,

Bristol, Conn., U. S. A.

## THE "AUTOMATIC"

Bicycle and Carriage Lamp

No Regulating Valves  
No Wicks  
No Attention Required  
No Absorbents  
No Variation in Flame  
Burns Best  
When  
Left  
Alone

Prices to Suit the Times



**BURNS • ACETYLENE • GAS**

The Plume & Atwood Mfg. Company

NEW YORK AND CHICAGO.

An  
Old  
Adage—  
Nothing  
Succeeds  
Like  
Success.



**An Old Lamp—The Electro**

ALSO A SUCCESS.

A well and long-established business means long and hard work, but it represents SUCCESS. Success means good judgment. Good lamp judgment means

## ELECTRO LAMPS

TESTED AND NOT FOUND WANTING.

A few good jobbers wanted in each section of the country.

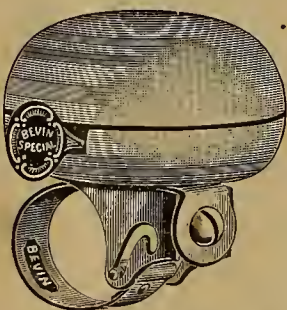
Greene & Haskell  
1 & 3 Union Square  
NEW YORK  
EASTERN AGENTS

W. J. Buckley & Co.  
204 Dearborn Street  
CHICAGO, ILL.  
CENTRAL AGENTS

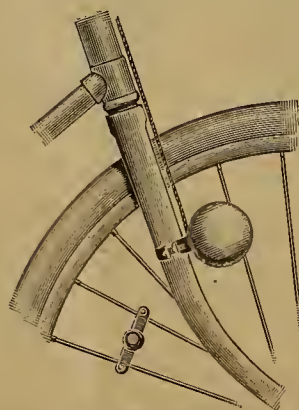
N. Pendleton Rogers  
San Francisco and  
106 Wall St., New York  
WESTERN STATES AGENT

WRITE FOR CATALOG

## Complete Line of Bells! AND OTHER SUPPLIES

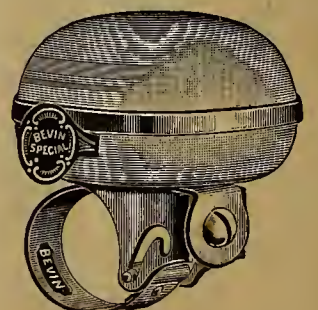


TROUSER  
GUARDS  
TROUSER CLIPS  
COMBINATION  
TROUSER  
GUARD and  
BICYCLE LOCK



Bevin Spoke Bell.

OIL HOLE COVERS  
"BEVIN" FOOT BRAKE  
THE "STAYTHERE"  
NIPPLE GRIPS  
THE "CHATHAM"  
LAMP BRACKET



EXCELSIOR SUPPLY CO.,  
276 Wabash Ave., - - - Chicago,  
Western Agents.

**BEVIN BROS. MFG. CO.,**  
East Hampton, - - - Conn., U. S. A.



# High Pressure and Red Cross

**T**HE National Cement & Rubber Manufacturing Company, of Toledo, Ohio, has just completed a mammoth deal by which the entire Stock, Good Will, Trade Marks, Patents, Patterns, and everything connected with the Red Cross Rubber & Cement Company, of Rochester, N. Y., is absorbed by consolidation by the Toledo company.

...WE'VE  
GOT IT ALL



BIG FELLOW (Toledo concern): Well, it's all over, and we are good friends, at least.

LITTLE FELLOW (Rochester concern): You've proved too aggressive a competitor for us; we long since discovered that the "High Pressure" people were gradually but surely securing the lion's share of trade everywhere we went.

BIG FELLOW: But Red Cross originated in Toledo, you know, and will feel very much at home there.

LITTLE FELLOW: True; and we realize that while as a competitor, you practically vanquished us, yet you were an honorable business rival, and never turned a scurvy trick against us.

BIG FELLOW: Well, we'll combine our forces, and our united strength will be too formidable for any adversary to worry us in the least. But hereafter we'll simply do business under the one name—The National Cement & Rubber Manufacturing Co.

LITTLE FELLOW: Agreed.

The Red Cross people will go out of business as a firm at once, and in a week we shall be able to ship all orders for Red Cross brands of goods from the Toledo factories. Everything not disposed of by immediate shipment from Rochester on orders already booked will be shipped to Toledo, and in future all contracts and business will be transacted from this office. All mail to either Red Cross or High Pressure concerns should come to us. We now represent the most powerful combination for the manufacturing of these brands of Cements, Brazers, Vulcanizers, Enameling Ovens, Varnishes, Rubber Paints, Graphites, Etc. in the world. Send for Catalogue. Free to all.

Address all orders and communications generally to

## The National Cement & Rubber Mfg. Co.

TOLEDO, OHIO, U. S. A.

# JUVENILE BICYCLES

We make the WORLD'S STANDARD

## THE "FAVORITE"

Quality better than ever. Prices lower than ever. We also make STRIPPED ADULT WHEELS. Excelsior Needle Co.'s spokes at bottom prices. Catalogue ready.

THE TOLEDO METAL WHEEL CO., Toledo, O.

### THEY ALL LOOK ALIKE

EXCEPT THE

# "AMERICA"

"TRUSS FRAME" BICYCLES

It has a style and merit of its own. THE ONLY "TRUSS FRAME" BICYCLE SOLD BY AGENTS. If there is no agent in your town for the "AMERICA" "TRUSS FRAME" bicycle, we want one at once.

Our line is a matchless one. Good money makers and good satisfaction givers. . . .

AMERICA "Truss Frame,"	list,	\$50
The BRADLEY, 30-in. Special,	"	45
The BRADLEY, 28-in.,	- "	40
The ORIOLE,	- - "	35
AMERICA Truss Frame Tandem, with center-drive attachment,	"	100

Export Department: No. 5 Broadway, New York City.  
David Bradley & Co., Council Bluffs, Iowa.  
Bradley, Clark & Co., Minneapolis, Minn.  
Bradley, Wheeler & Co., Kansas City, Mo.

### DAVID BRADLEY MFG. COMPANY

Bicycle Department,

73 to 77 FULTON ST. CHICAGO, ILL., U. S. A.

WE HAVE A RECORD OF 40 YEARS AS MANUFACTURERS.

### A WONDERFUL SUCCESS

will be the result if you secure the exclusive agency for our full line of

## Hudson,

## Lenawee

## ...and Noxall

❁ ❁ BICYCLES ❁ ❁

ELEVEN NEW MODELS—BEST OF MATERIAL and WORKMANSHIP

BEFORE YOU BUY

see our new Model 30, beautifully enameled in scarlet, rims to match. Built with three royal arch crowns and 30-inch wheels. Equipped good as the best.

Our salesmen are in the field. Write for catalog and liberal discounts.

### BEAN-CHAMBERLIN MFG. CO.

HUDSON, MICH.

Pacific Coast Branch: - THE BEAN SONS CO., San Jose, California

# "FAMOUS"

## Three

# Crown

MILWAUKEE ENGINEERING COMPANY

MILWAUKEE, WIS., U. S. A.

## BICYCLES

#### DISTRIBUTING AGENTS:

Hudson Bay Knitting Co., Montreal, Canada.  
The Kennedy Wolf Co., New York City.  
Geo. de B. Keim Saddlery Co., Philadelphia.  
Harbison & Gathright, Louisville, Ky.  
Bering & Cortes Hardware Co., Houston, Tex.  
Kingman Moore Imp. Co., Kansas City, Mo.  
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The New Christy Adjustable Saddle.

# THE CHRISTY SADDLE

is sure profit for the retail dealer. It was the original anatomical saddle and is better advertised and better known than any other kind. You run no risk when you carry the Christy. Why load up with imitations?

Spalding's Bicycle Sundry Catalogue Free.

Four Styles: Men's, Women's, Racing, and the New Christy Adjustable.



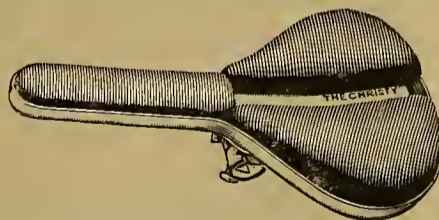
## THE SPALDING POLICY

of selling direct to the retail trade, large and small, at one price, and requiring the retail dealer to sell to the consumer at one price—no more and no less—is a winning policy and one that should certainly please the retail dealers. This plan is the retail dealers' salvation, as they are at last assured of getting athletic goods from a maker who will not permit price cutting on restricted goods.

If you approve this policy, correspond with us. We want to serve you,

## The Christy Racing Saddle

is the best saddle ever devised for racing purposes. The long pommel enables the rider to retain a firm hold in a sprint and thus prevent wobbling at a critical moment. Used by Bald, Cooper, Kiser, Gardiner and all the prominent riders.



CHRISTY RACING SADDLE.

# A. G. SPALDING & BROS.

147-149 Wabash Ave., CHICAGO.

126-130 Nassau Street, NEW YORK.

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Let us Introduce  
to You a Friend  
Who will be  
Valuable...

An Agency for...

# Vanguard Cycles...

Our advance sheet, now ready, will tell you all about them. They are right, in material, workmanship, finish and price ...

Model B.	-	Price \$35.
Progress	-	" \$25.

Vanguard Cycle Company,  
INDIANAPOLIS, IND.

WHAT THE

# Yale Man

SAW AT THE CYCLE SHOWS

**Bicycles** The wheels on exhibition were without exception a fine lot. THE YALE was admired by everyone and ranked among the best. ❀❀❀

**Prices** Some people were quoting lower prices than we have made, but we are positive that, quality considered, our prices are as low as the lowest.

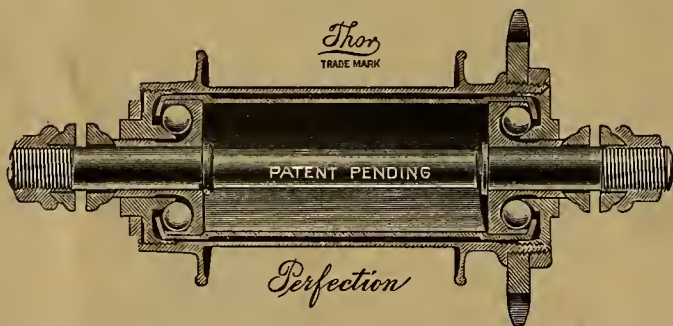
**Business** We did our share of the business offered and came away satisfied. ❀❀❀❀❀❀❀❀❀

**Chainless** We found that the chainless machines attracted considerable attention and we have decided to offer our agents YALE CHAINLESS made with SAGER GEAR. ❀❀❀❀❀❀❀❀❀

We want your business and will guarantee to please you.

THE KIRK MFG. COMPANY  
TOLEDO, OHIO

# Thor "Perfection" and "Special" HUBS



ARE RECOGNIZED BY THE PUBLIC

They STAMP a bicycle as the HIGHEST GRADE. You can get a good PROFIT by using them on your wheels. ❀❀ They COMMAND a PRICE ❀❀❀❀❀❀❀

Aurora Automatic Machinery Co.  
AURORA, ILLS.

IVEN, BRANDENBURG CO., Sole U. S. Selling Agents,  
101 Reade St., New York; 131-133 Lake St., Chicago.



## The ❀❀ Goodyear Pathfinder

in softness, resiliency and general service is unexcelled by any high grade tires on the market. It is the best tire for lowest price in existence. Fully guaranteed. Write for prices.

## The ❀❀ Goodyear Climax

is our three-month-guaranteed tire. There is absolutely no tire on the market of equal quality that can be quoted for any such price as we can name you.



We also manufacture the best unguaranteed tire in existence. .'. .'. Write us for prices.

The Goodyear Tire and Rubber Co.  
Office and Factory, AKRON, OHIO.

A. P. Kastler, 56 Fifth Ave., Chicago Representative.

A. D. MEISELBACH  
MANUFACTURER OF  
BICYCLES FOR JOBBERS ONLY

No. Milwaukee, Wis., U. S. A.

Capacity—Largest in the World



# The Liberty

AMERICA'S REPRESENTATIVE BICYCLE....

          List **\$ 50**           for road Models          

A greater number of solid, sound, practical features embodied in this product, and broader options than are offered on any other wheel. ❁ ❁ ❁

AGENTS, ADDRESS

The Liberty Cycle Co., = Bridgeport, Conn., U. S. A.

# IT IS NOT TOO LATE TO ORDER ELFIN JUVENILES

Indeed, it is never too late to order a wheel that sells itself. Our factory is being taxed to fill our orders, but we can take care of a few more. The people appreciate the Elfin's points. The reversible crank-bracket, that allows an adjustment to suit a rapidly growing youngster, has made a popular impression that can't be overlooked by dealers.

WM. SOMERVILLE'S SONS  
66 W. Broadway, New York City  
Agents for Greater New York and  
Foreign Distribution

E. G. EAGER & Co.  
Toledo Ohio  
Distributing Agents for Ohio,  
Michigan and Indiana

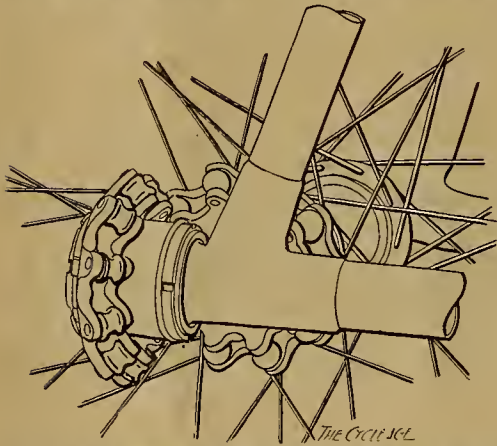
FRAZER & JONES CO.  
353 W. Fayette St., SYRACUSE, N. Y.

## We Quote

an extract from a catalogue just at hand of a well known manufacturer of the bevel gear type of chainless bicycles, on the necessity of ADJUSTMENT in all forms of gears.

"The reader is doubtless a bicycle rider and the possessor of a first-class bicycle, having ball bearings, perfect bearings. The balls hard as glass and the cones and cups properly tempered. The bearings doubtless run perfectly, give satisfaction, and are as good as can be made. DID YOU EVER ADJUST THOSE BEARINGS? Would you buy a bicycle having no provision for the adjustment of its bearings? Would you buy a chainless bicycle, whose gears are pins or rollers, with no provision for adjustment or taking up the wear, because you were told that no

wear will occur and no provision is necessary? What a fine rattle trap you would have in the course of six months! Ball bearings, universally used in cycle construction, and recognized by everybody, mechanical or un-mechanical, as being the perfection of simplicity and durability, minimizing friction, wear and trouble, require adjustment, as is well known. Any piece of mechanism that performs work or transmits power will sooner or later require adjustment, if used at all, and when said adjustment is not provided for, the so called mechanism is simply a trap."



### NOW READ

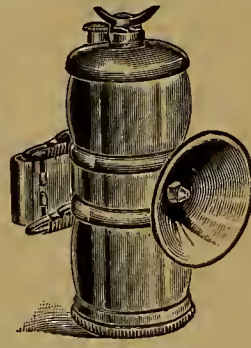
our advertisement in this paper of February 2nd and draw your own conclusions as to the superiority of the Bullis Ball Gear over all others.

"What Would you think of a Bearing Without an Adjustment?"

All forms of roller gears are in this class but ONE—The Bullis Ball Gear. "The Ball Bearing Gear" has an independent adjustment of every ball and cone. No rattle. Purely rolling contact. Friction eliminated. Write us.

**THE BULLIS BALL GEAR COMPANY,**  
38 East Ave. 353-355 East Main Street, - Rochester, N. Y.

General Western Agents—Excelsior Supply Co., 88-90 Lake St., Chicago.  
Guterman & Rosenfeld Co., 35 S. William St., New York; 35 36 Aldermanbury, London, E. C., Foreign Representatives.  
Munger & Dickinson, 203 Broadway, New York Agents.  
R. C. Stevens, 804 Arch St., Philadelphia (Pa.) Agents.  
Charles H. Weld, Mfrs. Agent, Marshall, Mich.



### THE "GEM"

A SMALL, NEAT, LIGHT AND  
PRACTICAL GAS LAMP  
AT A LOW PRICE.

Write for sample and  
particulars.

PATENT APPLIED FOR.

## ACETYLENE GAS LAMPS

M'F'R'D  
BY **MANHATTAN BRASS Co.**

338 E. 28TH ST.

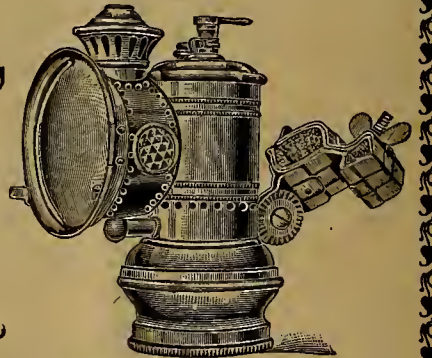
Western Dept.:  
132-4 Lake St., CHICAGO.

NEW YORK, U. S. A.

...THE...

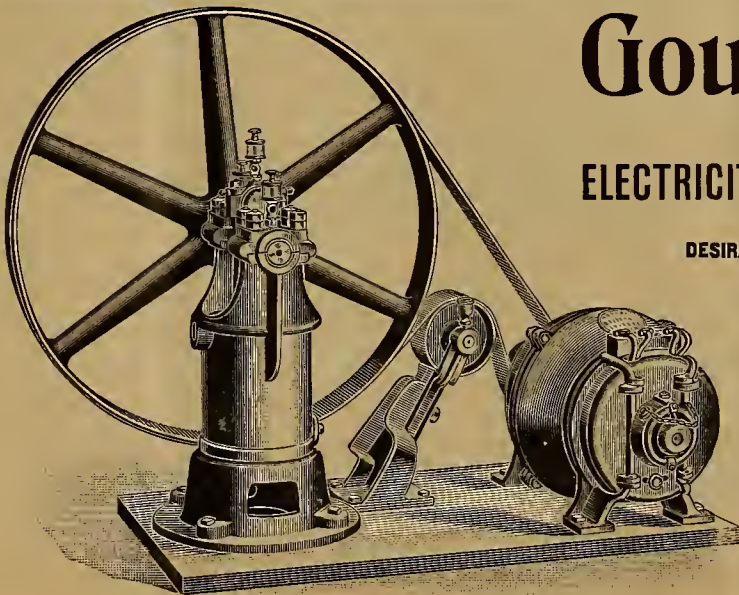
### "BRILLIANT"

There is NO Gas Lamp quite  
so good as this. We mean it  
and can prove it.



WRITE FOR SAMPLE AND  
PARTICULARS.

Pat'd Nov. 21, '98. Others pending.



## Goulds Power Air Pumps

OPERATED BY  
ELECTRICITY OR CITY WATER PRESSURE.

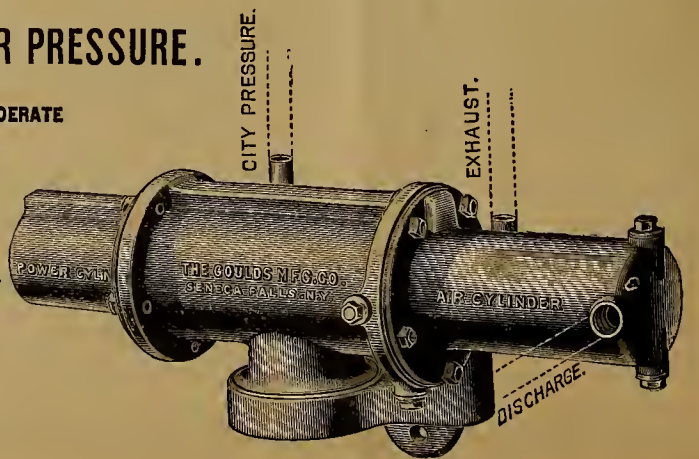
DESIRABLE ARRANGEMENTS AT MODERATE  
COST.

We also offer a Complete  
Line of

**HAND PUMPS.**

Send for new circular  
"Air Pumps."

The Goulds  
Mfg. Co.  
Seneca Falls, N. Y.

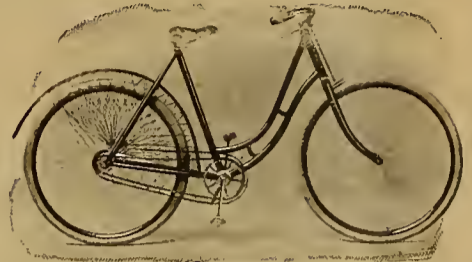


1899 A COLUMBIA AND HARTFORD YEAR 1899



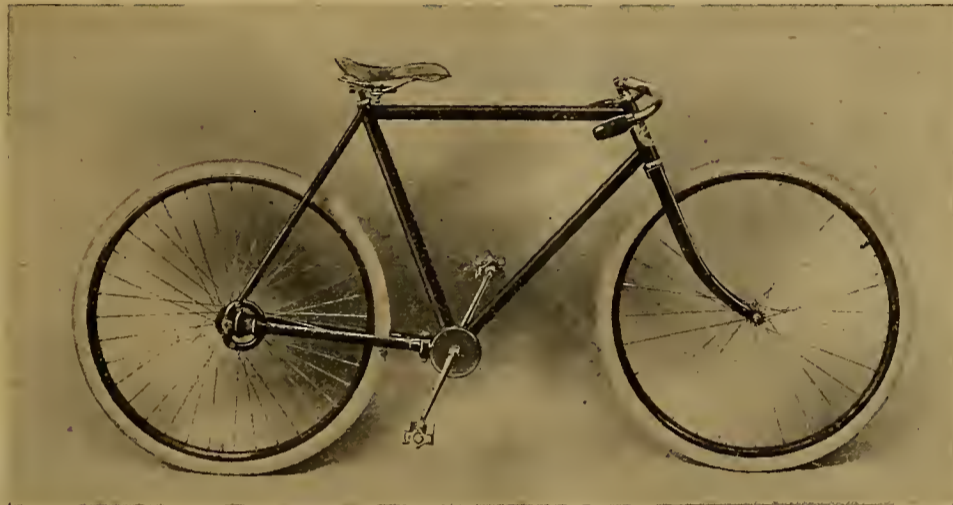
COLUMBIA, MODEL 57

*Columbia*  
Hartford and Vedette  
BICYCLES



COLUMBIA, MODEL 58.

The demand for the 1899 Columbias, Hartfords and Vedettes is entirely without precedent. In order to meet it we are running the largest bicycle plant in the world 22 hours a day. The fact that we are obliged to do this tends to show the extent of public confidence in our machines. It also enables us to reduce the cost of production while advancing the quality of our machines. We are sharing with the public the advantage gained by thus operating our factories to their full capacity and it was with a gratification which was shared by thousands of wheelmen that we first announced the 1899 Columbia and Hartford prices which bring the standards of bicycle quality within reach of all. This great demand is but a natural outgrowth of the unequalled combinations of quality and price which we are offering.



COLUMBIA BEVEL-GEAR CHAINLESS, MODEL 59.



COLUMBIA BEVEL-GEAR CHAINLESS, MODEL 60.

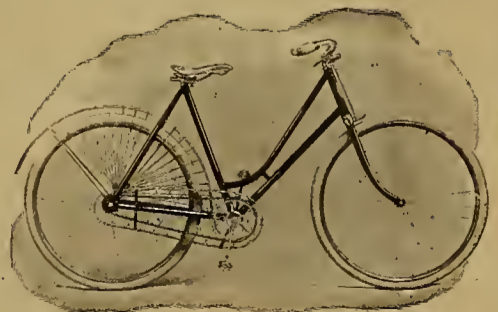
Columbia and Hartford improvements for 1899 are notable both in regards number and character. In no previous year have we been able to announce so many improvements of direct practical value to the rider. In the making of these machines no ground once gained has ever been lost; no satisfactory device has ever been discarded for something inferior and nothing new has ever been adopted until proved desirable by the most thorough laboratory and practical tests. Thus has the quality of our product been advanced year by year. Well-informed riders know something of our methods. They have heard of the exhaustive laboratory and road tests to which each of our new models is subjected before being placed on the market. They know that there is satisfaction in riding a Columbia or Hartford.



HARTFORD, PATTERN 19

**PRICES**

Models 59 and 60,	\$75
Models 57 and 58,	50
Patterns 19 and 20,	35
Vedettes, - -	\$25, 26



HARTFORD, PATTERN 20

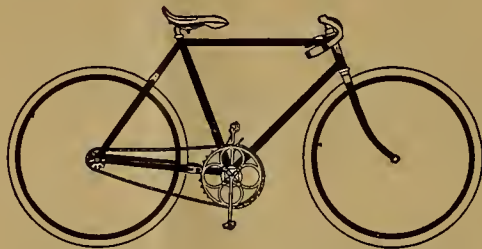
We issue the handsomest  
Bicycle catalogue of the year.

**POPE MFG. CO., HARTFORD, CONN.**

# AN EXTRA FINE WHEEL

**THOMAS No. 29  
RACER**

LIGHTEST RUNNING  
FINEST WHEEL OF '99



ADULTS - - \$35 to \$75.  
JUVENILES - \$20 to \$30.

New Wheels. Up-to-Date.

Limited Number of Live Agents  
Wanted.

B-21 Produce Ex'ngs, NEW YORK.  
21 S. Market St., - - BOSTON.  
217 N. Broad St., PHILADELPHIA.  
48 S. Clinton St., - CHICAGO.

ASK  
FOR PRICES

The THOMAS MFG. CO.

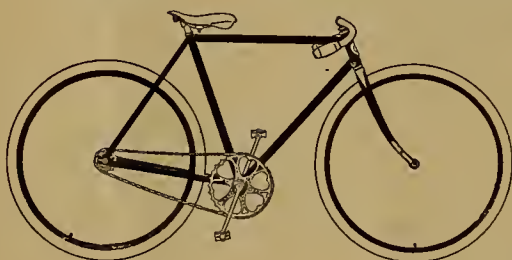
SPRINGFIELD, OHIO.

THOMAS CHAINLESS

## Ride a **FANNING.**

AND KEEP KOOL.

We guarantee to make all of our parts, which insures  
quality and workmanship.

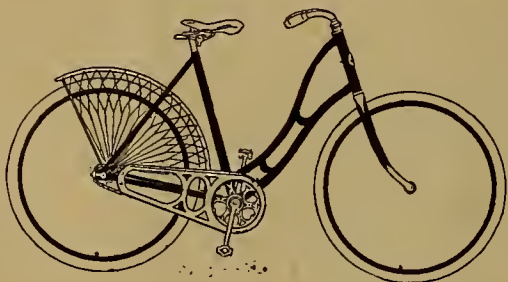


Shelby Seamless  
Tubing...  
Excelsior Needle  
Co.'s Spokes...  
Flush Jolats...  
Trilby Sprockets.  
Our own Hanger.

Indianapolis Chain.  
B. G. I. Pedals.

Adjustable  
Handlebars..

Our Own Hubs,  
Turned from Solid  
Steel Bar...



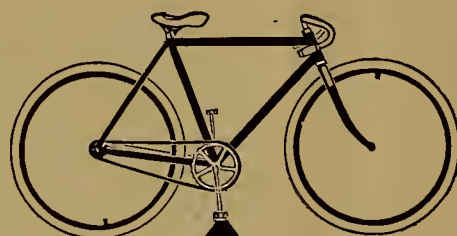
OUR CATALOGUE TELLS EVERYTHING.

**Fanning Cycle Mfg. Co.,**

194, 202 Clinton Street, . . . . CHICAGO.

## Catalogue Now Ready!

CONTAINS  
EVERYTHING  
IMAGIN-  
ABLE  
IN BICYCLE  
LINE....



60 PAGES  
OF WONDERFUL  
BARGAINS

WE HAVE  
A BEAUTIFUL  
BICYCLE  
THAT CAN BE  
LISTED  
AT \$25.00

**FRAMES**  
THE BEST, MOST HANDSOME  
AND HIGHLY FINISHED FRAMES ON  
EARTH. EVERY FRAME GUARANTEED.  
**SHONE-HANNA CO.**  
MANUFACTURERS  
AND  
WHOLESALEERS.  
29 S. CLINTON ST. ROCH. N.Y.

EASY TO ASSEMBLE

FINISH SUPERB

FRAME SETS 5 STYLES

SUNDRIES ALL KINDS

SEND FOR CATALOGUE. LOWEST PRICES ON EARTH

## THE "ADMIRAL"

List \$30

M. & W. tires; 1 1/4-in. flush joints; 2  
piece hanger; 3-16 in. chain, oval  
crown; D rear forks; large sprockets

We want a few more good jobbers to  
handle this fast seller.

**MARCH-DAVIS CYCLE MFG. CO.**

FACTORY: CHICAGO. 47 Warren Street,  
NEW YORK





# Standard Steel Tube

*"Simple as it seems, it was a great discovery"*



All Standard Sizes and Gauges

We claim that by our process is developed the Strongest Seamless Tube of unexcelled quality and finish.



OVAL REAR FORK



OVAL REAR STAY

Catalog of **ELECTRICALLY WELDED BICYCLE PARTS** on request

**The Standard Tool Co.**

NEW YORK OFFICE:  
94 Reade Street.

Cleveland, Ohio, U. S. A.

Please Mention The Cycle Age

# AN EXTRACT

"Of all the bicycles made and sent from the Chicago market the greatest bargains are those offered by the Chicago Tube Co. Their 28-inch, 30-inch and 3-crown wheels with Fauber one-piece hangers beat them all. They are up to date in design and equipment and are exceedingly highly finished, and their agents control the market with them in their respective territories."

IN ADDITION to bicycles referred to in above extract from a letter by a prominent dealer we make and sell frame sets and frames and also all material to build or to repair or to equip a bicycle, and have, for the past six years, a constantly increasing business, and are in a position to give the best for the least money. Particulars, catalogue, etc., to any address.

**CHICAGO TUBE CO.**

217 East Washington St.

CHICAGO, ILLS.

# TANDEM

TRIPLET AND 'QUAD'

# FITTINGS

WE ARE PREPARED TO FURNISH **COMPLETE SETS**, CORRECT ANGLES FOR FAUBER'S, ALSO W. & E. TWO-PIECE HANGERS.

## W. & E. EXPANDERS

FOR HANDLE BARS AND SEAT POSTS.

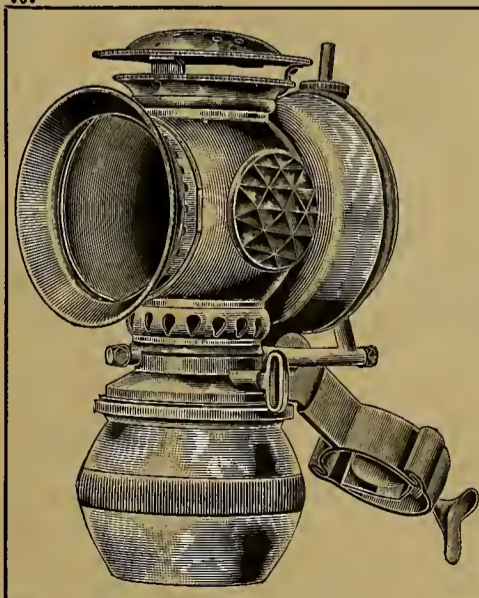
SEND FOR OUR COMPLETE CATALOGUE

**WALKER & EHRMAN MFG. CO.**  
WASHINGTON & UNION STS., CHICAGO, ILL.

THERE ARE OTHERS—BUT  
NONE EQUAL

# SOLAR LAMPS

THEIR SUCCESS HAS PROVEN THEM A



PRACTICAL  
RELIABLE  
SATISFACTORY  
SIMPLE  
AND  
AUTOMATIC  
LAMP.....

BEWARE  
OF  
EXPERIMENTS

**BADGER BRASS MFG. CO.** KENOSHA, WIS.

# SEAMLESS STEEL TUBING

Superior Quality. Anti-Combination Prices.

HERMANN BOKER & CO., 101-103 Duane St., NEW YORK

Sole Selling Agents for the Ellwood Ivins Tube Co., Philadelphia, Pa.; also handle Mannesmann, and Weyersberg, Kirschbaum & Co. Tubing.

Large Stock of All Current Sizes Carried in New York and Chicago.

Represented in Chicago by F. A. HASTINGS & CO., 159 Lake Street.

Without a Peer for '99

## THE "APOLLO"

Highest Grade & Finest Finish.  
28 or 30-inch Wheels

## THE "VESPER"

Finest Medium Grade Bicycle on the Market.

## THE "DEVON"

A Good, Cheap Grade with Up-to-Date Features.

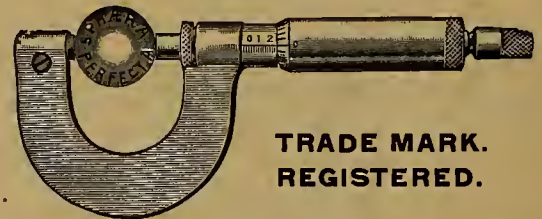
### BICYCLE SUNDRIES

Good Agents Wanted Everywhere. Catalogues  
Ready January First.

**EDW. K. TRYON, JR., & CO.**

PHILADELPHIA, PENN.

# STEEL BALLS



TRADE MARK.  
REGISTERED.

We are the ONLY makers that turn out Uniformly Perfect Balls.

### THESE ARE OUR GUARANTEES:

- First—That every ball is A PERFECT SPHERE.
- Second—That every ball is within 1-10,000 of an inch of exact size.
- Third—That the surface of the balls is absolutely smooth and is free from scratches and pit marks.
- Fourth—That balls bought from us at one time will be exactly like balls of a similar size bought from us at any other time.
- Fifth—That the balls are made of the best grade of ball steel that can be bought.

OUR BALLS MAKE EASY RUNNING WHEELS.

YOU WON'T FIND on our boxes a caution not to mix balls.

OUR PRICES ARE THE CHEAPEST. OUR BALLS ARE THE BEST.

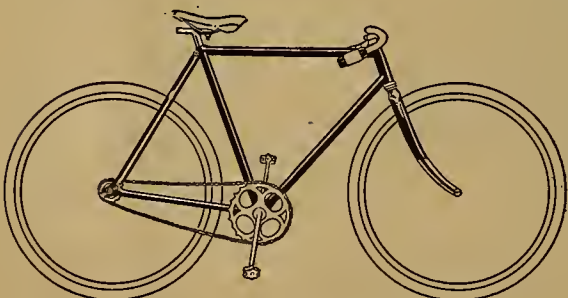
### THE STEEL BALL CO.

39 W. RANDOLPH ST., - - CHICAGO, ILL.

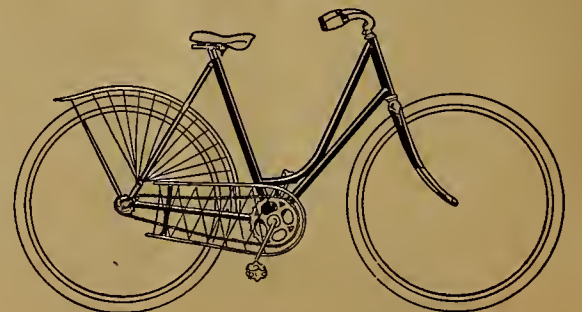
Mention The Cycle Age

# Capacity 30,000

AMPLE TO TAKE  
CARE OF YOU



WHEELS up to date  
PRICES right  
Write us NOW



Milwaukee Mfg. Co., = North Milwaukee, Wis., U. S. A.



# Writing for Cat=alogues

takes time.  
Time is money.  
Why write for a dozen when the  
Excelsior catalogue will give you  
all the information you need?  
It is new—just out.  
Embraces and illustrates

## Everything for Bicycle Builders and Dealers

**EXCELSIOR SUPPLY CO.**

ESTABLISHED 1876.

88 and 90 Lake St., CHICAGO.

### COLORS, LIFE AND GAIETY

Draw more trade in the bicycle line than sombre undecorated black steel tubing. This is to be considered by the cycle dealer who sells bicycles under his own name-plate, or who orders bicycles to his own specifications.

### Meyercord Transfers

Bright, Artistic, Delicate Striping, Elaborate Designs,  
Glaring, Etc.—in brief just as you want them—

## Do the Work.

For Repairmen who have an enameling oven, a few dollars spent for transfers will prove an excellent investment. Meyercord's Double Paper kind insures positive results with little labor.

We furnish electro cuts and samples free to jobbers—a sufficient outfit for their traveling men.

We can deliver to manufacturers on short notice, and, we guarantee the quality.

SAMPLES AND PRICES ON APPLICATION.

### The Meyercord Company, Inc.

American Manufacturers Guaranteed Decalomania Transfers,

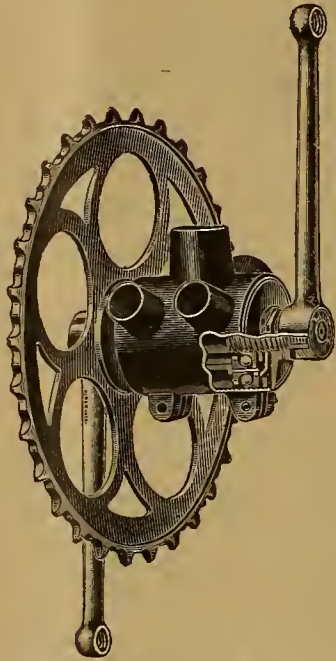
NEW YORK OFFICE:  
805 St. James Building.

MAIN OFFICE: CHAMBER OF COMMERCE BUILDING, CHICAGO, ILL.

ST. LOUIS OFFICE:  
610 Fullerton Building.

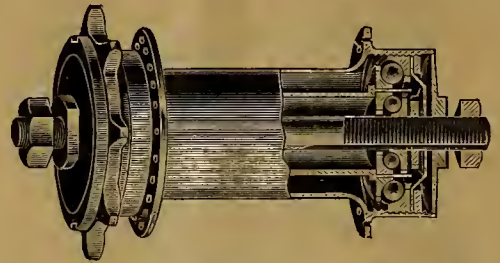
# J. P. Thomas Revolving Hubs and Hangers

HIGHEST GRADE EVER PRODUCED.  
DOUBLE BALL BEARINGS.



Patented in U. S. Dec. 23, 1897

Inner revolving sleeve, gains 40 per cent in speed with the same power, or rides 40 per cent easier. Notice the dustproof cap, patent oil feeder and other details of construction. It has been admitted by the most critical that this is the best and most scientific bearing ever produced. The great demand for a better article has made it necessary for all first-class manufacturers to adopt our bearings, as the public is willing to pay the additional cost.



Patented in U. S. Dec. 23, 1897.

The J. P. Thomas Revolving Hubs and Hangers have been on the market only since December 22nd, 1898, and we are now receiving orders from all parts of the country. To any manufacturer who has not yet adopted our Hubs and Hangers we shall be glad to send sample set C. O. D. on approval.

## J. P. THOMAS & CO

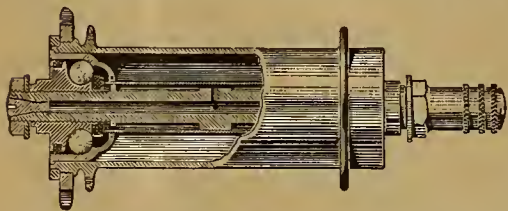
Office and Salesroom: 439-441-443 THIRTY-FIRST STREET

CHICAGO. ILLS., U. S. A.

### To the Trade.

I beg to call your attention to the merits of an improved ball-bearing, patented to me April 19, 1898. The objects sought are to give a better support to the ball so that the pressure will at all times be perpendicular to the surface of the ball, thus eliminating the wedging tendency of ordinary bearings which often splits the cup, and also to provide better oiling facilities.

To secure a better bearing surface for the balls, the cone and cup are both provided with raceways or rolling surfaces for the balls, which are



curved to as near the shape of the ball consistent with allowance for adjustment, and extend about a considerable portion of the surface of the cone part.

As a consequence, if the bearing is a little loose or any side strain is brought upon the wheel, there is a slight corresponding rolling of the ball, which keeps the pressure perpendicular to the surfaces. The ball can thus never act as a wedge to increase the strain and crack the cup or cone, or run on the shank of the cone if the bearings are loose, as the cone carries the balls—see cut. The bearings are two point contact.

From the inner side of the cup projects a flange which is cupped or reduced in diameter and acts as a receiver for the oil which lubricates the bearings. A reservoir for the oil is provided by the tube which surrounds the axle and central hole in this axle. This provides a large storage capacity for oil. The felt washer also strains the oil before delivering it to the bearing. In this way I secure a large oil storage capacity and a feed from the center outward, and the felt washer prevents the oil from carrying dirt into the bearings, and oils the bearings automatically. This is much superior to the ordinary oil feed tubes, as the position of the wheel does not affect its working.

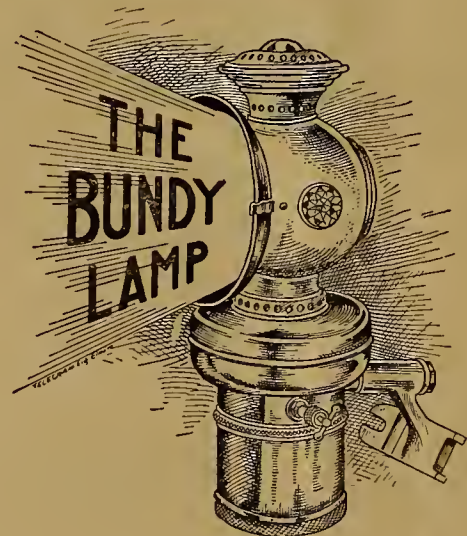
I hope that my invention will commend itself favorably to you and that I may hear from you concerning it. It is my desire to arrange for selling the patent or for manufacturing on royalty. Yours truly,

FRANK GUSTAVESON, = Wabasha, Minn.

“A Thing of Beauty is a Joy Forever.”

## A Perfect Lamp

is a jewel without price and a comfort forever and the day after. ❀ ❀ ❀ ❀



IS THE PEER OF ALL OTHERS.

Order a sample and you will handle no other lamp.

The Frank E. Bundy Lamp Co.,  
ELMIRA, N. Y., U. S. A.

Also Manufacturers of The McElroy Automatic Coaster and Brake.

## Hamilton

3-arch crown  
Fauber construction  
Flush joints  
Seamless tubing  
Baldwin chain  
Diamond frame only

List Price, \$50

## Wellington

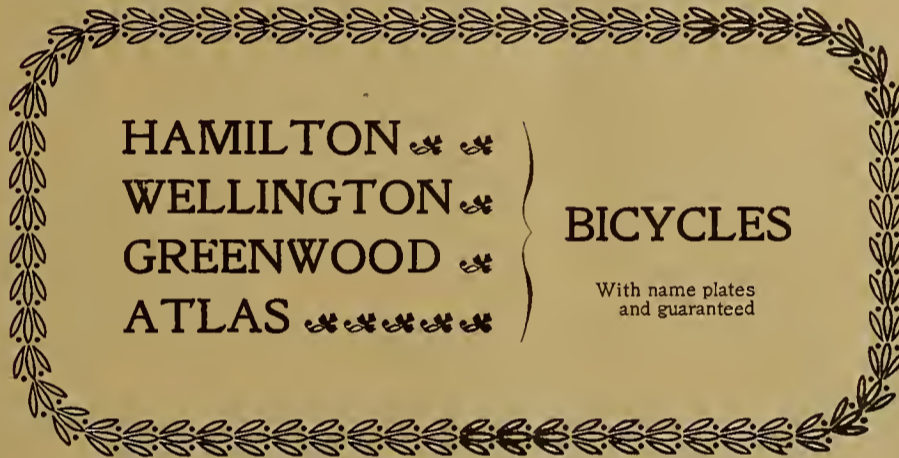
1-arch crown  
Flush joints  
Fauber hanger  
Seamless tubing  
28 and 30-in. wheels

List Price, \$40

A Quartette of Money-Makers  
for Live Agents

# INFORMATION

OF INTEREST TO YOU



Furnished to Dealers Stripped or  
Equipped as Desired

WRITE FOR PRICES OF BEST-SELLING  
LINE ON THE MARKET ✖ ✖ ✖ ✖ ✖ ✖

....MANUFACTURED BY....

## WELLINGTON WHEEL WORKS

35 RANDOLPH STREET

CHICAGO

## Greenwood

1-arch crown  
Flush joints  
28-inch wheels  
2-piece hanger.....

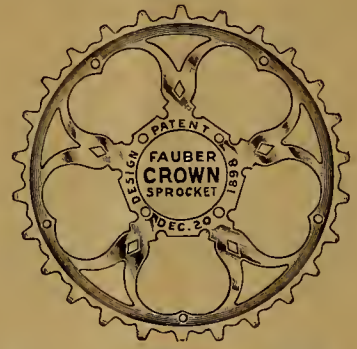
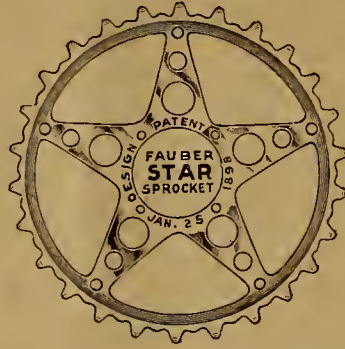
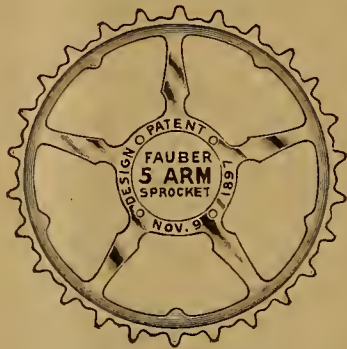
List Price, \$35

## Atlas....

Outside joints  
1-arch crown  
2-piece hanger  
28-inch wheels....

List Price, \$25

A NICE LINE OF INTERCHANGEABLE SPROCKETS.



# FAUBER HANGERS

THE GENUINE ONE PIECE.

INTERESTING FACTS AND FIGURES.

Material Items for Season of 1898.

Crank Forgings bought.....	119,964.
Cone Steel bought.....	32 TONS.
Ball race steel bought.....	73½ TONS.
Sprocket steel bought.....	218¾ TONS.
Steel balls bought.....	2,675,000.

Season 1899.

Crank Forgings Contracted for (actually ordered)....	260,000.
Options on Crank Forgings about.....	56,000 MORE.
Other material bought in proportion.	

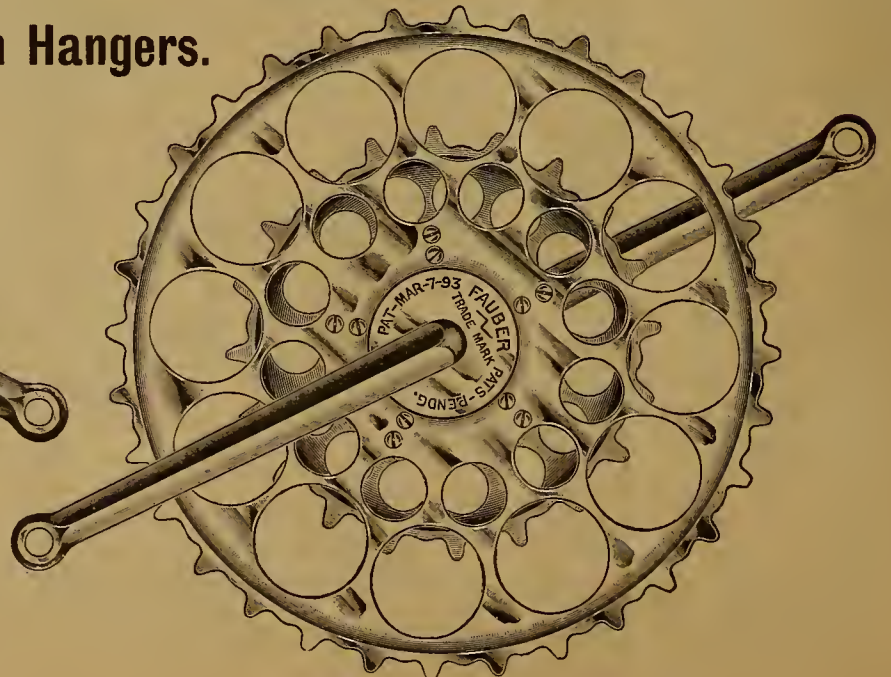
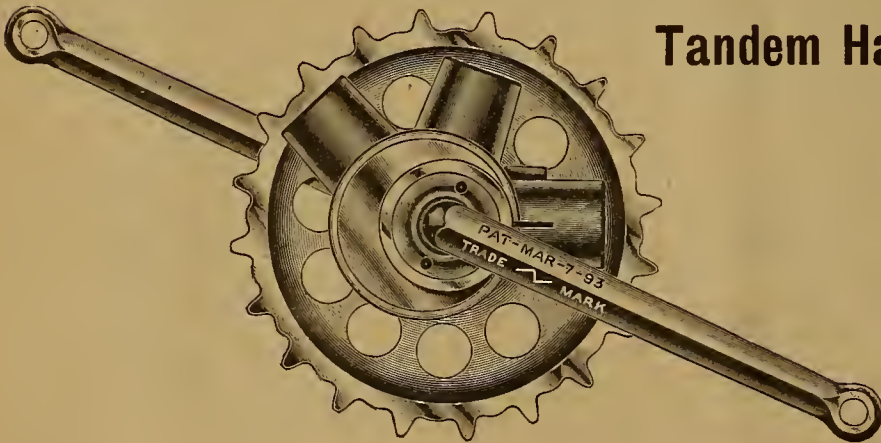
This means that we have provided for our trade. It is our purpose to make the Fauber Hanger so good and so reasonable in price that manufacturers and dealers will use them, and to make the Fauber Hanger so well known and so popular that riders will demand them.

## FAUBER HANGERS FOR

BICYCLES—TANDEMS—TRIPLETS—QUADS

Have been LEADING, are LEADING, will continue LEADING.

### Tandem Hangers.



**W. H. FAUBER**

MANUFACTURER

CHICAGO, - U. S. A.

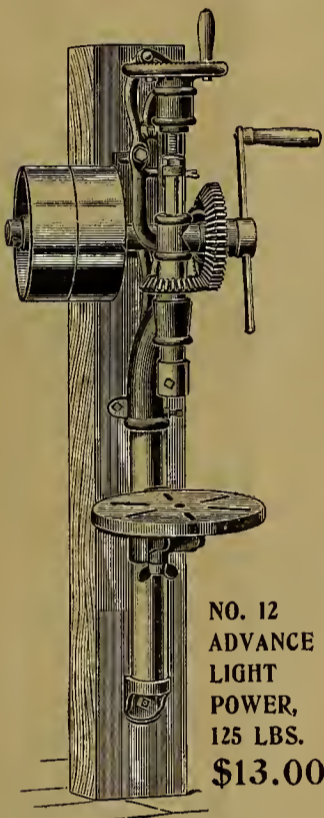
## Bicyclists, Attention

Don't suffer the nuisance of a leaking, spurt-  
ing oiler. The "PERFECT" POCKET OILER  
does not leak. It regulates the flow of oil to a  
drop. It's a beauty and lasts forever. En-  
dorsed by Pope Mfg. Co., and many others.  
Don't be deceived by a cheap substitute. For  
sale by all dealers or by mail 25 cts.

Cushman & Denison, 159 9th Ave., New York  
Mention The Cycle Age

## Drop Forgings

FOR CYCLE MANUFACTURERS.  
CHICAGO DROP FORGE & FOUNDRY CO.,  
KENSINGTON, ILL. U. S. A.



### Advance Drills...

FOR BICYCLE REPAIRERS.

Well made, Light draft, Continuous auto-  
matic self feed.

14 Sizes and Styles...

\$6.00

to

\$85.00

NO. 12  
ADVANCE  
LIGHT  
POWER,  
125 LBS.  
\$13.00

Special discounts to bicycle repair-  
men...

EVERY  
DRILL  
GUARANTEED.

THE SILVER MFG. CO., Salem, Ohio,  
325 Broadway.

## Hubs! Hub Shells

JULIUS HEINEMANN & CO.  
193-7 Van Buren St.,  
CHICAGO, ILLS., U. S. A.

## SNOW HOLDERS

ARE ADJUSTABLE.

When Set Are Firm.

Best made for bicycle stores, public  
buildings, offices, stores, churches,  
schools, factories, in fact anywhere.  
Wall and floor holders. Various styles  
furnished in any finish. Write for  
prices.

SNOW WIRE WORKS,  
Established 1834. Rochester, N. Y.



## DROP FORGINGS

FOR BICYCLES.



Write us for prices on any forgings you need.

RICHARD ECCLES - AUBURN, N. Y.

## HANDLE BARS

GEO. G. SPENCER

MANUFACTURER CHICAGO



### CHILION RESILIENT FRAMED BICYCLES

(the "don't jar you" kind)

M. D. STEBBINS MFG. CO. Dept. D.,  
No. 48 Hampden St., Springfield, Mass., U. S. A.

JOBBER,  
Send for electro  
and prices....

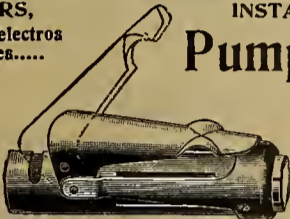
INSTANTANEOUS

### Pump Chuck

For Foot Pumps

Samples sent  
prepaid, 40 cts

VEHICLE PUMP  
CO., 1556 Fulton  
St., Chicago, Ill



A. G. BAGLEY & CO.,

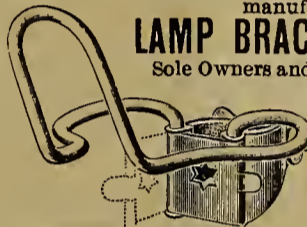
manufacturers of

### LAMP BRACKETS TOE CLIPS AND COASTERS

Sole Owners and Mfrs. of the B. G. I. Co.  
"Star" and the "Stand-  
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Plating and Enameling.

172 South Clinton Street  
Chicago, U. S. A.

D. P. Harris, New York  
Agent, 26 Warren St.



## THE RACYCLE

THE PERFECT WHEEL.

Seven models, ranging in price from \$75 to \$40.  
Write us.

THE MIAMI CYCLE & MFG. CO.,  
Middletown, Ohio.



WORLD  
CYCLES

ARNOLD, SCHWINN & CO. CHICAGO

Make Your Cycle Store the Most Popular Place in Town...

Address the Jobbers or...

Robt. Holmes & Bros.

DANVILLE, ILLS., U. S. A.

"WE MAKE WHEELS TOO."

## Eldredge and Belvidere

NATIONAL SEWING MACHINE CO.

339 Broadway, New York. Belvidere, Ill.

## Graphite Lubricants

ALL KINDS, ACCORDING TO WANTS.

Joseph Dixon Crucible Co., Jersey City, N. J.

## Stormers, Pennants and Mars

A COMPLETE LINE.

Acme Manufacturing Company,  
READING, PENNA.



THE SANGER  
ADJUSTABLE HANDLE BAR.  
SANGER HANDLE BAR  
Co. MILWAUKEE WIS.



## PEDALS

We make high grades only.

Standard Adjustable  
Standard Racer.

AMERICAN  
WATCH TOOL CO.  
Waltham, Mass.

## NEW BRUNSWICK TIRES

MADE BY THE  
NEW BRUNSWICK RUBBER CO.  
NEW BRUNSWICK, N. J.  
BRANCH OFFICES -  
CHICAGO - NEW YORK - BOSTON  
235 LAKE ST. 9-45 MURRAY ST. 27 C. NORTH ST.



## Zamboni Chain Riveter

A convenient, low priced tool for repair-  
men, formed so that it can be held in the  
jaws of a vise. A saver of time and money,  
and no repair shop can afford not to have  
it. Price, \$3.00.

McCABE HANGER MFG. CO.,  
540 W. 22d Street, - - New York City

## OMAHA SIOUX CITY



Chicago, Milwaukee & St. Paul Ry.

## SHORT LINE

ELECTRIC-LIGHTED TRAINS

ACROSS THE CONTINENT.

Ticket Office, 95 Adams Street.

...THE BRIDGEPORT DETACHABLE CHAIN...



THE SLICKEST CHAIN FOR 1899.

Accurate pitch. Repairable Without Tools. Send for Prices.  
Every chain will be fitted with our quick detaching link, having no screws, springs, or puzzling mechanical kinks.



THE BRIDGEPORT CHAIN CO., BRIDGEPORT, CONN.



The *Beemasco*  
SADDLE

is hygienic and will not chafe, bruise, irritate or tire the rider. It will suit every figure, as it is adjustable. It will be sold in your town by somebody. If you are interested write for descriptive catalogue. Riders will ask for it.

WM. B. RILEY & CO.  
324 Market St., Philadelphia, Pa.  
Mention The Cycle Age



HANDY CYCLE POCKET FOOT PUMP

Best Pump for home or road use.  
Price 50c. Liberal discount to the trade

Handy Cycle Pump Co.,  
112 Clark St., - CHICAGO, U. S. A.

**VINDEX BICYCLES**  
MANUFACTURED BY  
**READING CYCLE MFG. CO.**  
TENTH & EXETER STS.,  
READING PA.



The "CROWN"

GOOD VALUE—LOW PRICED  
HUBS ALWAYS IN STOCK

C.C.G. Co  
Every part guaranteed. Prices and samples on application.  
Cortland Carriage Goods Co., - Cortland, N. Y.

THE COLLINS  
PNEUMATIC HUB WHEELS  
FOR '99

Send for Catalogue and Prices.  
The Collins Pneumatic Hub & Wheel Works  
SAYRE, PA.

THE LEADING FEATURE FOR 1899 WHEELS  
**SUNBEAM SPOKES.**

THE AMERICAN SPECIALTY MFG. CO., Hartford, Conn.  
PATENTEES AND SOLE MAKERS, ALSO  
MANUFACTURERS OF  
Highest Grade Swaged Spokes and Nipples.  
Send for quotations Mention The Cycle Age

Liquid  
Brazing  
Crucibles

All sizes and shapes as required to fit any make of furnace, made by the original makers of brazing crucibles and the largest and oldest manufacturers of plumbago or graphite crucibles in the world.

JOSEPH DIXON CRUCIBLE CO.,  
Jersey City, - - - New Jersey.

PEORIA  
TIRES

Complete  
Catalogue  
Ready  
Peoria Rubber  
& Mfg. Co.  
Peoria, Ill.

THE STYLISH GORDON  
Examine the REAL THING before buying imitations.  
THE BECKLEY-RALSTON CO.  
178 Lake St., CHICAGO  
Gordon Patterns in all grades.

IS ALL RIGHT.  
Manufactured by  
The Russ Rim Co.  
39-41 Perry Street,  
BUFFALO, N. Y.  
Send for sample section....

ONCE A YEAR ENOUGH  
FOR BICYCLES  
Lubricates Anything  
WITH  
PACK HUBS & PEDALS  
HELMET OIL  
A HARD OIL  
10-12 N. CANAL ST.  
CHICAGO, ILL. USA  
C.H. BESLY & CO.

Lefever Arms Co. Chain...  
Built on honor. Properly case hardened; accurate as to pitch.  
Four Grades—Highest grade is made of nickel and tool steel.  
Lefever Arms Co., Syracuse, N.Y.  
Ivan-Brandenburg Co., Chicago, and  
101 Reade Street, New York.

1899 MODEL  
**WATERS WHITE SCORCHER**  
Fitted with Our One Piece Hanger made under Fauber licenses. Retail Price, \$22.00  
Send for net price and catalogue.  
F. S. WATERS CO., 155 W. Washington St., Chicago.

Lacing Cord  
For Ladies' Wheels.  
Any Length.  
All Colors.  
Write for Sample Card.  
MOOSEHEAD SILK CO.,  
Williamsville, Conn.

THE GENEVA CYCLE CO.  
GENEVA, O.  
NINE MODELS:  
NONE BETTER: FEW AS GOOD.

MACHINISTS' REPAIRMEN'S  
**TOOLS**  
BICYCLE REPAIRERS' TOOL CO.,  
84 West Washington Street, CHICAGO.

Ericson Automatic  
..Bicycle Bell

Attached to front fork of machine by a clamp bracket and operated by a friction pulley thrown in contact with tire of front wheel, and connected by a small lever on left handle bar.  
Simple, Durable, Effective.  
Does Not Rattle.  
Price for 2½ in., \$1; 3 in., \$1.15  
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FIBER BUCKSKIN GRIPS  
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IF DEFECTIVE PARTS ARE FOUND IN  
THE *MANSON BICYCLE*  
WE WILL REPLACE FREE AND PAY ALL EXPRESS CHARGES  
MANSON CYCLE CO. 153-5 W. JACKSON ST. CHICAGO.

STEEL WIRE SCREW DRIVER  
(Tempered Blade) The Strongest and Best Made  
ARCADE MFG. CO., Freeport, Ill., U. S. A.

SALAMANDER FOR THE CHAIN  
JUVENILES FOR THE CHILDREN  
SUNDRIES FOR EVERYBODY  
E. G. EAGER & CO., TOLEDO, OHIO



**GUARANTEED INDIANA TIRES.**

The Best of all Popular Priced Tires...

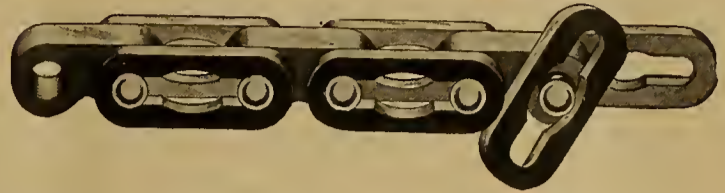


Our Prices and Samples will Interest You...

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THE THORSEN COMPANY, - 56 Fifth Avenue, Chicago. SELLING AGENTS.

**POPULAR CROWN CHAINS**  
PLAIN OR DETACHABLE.



**THE NEW CROWN DETACHABLE CHAIN.**

Crown Chains are accurate in alignment and pitch and satisfactory in quality and price...

CROWN ELECTRICAL MFG. CO., - - ST. CHARLES, ILL. MANUFACTURERS.

THE THORSEN COMPANY, - - 56 FIFTH AVE., CHICAGO. SELLING AGENTS.

**WHALEY BICYCLE STIRRUPS!!**

"The Best Toe Clips. The Best Selling Toe Clips."

Patent Dec. 29, 1896.  
Patent Sept. 14, 1897.  
Further patent allowed.



SOLD BY ALL LEADING JOBBERS

**CAUTION** See that the name "WHALEY" **BEWARE** of misleading circulars and advertisements. is on every stirrup.

**WHALEY-DWYER CO., Makers**

ST. PAUL, MINN., U. S. A.

HARTLEY & GRAHAM, NEW YORK, SOLE EXPORT AGENTS

An **Idea**

of what constitutes a good name plate. Are you looking for one?

Give us the name of your wheel, the quantity you use. We'll do the rest....

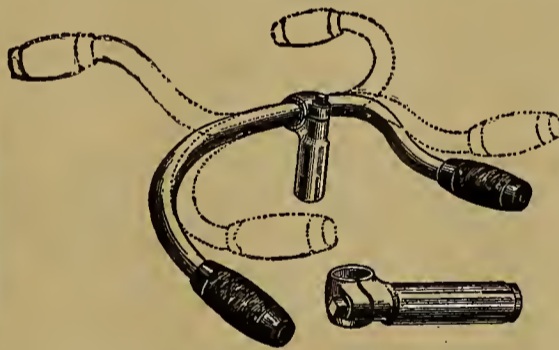
WE HAVE 40 STYLES STOCK PLATES.

S. D. CHILDS & CO. 140 Monroe Street, CHICAGO.

A postal brings Catalogue....



**The Oldest Handle Bar Manufacturers in Business**



Don't be misled to use bars that are unknown and of inferior quality when you can buy the

**Ideal Adjustable Bars, Ideal Adjustable Bars with Internal Binder**

for the same money. Our bars are made of the best seamless tubing, and the stems of one-piece forging. All styles. All bars heavily coppered before being nicked. Guaranteed the best finish and most perfect bar made. Get our prices and circular for '99.

**IDEAL PLATING CO., 7 Appleton St., Boston, Mass.**

**THERE ARE OTHERS**

But the only oil that does not gum is **3 in One**  
It does all these things:

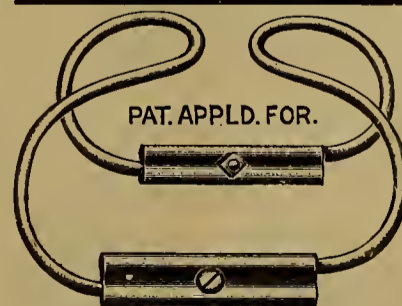
**CLEANS, LUBRICATES, PREVENTS RUST,**

and does each better than any other compound. For Bicycles, Guns, Typewriters, Sewing Machines, Etc. Sold by all dealers. Write for complete catalogue.



141 Broadway,

**G. W. COLE & CO., NEW YORK.**



The Pace-Maker and Samson

**...FOOT CLIP**

Also Pedal Balancers

are made by the Racine Toe Clip Mfg. Co., Racine, Wis. They are the very best clips on the market, and give better satisfaction in use than any other. They are fastened to the front and rear of pedal and therefore enable one to get a strong upward pull

**The SAMSON**

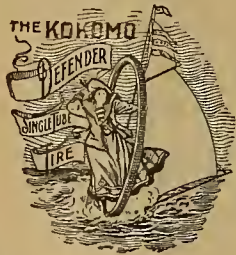
without fear of breaking clip or pedal. As for climbing hills, others are not in it. Dealers, write your jobber; if they do not keep them, order direct. Electros furnished to jobbers.

Pace Maker Clip, per pair..... 50c  
Rubber Covered Samson, per pair... 35c  
Samson, ..... 25c  
Pedal Balancers, per pair..... 15c



**RACINE TOE CLIP MFG. CO.**

RACINE, WIS.



## Whether Sailing or Wheeling

You Need Defense.  
Put on Our Guaranteed

# Defender Special

And You Will Save Expense.

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Philadelphia Agent, George W. Nock, 126 North Fourth St.  
Denver Agent, E. T. Weiant, 501-3 Sixteenth St.  
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## WE MANUFACTURE

everything to make first-class, up-to-date frames for Singles, Tandems, Triplets, Quads and Quints, adapted for 28 and 30-inch wheels. Our 30-inch line for '99 will be the best out.



HUBS

## AND WE SELL

everything to equip these frames in a first-class manner.

### THE BEST CRANK HANGER MADE

is the Armstrong "A" Hanger. You can't afford to use it unless you want the best. The only rim made that is good enough to use in 30-in. wheels is the KUNDTZ. We are their Chicago distributors.

**FREE:** Send for Wall Sheet and complete catalog showing Working Drawings for over 25 of our '99 Models.



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HANGERS

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### HARD RED TIRE CEMENT

One and Five Pound Cakes.

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One Ounce Tubes. Four Ounce Cans.

The Retail and Repair Trade can get these from their Regular Jobbers or

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**H. T. HEARSEY CYCLE CO., INDIANAPOLIS, IND.**

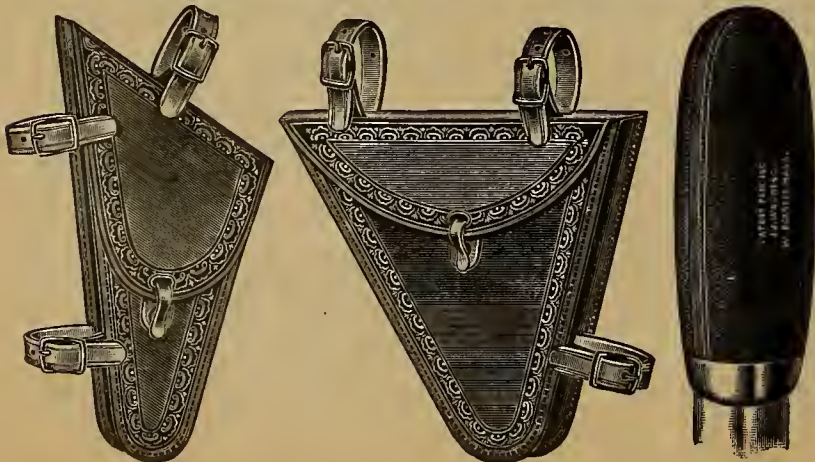
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## J. J. WARREN COMPANY, Worcester, Mass., U. S. A.

—MANUFACTURERS OF—

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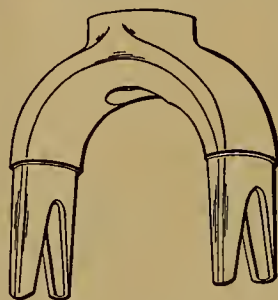
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in a repair job is in the labor. Why not make the labor as light as possible by using our...

# ASSEMBLING CHUCK?

**NEW ENGLAND CYCLE SUPPLY CO.**  
196 Myrtle Street, - - - Keene, N. H.

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## EXPANDERS

## COMPRESSION CLAMPS

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## CASTINGS BEST QUALITY

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## The Racine Malleable and Wrought Iron Co.

J. P. DAVIES, PRES.

RACINE WIS.

# Star Foot Power Lathes

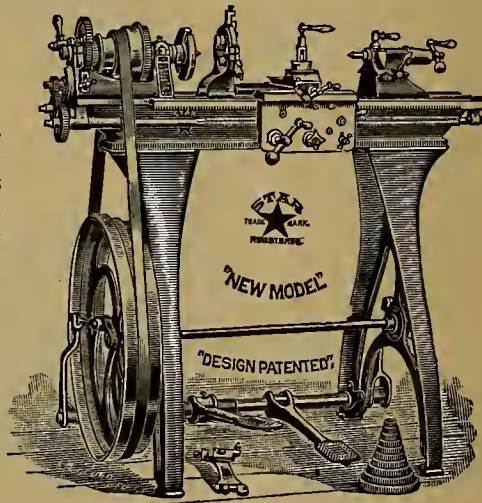
9 and 11-Inch Swing.  
24, 36, 48 and 60 inches  
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Complete Screw Cutting, Engine Lathes, with Automatic Cross Feed, with or without Compound Rest, Friction Countershaft, etc., for Bicycle and Electrical Work, Tool Makers and Gunsmiths, Technical Schools and Fine Accurate Machine Shop Service.

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# Compressed Cork Bicycle Grips

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We carry everything for bicycles, to make, repair or equip. Write us for our complete '99 catalogue we can do business with you if you get one. ❀ ❀

TOLEDO CYCLE SUPPLY COMPANY, JOBBERS AND MANUFACTURERS' AGENTS, 431-433 St. Clair St., Toledo, O., U. S. A.

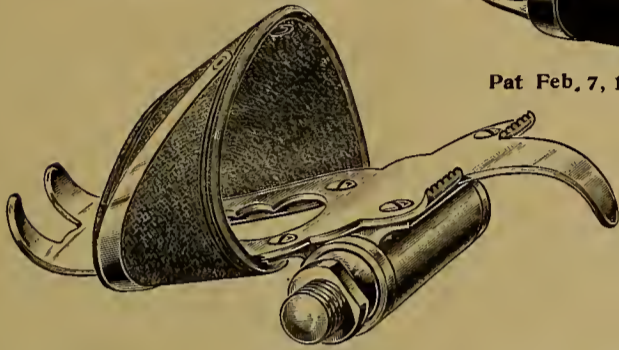
## "CONSENSUS OF OPINION"

THE S. & G. COMBINATION PEDAL

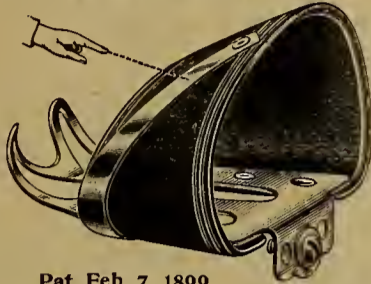
Perfect in every respect.  
Is the finest ever devised.

Write for Catalogue and Jobbers' Discounts.

Price per pair \$3.00



S. & G. Stirrup Toe Clip.

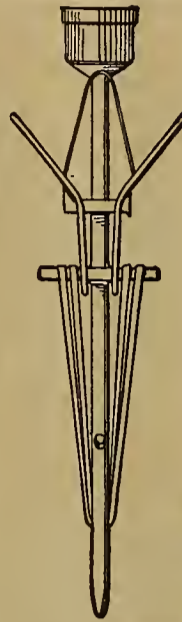


Pat Feb. 7, 1899

The most popular Toe Clip ever put on the market. Over one hundred and eight thousand pairs sold in 1898. Price per pair, 50 cents.

PATENT APPLIED FOR. SIDWAY MFG. CO., Chicago, Ill., U. S. A.

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Cures punctures quicker and better than any other device on the market. CAN BE CARRIED IN THE VEST POCKET. All you need besides the tool is a common rubber band, push it through the puncture and pinch the little clips, the rubber band slips off and tire is mended. We wish to call particular attention to the fact that Calls Instantaneous Repair Tool does not enlarge the puncture.

With each tool we send 1/2 doz. rubber bands and one tube of best cement. Price complete, 50c. Discount to dealers.

J. H. Burt Mfg. Co.

Exact Size. Patented Nov. 15, '98 Springfield, Mass., U. S. A.

Anyone USING, SELLING, MANUFACTURING, or CAUSING same to be MANUFACTURED without our consent within the United States will be PROSECUTED to the FULL EXTENT of the LAW.

30-inch Wheel Fittings.  
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3-Crown Fittings.  
Juvenile Fittings.

CORRECT ANGLES.

**MATTHEW STRAUSS**  
JOBBER IN CYCLE MATERIALS  
334, 336, 338 Genesee Street, - BUFFALO, N. Y.  
Send for advance sheet.

A DISTINCTIVE, STYLISH LINE OF Fittings In Sets

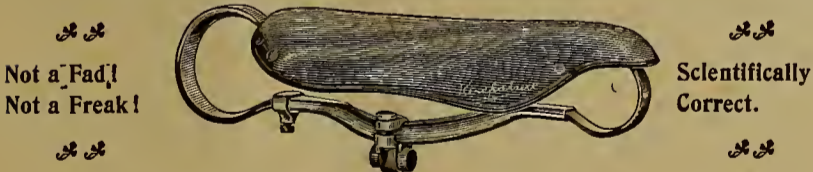
You can't afford to buy the "stereotyped" frame sets for sale everywhere. What you want is "talking points." Be distinctive and keep ahead.

**B. E. HARRIS & CO.**  
CHICAGO

"A THING ONCE SCIENTIFICALLY CORRECT IS FOREVER CORRECT."

Therefore we announce the same line for 1899 and continue to make the

## FAMOUS OLD KIRKPATRICK SADDLE.



**FINEST QUALITY SADDLE EVER MADE.**

Tested and approved by thousands of riders for years, now made better than ever.

**PRICE: ALWAYS AND EVERYWHERE, \$4.00**

Have it on your wheel for 1899. Jobbers and dealers can supply it. Send for booklet, "Scientific Saddle Making."

KIRKPATRICK SADDLE CO., - Springfield, Ohio.

## THE "RUSCH" SADDLES



THE ANOMALY OF THIS SADDLE IS THAT IT IS RESILIENT WITHOUT BEING SOFT.

Good jobbers wanted in each section of the country.

The Rusch Bicycle Saddles. N. Schroder, PROP. 91-93 Thompson St., New York City.

## Baldwin Detachable Chains FOR 1899



are made in a large variety of styles, with finest finish, superior for correct construction, durability and smooth running. Our Special Racer, made of nickel steel, lightest and strongest chain made; our Special Tandem we guarantee to hold any multiple wheel made.

Buy the genuine and you will have the best. Look for our TRADE MARK stamped on each connecting link.

**Baldwin Cycle Chain Co., Worcester, Mass...**

Hibbard, Spencer, Bartlett & Co., 18-32 Lake St., Chicago, Ill., always have a full line in stock, and are Distributing Agents for Chicago and the Western States. K. Franklin Peterson, 159 Lake St., Sole Sales Agent.



Warranted Perfect...

# Universal Brazer...

"HOT BLAST" TRADE MARK.

KEROSENE OIL or GASOLINE.

Powerful Heat. Instant Brazing.

Write for new catalogue.

WHITE MFG. CO.,  
158 Indiana Street, - CHICAGO.  
H. ROMEYN SMITH Eastern Mgr.

## TO BICYCLE DEALERS and REPAIRMEN...



Make no Mistake

Get it before you buy....

Our sixth annual (1899) Catalog and Net Trade Price List.

BICYCLE ACCESSORIES, PARTS, FITTINGS, TOOLS, BICYCLES, ETC.

116 Pages—700 Illustrations, 1000 LOW Quotations...

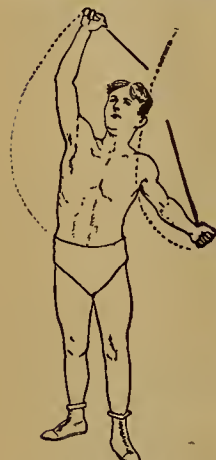
The Hall-Shone Co. (Inc.)

15, 17 ELM STREET, - - ROCHESTER, N. Y.

TAKE NOTICE... After July 1st, '99, our name will be THE E. H. HALL CO. (INC.)

## The Manhattan and Hendrickson Exercisers...

Pat. in United States, England and Germany.



A Complete Home Gymnasium with book of Instruction.

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| <b>MANHATTAN.</b>                    | <b>HENDRICKSON.</b>  |
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They are a paying side line for bicycle stores. Any of the above Exercisers mailed to any part of the United States on receipt of above prices.

Write for our wholesale discounts and proposition to consign you a stock.

We want an agent in every town and city in the United States.—L. A. W. Members Preferred.

MANHATTAN WEB CO.,

MANHATTAN. Cor. Grand & Market Place, - New York City.

## The Kelly Pneumatic Tire Repair Tool.



Patented Dec. 20th, 1898, and Jan. 17th, 1899. No. of patents, 616,109 and 617,810.

The quickest and best device for the purpose on the market. It positively will not pull out rubber bands with needle no matter what size the puncture may be. It is the only tool that will repair punctures after glycerine or any other anti-leak solution has been used. It can be used any place. So simple a child can use it. So small and compact it can be carried in the vest pocket, the size being 3 1/2 inches long. This tool is put in an enameled tin box with rubber bands, cement and directions.

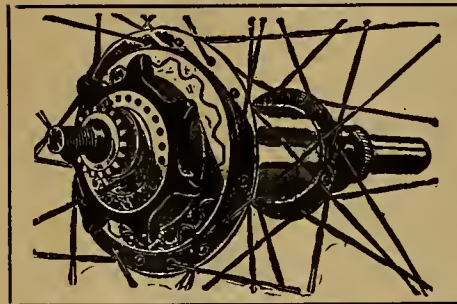
Sample by mail 35 cents. Special prices to dealers, jobbers and manufacturers. Manufactured by

THE KELLY MFG. CO.,

71 TO 9, PAYTON STREET, GREENTOWN, - - - INDIANA.

Also manufacturers of the Whisler Tire, Metal valve-stem, Inserting tool, and The Gibson Jewsharp Spoke Wrench and other small bicycle sundries.

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you can make your last year's bicycle into a new one, if you do not intend buying a '99 model wheel. In fact, the BI-GEAR gives you two bicycles to ride at the same time: viz, a high or regular gear, and a 20 per cent lower gear to be put into use instantly while riding, when wanted. The BI-GEAR doubles the pleasure of tandem riding, and if it will stand the wear and tear of the double machines, it certainly will do so on single wheels. Can coast without the chain revolving.

Price Reduced to \$15.00.

Exclusive territory to good agents. Liberal discounts to the trade. We also make the

"SURE THING" TIRE MENDER,

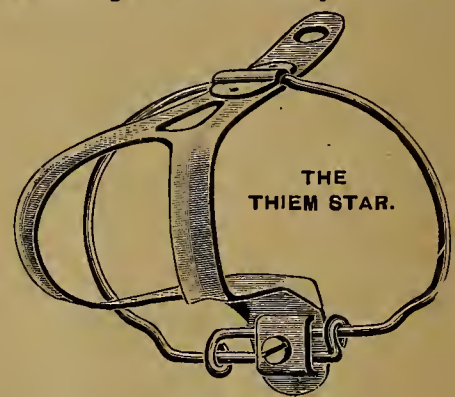
the simplest, cheapest, most convenient vest pocket emergency repair kit. No cement necessary. Rubber bands and the proper tool for putting them into place. Send for sample. Postpaid 10 cents.

BROWN-LIPE GEAR CO., - Syracuse, N. Y.

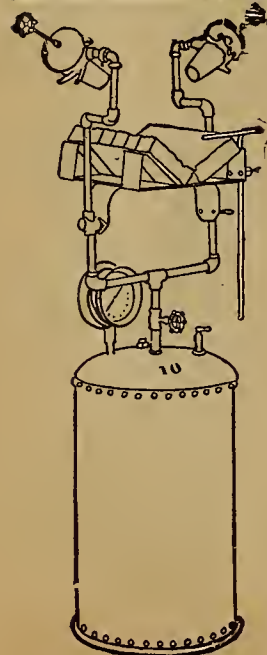
## LEADING TOE CLIPS:

Nothing has been produced in the way of toe clips that has given such

universal satisfaction to the trade as the clips manufactured by us. Their success is assured. They are therefore offered for the season of '99 ABSOLUTELY WITHOUT CHANGE IN DESIGN, MATERIAL OR WORKMANSHIP. We also manufacture a line of LAMP BRACKETS for head and fork attachment, plain steel and wire TOE CLIPS, CYCLE FLOOR STANDS and the WEBER NEW DEPARTURE LUGGAGE CARRIER. The value offered in this line is recommended to the attention and scrutiny of the jobbing and wholesale trade, whose correspondence is invited.



THIEM & CO., 78-80-82 SOUTH ROBERT STREET, ST. PAUL, MINN.



Send direct, or order from your Jobber, the Old Reliable

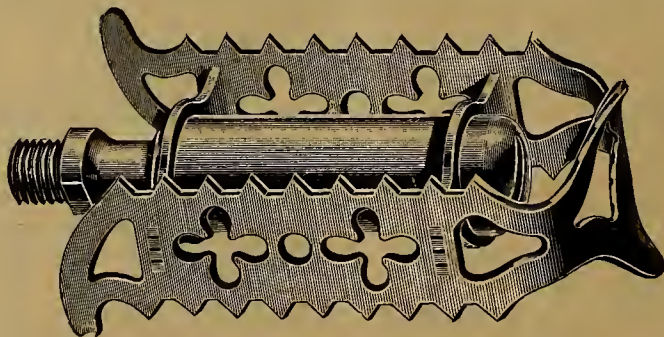
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CEMENTS BRAZERS, VULCANIZERS ENAMELING OVENS, TORCHES, ETC.

Sundrylog and Prices on application....

Red Cross Rubber and Cement Co. ROCHESTER, NEW YORK.

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Unequaled in design and workmanship. In finish the best of all. Prices right.

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Catalogue containing 105 numbers now ready.

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## "RUBBER NECK"

ONLY  
SADDLE IN  
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DOES  
YOUR  
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THEN  
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Manufactured by THE BUNKER SADDLE CO.,  
Mention The Cycle Age 63, 65, 67, 69 and 71 Milwaukee Ave., CHICAGO, ILL



IS THE RESULT OF FIFTY YEARS OF  
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It stays alight. It is handsome in appearance. It will not smoke. Perfect combustion. It gives more light. Light white and intense. Parabolic reflector throws light straight ahead. No details of construction neglected. All Jobbers Should Catalog It. Electros on Application.

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PITCH, MATERIAL AND FINISH GUARANTEED.

Made by Chantrell Tool Co.

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The Market Has No Effect On Our Prices.



## Bicycle Chains

3-16, 1/4, 5-16. 50 to 56 inches long.

Each Chain complete with bolt and nut, per hundred, \$20.00.

We buy our goods at SHERIFFS' and RECEIVERS' SALES.

CHICAGO HOUSE WRECKING CO., W. 35th and Iron Sts., CHICAGO.

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Write us for catalogue and discounts before placing your orders.

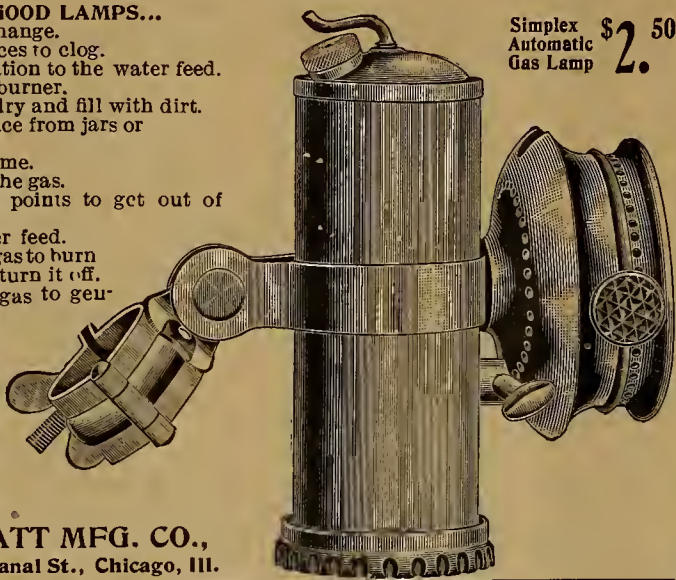
CHICAGO HANDLE BAR CO.

312-314 FIFTH AVENUE

CHICAGO.

OUR "SIMPLEX AUTOMATIC GAS LAMPS"

...ARE GOOD LAMPS...  
 No trouble to change.  
 No pinhole orifices to clog.  
 No band regulation to the water feed.  
 No clogging of burner.  
 No wicking to dry and fill with dirt.  
 No inconvenience from jars or shaking  
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 No smell from the gas.  
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 No waiting for gas to burn out, simply turn it off.  
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 No imperfect combustion.  
**NO!** Simply turn off the gas; when wanted, turn it on and relight

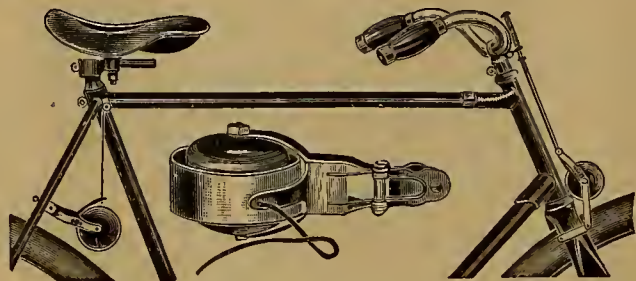


Simplex Automatic Gas Lamp \$2.50

Weight, less than 1 pound.  
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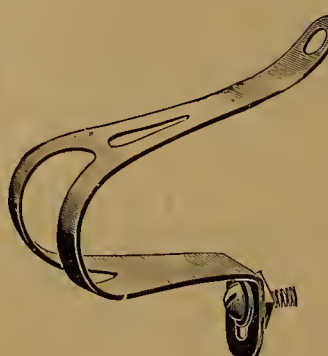
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**C. H. HANSON,**  
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DOUBLE GONG SILVER CHIMES



The only double toned, double gong Aluminum Bell on the market. For rear wheel, \$1.00; attachments for front wheel free. Special prices in quantities to the trade.

**ALUMINUM BELL COMPANY,** - Baltimore, Md.

"ROUND EDGE"  
  
**"NONPAREIL"**  
**TOE CLIP**  
 Toe Clips and Coasters of all kinds in our special finish.  
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**NEW YORK TO BUFFALO** West Shore R. R.  
 First-Class Service....



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PERFECT PASSENGER SERVICE.

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**CALIFORNIA**  
 FAST TRAINS  
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**4 TRAINS DAILY.**

Only line to West Baden and French Lick Springs.

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Remember the Name—

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"CROSBY PEERLESS" 30-INCH WHEEL.

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From the tannery to the consumer. A full line of padded saddles at bottom prices.

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Is greatly admired by everyone and becoming deservedly popular.

THE SECRET...

Being that

IT WORKS WELL  
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IT'S WELL MADE

Carbide Holder resting on bottom of Lamp, filled and ready to be screwed into place.

Don't

Begrime, besmear and besmireh yourself cleaning out carbide from the old style gas lamps, but buy the one with the

Separate Carbide Holder...

the easiest to fill and clean. The simplest to operate. Illustrated catalogue free.

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THE LATEST NEW DEPARTURES.  
Handsomely Modeled and Finely Hand-Chased.

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Richest and Handsomest Thing Out.

Brilliant Jewelled Eyes

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MANUFACTURERS' AGENTS, JOBBERS  
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# BICYCLE SUNDRIES

WE HAVE ALWAYS ON HAND A COM-  
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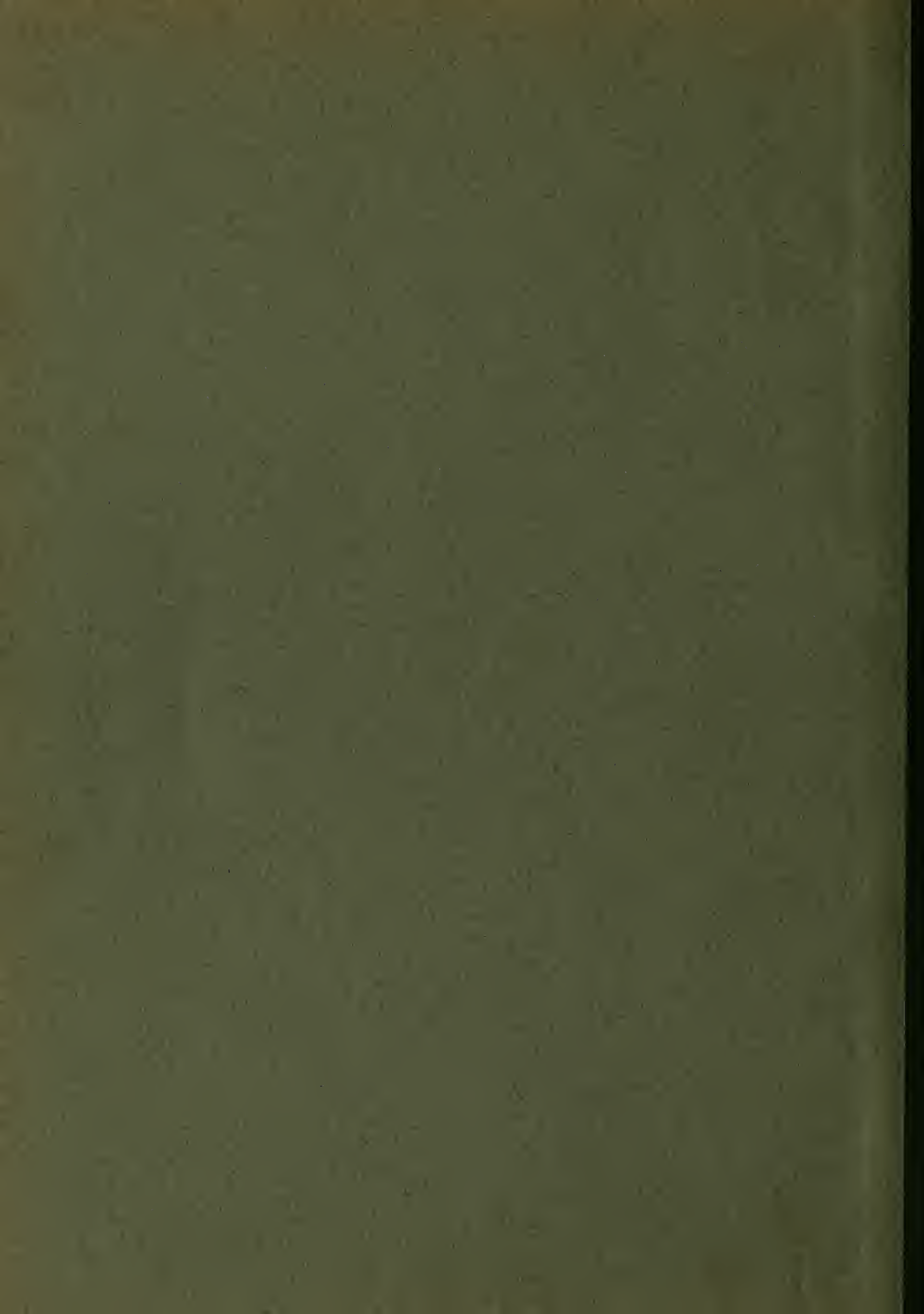
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